

# 2019 Subject Index (A-M)

## IEEE Transactions on Magnetism

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This index covers all technical items—papers, correspondence, reviews, etc.—that appeared in this periodical during 2019, and items from previous years that were commented upon or corrected in 2019. Departments and other items may also be covered if they have been judged to have archival value. The Subject Index contains entries describing the item under all appropriate subject headings, plus the first author's name, the publication abbreviation, month, and year, and associated article number.

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- Design and Implementation of a Magnetic Press System for Creating Magnetically Oriented Barium Hexaferrite Pucks. *Johnson, S.D.*, +, *T MAG July 2019 2801406*

- Effect of Sn<sup>4+</sup>-Zn<sup>2+</sup>-Co<sup>2+</sup> Doping on Structural and Magnetic Properties of M-Type Barium Hexaferrites. *Mesdaghi, S.*, +, *T MAG Jan. 2019 2100106*

- Magnetic States and Bandgaps of B-Site Substituted Double-Perovskite Ba<sub>2</sub>Pr(Bi, Sb)O<sub>6</sub>. *Taniguchi, H.*, +, *T MAG Feb. 2019 2400404*

- Microwave Monolithic Devices Using Magnetic Hard-Soft Nanocomposite. *Sharma, V.*, +, *T MAG July 2019 4002004*

- Microwave-Assisted Magnetization Reversal in Dispersed Nanosized Barium Ferrite Particles for High-Density Magnetic Recording Tape. *Ozawa, E.*, *T MAG July 2019 3200404*

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- High-Efficient Adaptive Modulation for PWM-Based Multi-Level Perpendicular Magnetic Recording on Insufficient Resolution Channel. *Harada, K.*, *T MAG Nov. 2019 3101208*

**Binding energy**

- The Effect of Interstitial Nitrogen Addition on the Structural Properties of Supercells of NdFe<sub>12-x</sub>Ti<sub>x</sub>. *Skelland, C.*, +, *T MAG Oct. 2019 6700205*

**Bio-optics**

Magnetically Induced Flickering Change in the Light-Reflecting Cuticulae of the Common Bluebottle Butterfly *Graphium Sarpedon*. Iwasaka, M., +, *TMAG July 2019 5200204*

**Bioacoustics**

Magneto-Acoustic Resonator for Aquatic Animal Tracking. Almansouri, A.S., +, *TMAG Feb. 2019 4700104*

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Using Magnetic Field Gradients to Shorten the Antigen-Antibody Reaction Time for a Magnetic Immunoassay. Tsukada, K., +, *TMAG July 2019 5100405*

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Fast Ignitron-Based Magnetic Field Pulser for Biological Applications. Staigvila, G., +, *TMAG May 2019 5900105*

Investigating the Role of Coil Designs and Anatomical Variations in Cerebellar TMS. Zhong, X., +, *TMAG July 2019 5000905*

Modeling of Transcranial Magnetic Stimulation Versus Pallidal Deep Brain Stimulation for Parkinson's Disease. Syeda, F., +, *TMAG July 2019 5000805*

**Bioelectric potentials**

Analysis of Current Density Inside Human Body Using Geometric Multi-Grid Method. Nomura, M., +, *TMAG June 2019 7203605*

Modeling of Transcranial Magnetic Stimulation Versus Pallidal Deep Brain Stimulation for Parkinson's Disease. Syeda, F., +, *TMAG July 2019 5000805*

**Biological effects of fields**

Fast Ignitron-Based Magnetic Field Pulser for Biological Applications. Staigvila, G., +, *TMAG May 2019 5900105*

**Biological techniques**

Fast Ignitron-Based Magnetic Field Pulser for Biological Applications. Staigvila, G., +, *TMAG May 2019 5900105*

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Electroencephalogram Characteristics Induced by Different Magnetic Stimulation Modes of Acupuncture Point. Fu, L., +, *TMAG June 2019 5000304*

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Finite-Element Gaussian Belief Propagation Solver for Multi-Physics Modeling of Radiofrequency Tumor Ablation. Akbari, A., +, *TMAG June 2019 7201604*

**Biomagnetism**

Comparison of Numerical Techniques for the Evaluation of Human Exposure From Measurement Data. Conchin Gubernati, A., +, *TMAG June 2019 5000404*

Fast Ignitron-Based Magnetic Field Pulser for Biological Applications. Staigvila, G., +, *TMAG May 2019 5900105*

Investigating the Role of Coil Designs and Anatomical Variations in Cerebellar TMS. Zhong, X., +, *TMAG July 2019 5000905*

Optimization of the Gap Size of Flux Concentrators: Pushing Further on Low Noise Levels and High Sensitivities in Spin-Valve Sensors. Silva, M., +, *TMAG July 2019 4400605*

Remote Sensing of Ciliary Beating Using a SQUID Gradiometer. Maki-batake, R., +, *TMAG March 2019 5200105*

Using Magnetic Field Gradients to Shorten the Antigen-Antibody Reaction Time for a Magnetic Immunoassay. Tsukada, K., +, *TMAG July 2019 5100405*

**Biomedical electrodes**

Electroencephalogram Characteristics Induced by Different Magnetic Stimulation Modes of Acupuncture Point. Fu, L., +, *TMAG June 2019 5000304*

Modeling of Transcranial Magnetic Stimulation Versus Pallidal Deep Brain Stimulation for Parkinson's Disease. Syeda, F., +, *TMAG July 2019 5000805*

**Biomedical equipment**

Calibration of Room Temperature Magnetic Sensor Array for Biomagnetic Measurement. Adachi, Y., +, *TMAG July 2019 5000506*

Design and Demonstration of Novel Magnetoencephalogram Detectors. Uchiyama, T., +, *TMAG July 2019 4400408*

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Behavior of Monosodium Urate Crystals in a Highly Viscous Model of Synovial Fluid. Takeuchi, Y., +, *TMAG July 2019 5000704*

Biofunctionalizing Magnetic Nanowires Toward Targeting and Killing Leukemia Cancer Cells. Alsharif, N.A., +, *TMAG Feb. 2019 5400105*

**Biomedical measurement**

Calibration of Room Temperature Magnetic Sensor Array for Biomagnetic Measurement. Adachi, Y., +, *TMAG July 2019 5000506*

Electrically Small Dipole Antenna Probe for Quasistatic Electric Field Measurements in Transcranial Magnetic Stimulation. Zolj, A., +, *TMAG Jan. 2019 5800110*

Numerical Simulation of Conductivity Changes in the Human Thorax Caused by Aortic Dissection. Reinbacher-Kostinger, A., +, *TMAG June 2019 5100304*

Remote Sensing of Ciliary Beating Using a SQUID Gradiometer. Maki-batake, R., +, *TMAG March 2019 5200105*

**Biomedical MRI**

Design and Optimization of a Ring-Pair Permanent Magnet Array for Head Imaging in a Low-Field Portable MRI System. Ren, Z.H., +, *TMAG Jan. 2019 5100108*

Investigating the Role of Coil Designs and Anatomical Variations in Cerebellar TMS. Zhong, X., +, *TMAG July 2019 5000905*

**Biomembranes**

Fast Ignitron-Based Magnetic Field Pulser for Biological Applications. Staigvila, G., +, *TMAG May 2019 5900105*

**Bismuth**

Highly Sensitive Magnetic Field Sensing Using Magnetization Dynamics in Yttrium Iron Garnet Single-Crystal Thin Films. Koda, T., +, *TMAG July 2019 4002604*

Interferometric Detection of Pinned Interactions in Bismuth-Substituted Iron Garnet. Bauer, L., +, *TMAG July 2019 6100804*

**Bismuth alloys**

In-Field Annealing and Quenching for Ferromagnetic MnBi Under 19 T. Kobayashi, R., +, *TMAG Feb. 2019 1000204*

**Bismuth compounds**

Anomalous Hall Effect in a Magnetic Topological Insulator (BiMn)<sub>2</sub>Te<sub>3</sub>. Pili-idi, A., +, *TMAG July 2019 2400506*

Effects of the Sintering Temperature on RF Complex Permeability of NiCu-CoZn Ferrites for Near-Field Communication Applications. Lathiya, P., +, *TMAG Feb. 2019 2800404*

Observation of Longitudinal Spin Seebeck Voltage in YIG Films Chemically Prepared by Co-Precipitation and Spin Coating. Yamada, K., +, *TMAG Feb. 2019 4500104*

**Block codes**

A Study on Block-Based Neural Network Equalization in TD-MR System With LDPC Coding. Luo, K., +, *TMAG Nov. 2019 6700605*

Performance of Interleaved Block Codes With Burst Errors. Cideciyan, R.D., +, *TMAG March 2019 3100305*

**Blood**

Biofunctionalizing Magnetic Nanowires Toward Targeting and Killing Leukemia Cancer Cells. Alsharif, N.A., +, *TMAG Feb. 2019 5400105*

**Bone**

Behavior of Monosodium Urate Crystals in a Highly Viscous Model of Synovial Fluid. Takeuchi, Y., +, *TMAG July 2019 5000704*

Design and Realization of an Open EPR Resonator at X-Band Frequencies. Pisa, S., +, *TMAG Feb. 2019 5100210*

**Boron alloys**

A Comparative Study of the Magnetocaloric Effect in MnFePSiGeB Prepared by Traditional Sintering and Spark Plasma Sintering. Wang, G.F., +, *TMAG Feb. 2019 2500705*

Annealing Temperature Effects on Spin Hall Magnetoresistance in Perpendicularly Magnetized W/CoFeB Bilayers. Peterson, T.J., +, *TMAG Feb. 2019 4100204*

Changes in Microstructure and Magnetic Properties of Fe-B-Cu Ribbons According to Annealing Conditions. Lee, K., +, *TMAG Feb. 2019 2000904*

Characterization of Continuous Wave Laser-Induced Thermal Gradients in Magnetic Tunnel Junctions Integrated Into Microresonators via COMSOL Simulations. Cansever, H., +, *TMAG July 2019 7401505*

Critical Role of W Insertion Layer Sputtering Condition for Reference Layer on Magnetic and Transport Properties of Perpendicular-Anisotropy Magnetic Tunnel Junction. Honjo, H., +, *TMAG July 2019 3400904*

- Effect of Annealing on Magnetic and Mechanical Behaviors of NANOPERM-Type Alloys. *Hasiak, M.*, +, *T MAG Feb. 2019 2001606*
- Effects of Thickness and Thermal Annealing of FeCoB Thin Films on Ferromagnetic Resonance and Microwave Propagation Properties. *Artega-Durán, A.*, +, *T MAG Feb. 2019 2800303*
- Elastic and Magnetoelastic Properties of Fe-Rich Tetragonal Y-Fe Compounds: Phenomenology and Electron Theory. *Inoue, J.*, +, *T MAG Feb. 2019 2100304*
- Electrical Resistivity and Magnetic Performance of Ceramics-Bonded Nd-Fe-B-Type Magnet Consolidated Using Dielectric Oxide Binder. *Kang, M.S.*, +, *T MAG July 2019 2101405*
- Engineering of Magnetic Properties of Fe-Rich Microwires by Stress Annealing. *Zhukov, A.P.*, +, *T MAG Feb. 2019 2000504*
- Insertion Layer Thickness Dependence of Magnetic and Electrical Properties for Double-CoFeB/MgO-Interface Magnetic Tunnel Junctions. *Miura, S.*, +, *T MAG July 2019 3401004*
- Low-Temperature Performance of Nanoscale Perpendicular Magnetic Tunnel Junctions With Double MgO-Interface Free Layer. *Cao, K.*, +, *T MAG March 2019 3400304*
- Magnetic Damping Constant of CoFeB/Pt Thin Films With Varying the Thicknesses of Pt and Insertion Layer of Al. *Wu, K.*, +, *T MAG July 2019 4100305*
- Magnetic Tunnel Junctions: Laser Annealing Versus Oven Annealing. *Sharma, A.*, +, *T MAG Jan. 2019 4400104*
- Magnetic-Polymer Composites for Bonding and 3D Printing of Permanent Magnets. *Palmero, E.M.*, +, *T MAG Feb. 2019 2101004*
- Micromagnetic Study of Edge-Damage Effects in Perpendicular CoFeB/MgO Magnetic Tunnel Junction. *Yoshida, C.*, +, *T MAG July 2019 3401105*
- Microstructure Characterization and Magnetic Characteristics of Ce-Fe-B Based Spark Plasma Sintered Magnets. *Jiang, Q.*, +, *T MAG Sept. 2019 2101806*
- Offset Reduction in GMI-Based Device by Using Double-Frequency Bias-Current Modulation. *Espes, A.*, +, *T MAG Jan. 2019 4000504*
- Permanent Magnets Beyond Nd-Dy-Fe-B. *Hirosawa, S.*, *T MAG Feb. 2019 2100506*
- Reduction of Magnet Eddy Current Loss in PMSM by Using Partial Magnet Segment Method. *Wang, Y.*, +, *T MAG July 2019 8105105*
- Spin-Orbit Torque-Driven Magnetic Switching of Co/Pt-CoFeB Exchange Spring Ferromagnets. *Song, M.*, +, *T MAG Aug. 2019 1401004*
- Surface Texturing and Enhanced Microwave Absorption of Fe-B Alloy Flakes Through a Dealloying Process. *Tian, N.*, +, *T MAG July 2019 4002105*
- The Correlation Between Magnetic Dead Layer and Perpendicular Magnetic Anisotropy in MgO/CoFeB/Ta Top Structure. *Shen, S.*, +, *T MAG Feb. 2019 3400205*
- The Step-Current Annealing: An Easy Method to Improve the Magnetoimpedance in Co-Rich Ribbons. *Moradi, M.*, +, *T MAG Jan. 2019 2000206*
- Theoretical Study of Gilbert Damping in Rare-Earth Permanent Magnets. *Saito, F.*, +, *T MAG July 2019 2101604*
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- A New Multi-Objective Optimization Method of Magnetic Levitation Planar Motor. *Zheng, T.*, +, *T MAG Aug. 2019 8204408*
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- Calculation of the Ionized Field of  $\pm 800$  kV High Voltage DC Power Lines With the Presence of Charged Atmospheric Particles. *Zou, Z.*, +, *T MAG Oct. 2019 7501304*
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- Electrically Small Dipole Antenna Probe for Quasistatic Electric Field Measurements in Transcranial Magnetic Stimulation. *Zolj, A.*, +, *T MAG Jan. 2019 5800110*
- Electroencephalogram Characteristics Induced by Different Magnetic Stimulation Modes of Acupuncture Point. *Fu, L.*, +, *T MAG June 2019 5000304*
- Investigating the Role of Coil Designs and Anatomical Variations in Cerebellar TMS. *Zhong, X.*, +, *T MAG July 2019 5000905*
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Comparative Study Between a Novel Multi-Tooth and a V-Shaped Flux-Switching Permanent Magnet Machines. *Zhao, G., +, TMAG July 2019 8104908*

Consequent-Pole Hybrid Excitation Brushless Wound Field Synchronous Machine With Fractional Slot Concentrated Winding. *Ayub, M., +, TMAG July 2019 8203805*

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High-Performance Ferrite Permanent Magnet Brushless Machines. *Shan-shal, A., +, TMAG July 2019 8104504*

Influence of Slot Combination on Performance of Brushless Doubly Fed Generator With Hybrid Rotor. *Zhang, F., +, TMAG Nov. 2019 6700406*

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MnGa (001)-Textured Film Fabricated on Thermally Oxidized Si Substrate for Application to Ion Beam Bit Patterned Media. *Ishikawa, T., +, TMAG July 2019 3200104*

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## C

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Calibration of Room Temperature Magnetic Sensor Array for Biomagnetic Measurement. *Adachi, Y., +, TMAG July 2019 5000506*

Design and Development of a New Magnetometer Calibration Device. *Angelopoulos, S., +, TMAG Jan. 2019 4000604*

Low Power *In Situ* AI Calibration of a Three-Axial Magnetic Sensor. *Alimi, R., +, TMAG July 2019 4002407*

Magnetic Calibration System With Interference Compensation. *Janosek, M., +, TMAG Jan. 2019 6000104*

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Low-Noise Orthogonal Fluxgate Using Flipped Current Joule Annealing. *Butta, M., +, TMAG July 2019 4002906*

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Biofunctionalizing Magnetic Nanowires Toward Targeting and Killing Leukemia Cancer Cells. *Alsharif, N.A., +, TMAG Feb. 2019 5400105*

Photomagnetic Control of Nanoparticles With Radical Pair System: A Promising New Area of Liposomal Drug-Delivery System. *Nakagawa, H., +, TMAG Feb. 2019 5000104*

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Magnetically Actuated Piezoelectric-Based Rotational Energy Harvester With Enhanced Output in Wide Range of Rotating Speeds. *Rashidi, R., +, TMAG Sept. 2019 8700208*

Magnetostrictive Energy Harvesting: Materials and Design Study. *Backman, G., +, TMAG July 2019 4700206*

Magnetostrictive Tactile Sensor Array for Object Recognition. *Zhang, B., +, TMAG July 2019 4002207*

Modeling and Analysis of Galfenol Nonlinear Cantilever Energy Harvester With Elastic Magnifier. *Cao, S., +, TMAG June 2019 8200905*

Study of Dynamic Behavior of Magnetostrictively Patterned Flexible Micro-Wings. *Cho, C., +, TMAG Feb. 2019 4001604*

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A Novel Gauged Potential Formulation for 3-D Electromagnetic Field Analysis Including Both Inductive and Capacitive Effects. *Zhao, Y., +, TMAG June 2019 7400905*

A Novel Three-Axial Force Tactile Sensor Based on the Fringing Effect of Electric Field. *Sun, Y., +, TMAG Sept. 2019 7500305*

An Ultrasensitive Differential Capacitive Dilatometer. *Martien, D., +, TMAG Feb. 2019 6500204*

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A Novel Gauged Potential Formulation for 3-D Electromagnetic Field Analysis Including Both Inductive and Capacitive Effects. *Zhao, Y., +, TMAG June 2019 7400905*

A Novel Three-Axial Force Tactile Sensor Based on the Fringing Effect of Electric Field. *Sun, Y., +, TMAG Sept. 2019 7500305*

An Ultrasensitive Differential Capacitive Dilatometer. *Martien, D., +, TMAG Feb. 2019 6500204*

#### Capacitors

A Symmetric Field-Circuit Coupled Formulation for 3-D Transient Full-Wave Maxwell Problems. *Zhao, Y., +, TMAG June 2019 7201804*

An Ultrasensitive Differential Capacitive Dilatometer. *Martien, D., +, TMAG Feb. 2019 6500204*

Impulse Magnetized Magnetic Screws. *Mohamed, H.M., +, TMAG July 2019 8001504*

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Changes in Microstructure and Magnetic Properties of Fe-B-Cu Ribbons According to Annealing Conditions. *Lee, K., +, TMAG Feb. 2019 2000904*

Fe/C Nanocapsule-Decorated  $\text{Fe}_2\text{B/C}$  Nanocapsule Hybrids With Improved Gigahertz Electromagnetic Absorption Properties. *Liu, X., +, TMAG Feb. 2019 2501205*

Ferromagnetism and Giant Paramagnetism of Copper Nanoparticles in Carbon Matrix. *Kocharian, A., +, TMAG Feb. 2019 2300604*

Studies of HAMR Recording by Hybrid Monte Carlo Micromagnetics. *Miao, J., +, TMAG July 2019 3001604*

#### Carbon nanotubes

Self-Assembled Magnetically Isolated Co Nanoparticles Embedded Inside Carbon Nanotubes. *Prishepa, S.L., +, TMAG Feb. 2019 2300304*

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Electron-Doping Effect on the Magnetic-Field-Sensitive Dielectric Anomaly in  $\text{CaMn}_{1-x}\text{Sb}_x\text{O}_3$ . *Taniguchi, H., +, TMAG Feb. 2019 1000104*

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Investigation of Cast Iron Matrix Constituents by Magnetic Adaptive Testing. *Vertesy, G., +, TMAG March 2019 6200306*

#### Cavity resonators

A Ferrite-Filled Cavity Resonator for Electronic Article Surveillance on Metallic Packaging. *Keatley, P.S., +, TMAG Dec. 2019 4004110*

Mixed Finite-Element Method for 3-D Closed Cavity Problem With Anisotropic and Lossy Media. *Jiang, W., +, TMAG May 2019 7400506*

#### Cellular biophysics

Biofunctionalizing Magnetic Nanowires Toward Targeting and Killing Leukemia Cancer Cells. *Alsharif, N.A., +, TMAG Feb. 2019 5400105*

Fast Ignitron-Based Magnetic Field Pulser for Biological Applications. *Staigvila, G., +, TMAG May 2019 5900105*

Modeling of Transcranial Magnetic Stimulation Versus Pallidal Deep Brain Stimulation for Parkinson's Disease. *Syeda, F., +, TMAG July 2019 5000805*

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Electrical Resistivity and Magnetic Performance of Ceramics-Bonded Nd-Fe-B-Type Magnet Consolidated Using Dielectric Oxide Binder. *Kang, M.S., +, TMAG July 2019 2101405*

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Microstructure Characterization and Magnetic Characteristics of Ce-Fe-B Based Spark Plasma Sintered Magnets. *Jiang, Q., +, TMAG Sept. 2019 2101806*

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High-Efficient Adaptive Modulation for PWM-Based Multi-Level Perpendicular Magnetic Recording on Insufficient Resolution Channel. *Harada, K., TMAG Nov. 2019 3101208*

ISI/ITI Turbo Equalizer for TDMR Using Trained Local Area Influence Probabilistic Model. *Sun, X., +, TMAG April 2019 3100515*

**Chaos**

Stochastic PEEC Method Based on Polynomial Chaos Expansion. *Torchio, R., +, TMAG June 2019 7204504*

Transient Chaos in Nanomagnets Subject to Elliptically Polarized AC Applied Fields. *Serpico, C., +, TMAG Feb. 2019 4300305*

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Modified Improved Interpolating Moving Least Squares Method for Meshless Approaches. *Fujita, Y., +, TMAG June 2019 7203204*

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A Comparative Study of the Magnetocaloric Effect in MnFePSiGeB Prepared by Traditional Sintering and Spark Plasma Sintering. *Wang, G.F., +, TMAG Feb. 2019 2500705*

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Critical Role of W Insertion Layer Sputtering Condition for Reference Layer on Magnetic and Transport Properties of Perpendicular-Anisotropy Magnetic Tunnel Junction. *Honjo, H., +, TMAG July 2019 3400904*

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Self-Assembled Magnetically Isolated Co Nanoparticles Embedded Inside Carbon Nanotubes. *Prischepa, S.L., +, TMAG Feb. 2019 2300304*

**Chromium alloys**

Effect of Pt and FePt Layer Thickness on Microstructure and Magnetic Properties of L1<sub>0</sub> FePt Films With Perpendicular Anisotropy. *Bae, J., +, TMAG Aug. 2019 3200506*

Fabrication of Ferrite-Coated Magnetic Fe-Mn-Si-Cr-Ni Alloy Utilizing Selective Oxidation of Mn Element. *Peng, H., +, TMAG May 2019 2900307*

High GMR Effect and Perfect Microstructure in CoFe/Cu Multilayers. *Milyaev, M., +, TMAG April 2019 2300904*

The Network-Shaped Upheaval Structure in (002) Textured MgO Layer for L1<sub>0</sub> FePt-Based Granular Media With Columnar Nanostructure. *Shimizu, A., +, TMAG July 2019 3200208*

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Non-Volatile Spintronic Flip-Flop Design for Energy-Efficient SEU and DNU Resilience. *Alghareb, F.S., +, TMAG March 2019 3400611*

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Differential Spin Hall Effect-Based Nonvolatile Static Random Access Memory for Energy-Efficient and Fast Data Restoration Application. *Shreya, S., +, TMAG Sept. 2019 3401211*

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Electrically Tunable Ferrite Bandpass Filter in X-Band With Wide Tunability. *Kagita, S., +, TMAG July 2019 4003204*

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Fractional Order PID Control for Reduction of Vibration and Noise on Induction Motor. *Hsu, C., TMAG Nov. 2019 6700507*

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Performance Analysis and Optimization of Liquid-Cooled and Flywheel-Type Eddy Current Retarder. *Ye, L., +, TMAG June 2019 8001005*

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Power-Efficient Spin-Torque Nano-Oscillator-Based Wireless Communication With CMOS High-Gain Low-Noise Transmitter and Receiver. *Lee, H.S., +, TMAG May 2019 4001910*

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A Scalable, Broadband, and Physics-Based Model for On-Chip Rectangular Spiral Inductors. *Jayaraman, S.S., +, TMAG Sept. 2019 8402006*

Compact Macrospin-Based Model of Three-Terminal Spin-Hall Nano Oscillators. *Albertsson, D.I., +, TMAG Oct. 2019 4003808*

Impact of Contact Misalignment on Magnetic Cross Sensitivity of Integrated Vertical Hall Sensors. *Beran, P., +, TMAG Jan. 2019 4000904*

Three-Axis Micofluxgate With a Fluxguide. *Jeng, J., +, TMAG July 2019 2002304*

**CMOS logic circuits**

Exploration of Non-Volatile MTJ/CMOS Circuits for DPA-Resistant Embedded Hardware. *Kumar, S.D., +, TMAG Dec. 2019 3401308*

Non-Volatile Spintronic Flip-Flop Design for Energy-Efficient SEU and DNU Resilience. *Alghareb, F.S., +, TMAG March 2019 3400611*

**CMOS memory circuits**

Exploration of Non-Volatile MTJ/CMOS Circuits for DPA-Resistant Embedded Hardware. *Kumar, S.D., +, TMAG Dec. 2019 3401308*

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Advanced Processing of Micropatterned Elasto-Magnetic Membranes. *Martin, E.L., +, TMAG July 2019 2900406*

Magnetization Reversal and Domain Nucleation in Ultra-Thin Co/Re(0001) Capped by Graphitic C. *Genuzio, F., +, TMAG Feb. 2019 2300504*

Perpendicular Exchange Bias in (Co/Pt)<sub>n</sub> Multilayers. *Elphick, K., +, TMAG July 2019 4800106*

Perpendicularly Magnetized Thin-Film Antidot Arrays for Superparamagnetic Microbead Actuation. *Ouk, M., +, TMAG Sept. 2019 4600707*

Remanence State and Coercivity in 1-D Chain of Polycrystalline Hollow Cobalt Nanospheres. *Guerra, Y., +, TMAG April 2019 7200305*

Self-Assembled Magnetically Isolated Co Nanoparticles Embedded Inside Carbon Nanotubes. *Prischepa, S.L., +, TMAG Feb. 2019 2300304*

Spin Injection From EuS/Co Multilayers Into GaAs Detected by Polarized Electroluminescence. *Goschew, A., +, TMAG July 2019 1400804*

Spin-Orbit Torque-Driven Magnetic Switching of Co/Pt-CoFeB Exchange Spring Ferromagnets. *Song, M., +, TMAG Aug. 2019 1401004*

Studying of the Interlayer Interaction in Magnetic Multilayers (FM/I/FM) Measuring the FMR Peak Asymmetry. *Vdovichev, S.N., +, TMAG Aug. 2019 6100906*

The Step-Current Annealing: An Easy Method to Improve the Magnetoimpedance in Co-Rich Ribbons. *Moradi, M., +, TMAG Jan. 2019 2000206*

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Adiabatic Temperature Changes at Structural and Magnetic Phase Transitions in Ni<sub>45</sub>Mn<sub>43</sub>CoSn<sub>11</sub> at High Magnetic Fields. *Pandey, S., +, TMAG Feb. 2019 2500604*

Advanced Processing of Micropatterned Elasto-Magnetic Membranes. *Martin, E.L., +, TMAG July 2019 2900406*

Annealing Temperature Effects on Spin Hall Magnetoresistance in Perpendicularly Magnetized W/CoFeB Bilayers. *Peterson, T.J., +, TMAG Feb. 2019 4100204*

Characterization of Continuous Wave Laser-Induced Thermal Gradients in Magnetic Tunnel Junctions Integrated Into Microresonators via COMSOL Simulations. *Cansever, H., +, TMAG July 2019 7401505*

Critical Role of W Insertion Layer Sputtering Condition for Reference Layer on Magnetic and Transport Properties of Perpendicular-Anisotropy Magnetic Tunnel Junction. *Honjo, H., +, TMAG July 2019 3400904*

Effects of Thickness and Thermal Annealing of FeCoB Thin Films on Ferromagnetic Resonance and Microwave Propagation Properties. *Arteaga-Duran, A., +, TMAG Feb. 2019 2800303*

Elastic and Magnetoelastic Properties of Fe-Rich Tetragonal Y-Fe Compounds: Phenomenology and Electron Theory. *Inoue, J., +, TMAG Feb. 2019 2100304*

Electric Field Tuning of Anisotropic Magnetoresistance in Ni-Co/PMN-PT Multiferroic Heterostructure. *Wang, C., +, TMAG Feb. 2019 2501103*



- Electrical Resistivity and Magnetic Performance of Ceramics-Bonded Nd-Fe-B-Type Magnet Consolidated Using Dielectric Oxide Binder. *Kang, M.S.*, +, *TMAG July 2019 2101405*
- Electromagnetic Properties of Fe<sub>50</sub>Co<sub>50</sub>/Cu Granular Composite Materials Containing Flaky Particles. *Kasagi, T.*, +, *TMAG Feb. 2019 2800204*
- Engineering of Magnetic Properties of Fe-Rich Microwires by Stress Annealing. *Zhukov, A.P.*, +, *TMAG Feb. 2019 2000504*
- Formation and Perpendicular Magnetic Coupling of Al and L<sub>10</sub> CoPt in CoPt/TiN Films on Glass Substrate. *An, H.*, +, *TMAG Feb. 2019 2100204*
- High GMR Effect and Perfect Microstructure in CoFe/Cu Multilayers. *Milyaev, M.*, +, *TMAG April 2019 2300904*
- Insertion Layer Thickness Dependence of Magnetic and Electrical Properties for Double-CoFeB/MgO-Interface Magnetic Tunnel Junctions. *Miura, S.*, +, *TMAG July 2019 3401004*
- Loss Prediction in DC-Biased Magnetic Sheets. *de la Barriere, O.*, +, *TMAG Oct. 2019 2002614*
- Low-Temperature Performance of Nanoscale Perpendicular Magnetic Tunnel Junctions With Double MgO-Interface Free Layer. *Cao, K.*, +, *TMAG March 2019 3400304*
- Magnetic Damping Constant of CoFeB/Pt Thin Films With Varying the Thicknesses of Pt and Insertion Layer of Al. *Wu, K.*, +, *TMAG July 2019 4100305*
- Magnetic Domain Structures and Magnetic Properties of Lightly Nd-Doped Sm-Co Magnets With High Squareness and High Heat Resistance. *Machida, H.*, +, *TMAG Feb. 2019 2100604*
- Magnetic Tunnel Junctions: Laser Annealing Versus Oven Annealing. *Sharma, A.*, +, *TMAG Jan. 2019 4400104*
- Magnetization Studies on Tb-Fe and Tb-Fe-Co Thin Films. *Rajasekhar, P.*, +, *TMAG Feb. 2019 2500804*
- Measurements of Iron Loss in PMSM Stator Cores Based on CoFe and SiFe Lamination Sheets and Stemmed From Different Manufacturing Processes. *Boubaker, N.*, +, *TMAG Jan. 2019 8100309*
- Micromagnetic Study of Edge-Damage Effects in Perpendicular CoFeB/MgO Magnetic Tunnel Junction. *Yoshida, C.*, +, *TMAG July 2019 3401105*
- Microstructure Characteristics of 2:17 SmCo Commercial Magnets With Different Coercivities. *Xie, Z.H.*, +, *TMAG July 2019 2101504*
- Microwave Absorption Properties of Flake-Like Nd<sub>2</sub>Co<sub>16.5</sub>Si<sub>0.5</sub> Powders-Paraffin Composite. *Qiao, G.Y.*, +, *TMAG Feb. 2019 2800504*
- Offset Reduction in GMI-Based Device by Using Double-Frequency Bias-Current Modulation. *Espes, A.*, +, *TMAG Jan. 2019 4000504*
- Optical Detection of Phase-Resolved Ferromagnetic Resonance in Epitaxial FeCo Thin Films. *Li, Y.*, +, *TMAG July 2019 6100605*
- Optical Receiver With Helicity-Dependent Magnetization Reversal. *Azim, Z.A.*, +, *TMAG Jan. 2019 4400206*
- Optimization of the Gap Size of Flux Concentrators: Pushing Further on Low Noise Levels and High Sensitivities in Spin-Valve Sensors. *Silva, M.*, +, *TMAG July 2019 4400605*
- Proposal of Granular-Type Cap Layer with High-*K<sub>u</sub>* CoPt Grains and Ferromagnetic Oxide Grain Boundaries for Full Granular Media. *Tham, K.K.*, +, *TMAG July 2019 3200305*
- Realization of Energy Harvesting Based on Stress-Induced Modification of Magnetic Domain Structures in Microwires. *Bhatti, S.*, +, *TMAG July 2019 2301107*
- Spin-Orbit Torque-Driven Magnetic Switching of Co/Pt-CoFeB Exchange Spring Ferromagnets. *Song, M.*, +, *TMAG Aug. 2019 1401004*
- Studies of Exchange Coupling in FeCo/L<sub>10</sub>-FePt Bilayer Thin Films. *Vashisht, G.*, +, *TMAG March 2019 2101205*
- The Comparison of Magnetic Properties at Room Temperature in RCo<sub>5</sub> (R = Y, Sm, and Gd) Nanoflakes Synthesized via Time-Staged HEBM. *Bajorek, A.*, +, *TMAG Feb. 2019 2100904*
- The Correlation Between Magnetic Dead Layer and Perpendicular Magnetic Anisotropy in MgO/CoFeB/Ta Top Structure. *Shen, S.*, +, *TMAG Feb. 2019 3400205*
- The Network-Shaped Upheaval Structure in (002) Textured MgO Layer for L<sub>10</sub> FePt-Based Granular Media With Columnar Nanostructure. *Shimizu, A.*, +, *TMAG July 2019 3200208*
- The Step-Current Annealing: An Easy Method to Improve the Magnetoimpedance in Co-Rich Ribbons. *Moradi, M.*, +, *TMAG Jan. 2019 2000206*
- Tuning the Structural Transitions and Magnetocaloric Response in Gd<sub>5</sub>Si<sub>1.7</sub>Ge<sub>2.3</sub> Alloys Through Cobalt Addition. *Uthaman, B.*, +, *TMAG Oct. 2019 2501911*
- Cobalt compounds**
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- Effects of the Sintering Temperature on RF Complex Permeability of NiCu-CoZn Ferrites for Near-Field Communication Applications. *Lathiya, P.*, +, *TMAG Feb. 2019 2800404*
- Exploration of Non-Volatile MTJ/CMOS Circuits for DPA-Resistant Embedded Hardware. *Kumar, S.D.*, +, *TMAG Dec. 2019 3401308*
- Field Dependence of the Magnetization at Increasing Size: An Empirical Approach for Cobalt Ferrite Nanoparticles. *Stein, C.R.*, +, *TMAG Feb. 2019 6000203*
- Magnetic and Transport Properties of Co<sub>1+x</sub>FeV<sub>1-x</sub>Si Epitaxial Films Grown by Molecular Beam Epitaxy. *Yamada, S.*, +, *TMAG Feb. 2019 2400304*
- Texture Evolution and Magnetostriction of Rolled (Co<sub>70</sub>Fe<sub>30</sub>)<sub>99.8</sub>(NbC)<sub>0.2</sub> Sheets. *Zhao, Y.*, +, *TMAG Oct. 2019 2501805*
- Ultra-Low Profile Integrated Magnetic Inductors and Transformers for HF Applications. *Michel, J.*, +, *TMAG July 2019 8401207*
- Coercive force**
- A Novel Electromagnetic Testing Method Based on the Magnetic Field Interaction. *Sun, Y.*, +, *TMAG Aug. 2019 6201312*
- Advanced Processing of Micropatterned Elasto-Magnetic Membranes. *Martin, E.L.*, +, *TMAG July 2019 2900406*
- Analysis of Axial Field Flux-Switching Memory Machine Based on 3-D Magnetic Equivalent Circuit Network Considering Magnetic Hysteresis. *Li, N.*, +, *TMAG June 2019 7203104*
- Closed-Circuit Versus Open-Circuit Characterization of Hard Magnets. *Fliegans, J.*, +, *TMAG Feb. 2019 2101105*
- Coercivity Mechanism of Ga-Doped Nd-Fe-B Sintered Magnets. *Matsuura, Y.*, +, *TMAG Dec. 2019 5100606*
- Current-Induced Modulation of Coercive Field in the Ferromagnetic Oxide SrRuO<sub>3</sub>. *Yamanouchi, M.*, +, *TMAG July 2019 1400604*
- Demagnetizing Effects and Correction in Permeameter Measurements of Soft Magnetic Cylinders. *Chen, D.*, *TMAG May 2019 6000410*
- Design and Implementation of a Magnetic Press System for Creating Magnetically Oriented Barium Hexaferrite Pucks. *Johnson, S.D.*, +, *TMAG July 2019 2801406*
- Effect of Pt and FePt Layer Thickness on Microstructure and Magnetic Properties of L<sub>10</sub> FePt Films With Perpendicular Anisotropy. *Bae, J.*, +, *TMAG Aug. 2019 3200506*
- Effect of Sn<sup>4+</sup>-Zn<sup>2+</sup>-Co<sup>2+</sup> Doping on Structural and Magnetic Properties of M-Type Barium Hexaferrites. *Mesdaghi, S.*, +, *TMAG Jan. 2019 2100106*
- Electrical Resistivity and Magnetic Performance of Ceramics-Bonded Nd-Fe-B-Type Magnet Consolidated Using Dielectric Oxide Binder. *Kang, M.S.*, +, *TMAG July 2019 2101405*
- Enhanced Microwave Absorption Properties of Absorbing Materials Induced by Complex Coupling Agents. *Ye, L.*, +, *TMAG Feb. 2019 2800605*
- Field Dependence of the Magnetization at Increasing Size: An Empirical Approach for Cobalt Ferrite Nanoparticles. *Stein, C.R.*, +, *TMAG Feb. 2019 6000203*
- High-Q On-Chip C-Band Inductor With a Nanocrystalline MnZn-Ferrite Film Core. *Sai, R.*, +, *TMAG July 2019 2801304*
- Influence of Design Parameters on On-Load Demagnetization Characteristics of Switched Flux Hybrid Magnet Memory Machine. *Lyu, S.*, +, *TMAG July 2019 8106405*
- Magnetic Anisotropy and Ferromagnetic Resonance in Nitrogen-Incorporated NiFe<sub>2</sub>O<sub>4</sub> Thin Films. *Anoop Baby, K.B.*, +, *TMAG Feb. 2019 2000704*
- Magnetic Domain Structures and Magnetic Properties of Lightly Nd-Doped Sm-Co Magnets With High Squareness and High Heat Resistance. *Machida, H.*, +, *TMAG Feb. 2019 2100604*

- Magnetic-Polymer Composites for Bonding and 3D Printing of Permanent Magnets. *Palmero, E.M., +, TMAG Feb. 2019 2101004*
- Microstructure and Magnetic Properties of Anisotropic Strontium Hexaferrite Powders. *Dilipan, A.R., +, TMAG Aug. 2019 2101705*
- Microstructure Characteristics of 2:17 SmCo Commercial Magnets With Different Coercivities. *Xie, Z.H., +, TMAG July 2019 2101504*
- Microstructure Characterization and Magnetic Characteristics of Ce-Fe-B Based Spark Plasma Sintered Magnets. *Jiang, Q., +, TMAG Sept. 2019 2101806*
- MnGa (001)-Textured Film Fabricated on Thermally Oxidized Si Substrate for Application to Ion Beam Bit Patterned Media. *Ishikawa, T., +, TMAG July 2019 3200104*
- Observation of Longitudinal Spin Seebeck Voltage in YIG Films Chemically Prepared by Co-Precipitation and Spin Coating. *Yamada, K., +, TMAG Feb. 2019 4500104*
- Optimization of GMI Effect and Magnetic Properties of Co-Rich Microwires by Joule Heating. *Corte-Leon, P., +, TMAG Feb. 2019 2000404*
- Permanent Magnets Beyond Nd-Dy-Fe-B. *Hirosawa, S., TMAG Feb. 2019 2100506*
- Proposal of Granular-Type Cap Layer with High- $K_u$  CoPt Grains and Ferromagnetic Oxide Grain Boundaries for Full Granular Media. *Tham, K.K., +, TMAG July 2019 3200305*
- Remanence State and Coercivity in 1-D Chain of Polycrystalline Hollow Cobalt Nanospheres. *Guerra, Y., +, TMAG April 2019 7200305*
- Size Effects on Magnetic Property and Crystal Structure of Mn<sub>3</sub>O<sub>4</sub> Nanoparticles in Mesoporous Silica. *Tajiri, T., +, TMAG Feb. 2019 2300204*
- Synthesis of  $\gamma^3$ -Fe<sub>4</sub>N Soft Magnetic Material by High-Pressure Nitriding Approach. *Jiang, Y., +, TMAG Feb. 2019 2001504*
- The Comparison of Magnetic Properties at Room Temperature in RCo<sub>5</sub> (R = Y, Sm, and Gd) Nanoflakes Synthesized via Time-Staged HEBM. *Bajorek, A., +, TMAG Feb. 2019 2100904*
- Coils**
- A Comparative Investigation of Presaturated Core Fault Current Limiters Biased by DC Current and Permanent Magnet. *Eladawy, M., +, TMAG Nov. 2019 8002310*
- A Novel Coil With High Misalignment Tolerance for Wireless Power Transfer. *Li, Y., +, TMAG June 2019 2800904*
- AC Resistance Reduction of a Flexible Wireless Power Transmission Coil Using Magnetic Path Control Technology at 13.56 MHz. *Tokudaiji, Y., +, TMAG July 2019 8401407*
- An Improved Method for Measuring the Magnetic Properties of Silicon Steel With Double Sheets at High Frequency. *Chen, R., +, TMAG Feb. 2019 6100404*
- Calibration of Room Temperature Magnetic Sensor Array for Biomagnetic Measurement. *Adachi, Y., +, TMAG July 2019 5000506*
- Design and Analysis of Quasi-Omnidirectional Dynamic Wireless Power Transfer for Fly-and-Charge. *Han, W., +, TMAG July 2019 8001709*
- Design and Development of a New Magnetometer Calibration Device. *Angelopoulos, S., +, TMAG Jan. 2019 4000604*
- Design and Implementation of a New 6-DoF Magnetic Levitation Positioning System. *Lahdo, M., +, TMAG Dec. 2019 8107407*
- Design and Optimization of a Ring-Pair Permanent Magnet Array for Head Imaging in a Low-Field Portable MRI System. *Ren, Z.H., +, TMAG Jan. 2019 5100108*
- Determination of Partial Discharge Inception Voltage and Location of Partial Discharges by Means of Paschen's Theory and FEM. *Parent, G., +, TMAG June 2019 7203504*
- Development and Validation of Numerical Magnetic Force and Torque Model for Magnetically Levitated Actuator. *Xu, F., +, TMAG Jan. 2019 4900109*
- Double-Solenoid Ferrite Coils for Magnetic-Field Amplification in LF and MF Bands. *Sasaki, A., TMAG Dec. 2019 4004209*
- Eddy Current Linear Speed Sensor. *Mirzaei, M., +, TMAG Jan. 2019 4000304*
- Electrically Small Dipole Antenna Probe for Quasistatic Electric Field Measurements in Transcranial Magnetic Stimulation. *Zolj, A., +, TMAG Jan. 2019 5800110*
- Enhanced Field Sensitivity by Strong Mutual Coupling and Magnetoinduction in Amorphous Film/Planar Coil Multilayers. *Song, F., +, TMAG Feb. 2019 4001505*
- Experiments With a Compact Wireless Power Transfer System Using Strongly Coupled Magnetic Resonance and Metamaterials. *Correa, D.C., +, TMAG Aug. 2019 8401904*
- Exploring Fully Superconducting Air-Core Machine Topology for Off-Shore Wind Turbine Applications. *Lee, D., +, TMAG July 2019 8106506*
- Investigating the Role of Coil Designs and Anatomical Variations in Cerebellar TMS. *Zhong, X., +, TMAG July 2019 5000905*
- Investigation of the Influence of Magnetic Field Distribution on the Magnetorheological Absorber With Individually Controllable Coils. *Ouyang, Q., +, TMAG Aug. 2019 4600613*
- Loss Computation Method for Litz Cables With Emphasis on Bundle-Level Skin Effect. *Gyimothy, S., +, TMAG June 2019 6300304*
- Magnetic Calibration System With Interference Compensation. *Janosek, M., +, TMAG Jan. 2019 6000104*
- Magnetic Gradient Measurement Using Micro-Fabricated Shaped Rubidium Vapor Cell. *Ji, Y., +, TMAG Sept. 2019 4700405*
- Modeling and Analysis of a Biaxial Noncontact Lorentz Force Actuator. *Li, J., +, TMAG April 2019 4900209*
- Modeling and Design of a 3-DOF Magnetic Bearing With Toroidal Radial Control Coils. *Zhong, Y., +, TMAG July 2019 8300907*
- Modeling Electromagnetic Force and Axial-Stiffness for an Electromagnetic Negative-Stiffness Spring Toward Vibration Isolation. *Sun, Y., +, TMAG March 2019 8000410*
- Modeling of a Halbach Array Voice Coil Actuator via Fourier Analysis Based on Equivalent Structure. *Huang, X., +, TMAG Aug. 2019 8204606*
- Nd<sub>2</sub>Fe<sub>14</sub>N<sub>y</sub> Magnetic Core Application for Resonance Coil of 13.56 MHz GaN Wireless Power Transmission. *Ide, T., +, TMAG Oct. 2019 2801605*
- Novel Modular Fractional Slot Permanent Magnet Machines With Redundant Teeth. *Li, Y.X., +, TMAG Sept. 2019 8204810*
- Optimal Frequency of Low-Frequency Eddy-Current Testing for Detecting Defects on the Backside of Thick Steel Plates. *Yoshimura, W., +, TMAG July 2019 6201205*
- Power Allocation for Dynamic Dual-Pickup Wireless Charging System of Electric Vehicle. *Huang, Y., +, TMAG July 2019 8600106*
- Reducing the Maximum Temperature Rise of Coil Array Based on Current Proportion Commutation Algorithm for Magnetic Levitation Planar Motor. *Sun, H., +, TMAG Sept. 2019 8600207*
- Reduction of Eddy Current Loss in Rectangular Coils Using Magnetic Shield: Analysis With Homogenization Method. *Fujita, S., +, TMAG June 2019 7000604*
- Research on Transposition Method and Loss of Multi-Turn Coil in an Induction Motor. *Wang, D., +, TMAG Oct. 2019 7501604*
- The ARMM System: An Optimized Mobile Electromagnetic Coil for Non-Linear Actuation of Flexible Surgical Instruments. *Sikorski, J., +, TMAG Sept. 2019 5600109*
- Three-Axis Micofluxgate With a Fluxguide. *Jeng, J., +, TMAG July 2019 2002304*
- TMR-Sensor-Array-Based Misalignment-Tolerant Wireless Charging Technique for Roadway Electric Vehicles. *Liu, X., +, TMAG July 2019 4003107*
- Cold rolling**
- Texture Evolution and Magnetostriction of Rolled (Co<sub>70</sub>Fe<sub>30</sub>)<sub>99.8</sub>(NbC)<sub>0.2</sub> Sheets. *Zhao, Y., +, TMAG Oct. 2019 2501805*
- Colossal magnetoresistance**
- Magnetoimpedance Response of a Double-Exchange Metallic Ferromagnet La<sub>0.80</sub>Sr<sub>0.20</sub>MnO<sub>3</sub>. *Chaudhuri, U., +, TMAG July 2019 2801205*
- Combustion synthesis**
- Effect of Sn<sup>4+</sup>-Zn<sup>2+</sup>-Co<sup>2+</sup> Doping on Structural and Magnetic Properties of M-Type Barium Hexaferrites. *Mesdaghi, S., +, TMAG Jan. 2019 2100106*
- Commutation**
- Reducing the Maximum Temperature Rise of Coil Array Based on Current Proportion Commutation Algorithm for Magnetic Levitation Planar Motor. *Sun, H., +, TMAG Sept. 2019 8600207*
- Compaction**
- Synthesis of  $\gamma^3$ -Fe<sub>4</sub>N Soft Magnetic Material by High-Pressure Nitriding Approach. *Jiang, Y., +, TMAG Feb. 2019 2001504*

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- A Torque Compensation Control Scheme of PMSM Considering Wide Variation of Permanent Magnet Temperature. *Cho, S.*, +, *TMAG Feb. 2019 8200105*
- DC Bias Treatment of Hybrid Type Transformer Based on Magnetic Flux Modulation Mechanism. *Chen, Z.*, +, *TMAG June 2019 1700204*
- Magnetic Calibration System With Interference Compensation. *Janosek, M.*, +, *TMAG Jan. 2019 6000104*

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- 3-D Finite Element Analysis of Magnetolectric Composites Accounting for Material Nonlinearity and Eddy Currents. *Do, T.A.*, +, *TMAG Oct. 2019 7402008*
- Analysis of Magnetic Properties of Soft Magnetic Composite Using Discrete Element Method. *Maruo, A.*, +, *TMAG June 2019 2002205*
- Electromagnetic Properties of Au/Fe<sub>53</sub>Ni<sub>47</sub> Hybrid Granular Composite Materials. *Kono, K.*, +, *TMAG Feb. 2019 2800104*
- Electromagnetic Properties of Fe<sub>50</sub>Co<sub>50</sub>/Cu Granular Composite Materials Containing Flaky Particles. *Kasagi, T.*, +, *TMAG Feb. 2019 2800204*
- Enhanced Microwave Absorption Properties of Absorbing Materials Induced by Complex Coupling Agents. *Ye, L.*, +, *TMAG Feb. 2019 2800605*
- Homogenization of Magnetolectric 0–3 Type Composites by 3-D Multiphysics Finite-Element Modeling. *Do, T.A.*, +, *TMAG June 2019 7401004*
- Improved Tunability in Metglas/Ferrite/PZT Magnetolectric Tunable Inductors. *Zhang, J.*, +, *TMAG July 2019 2501604*
- Loss Characteristics and Model Verification of Soft Magnetic Composites Under Non-Sinusoidal Excitation. *Yu, X.*, +, *TMAG Feb. 2019 6100204*
- Magnetostrictive Sensors for Composite Damage Detection and Wireless Structural Health Monitoring. *Leong, Z.*, +, *TMAG July 2019 4003006*
- Miniaturization Techniques Using Magnetic Materials for Broadband Antenna Applications. *Durbha, R.*, +, *TMAG July 2019 2801007*
- Producing 3-D Imitations of Soft Magnetic Composite Material Geometries. *Vesa, J.*, +, *TMAG Oct. 2019 2002510*
- Research of Harmonic Effects on Core Loss in Soft Magnetic Composite Materials. *Yu, X.*, +, *TMAG Feb. 2019 6100305*
- Tailoring the Microstructure of Soft Magnetic Composites for Electric Motor Applications. *Schuller, D.*, +, *TMAG Feb. 2019 2001204*

**Compressibility**

- Local Measurement of Peening-Induced Residual Stresses on Iron Nickel Material Using Needle Probes Technique. *Tene Deffo, Y.A.*, +, *TMAG July 2019 7100208*

**Compressive strength**

- Magnetic PolyHIPE Composites With Activated Carbon and Iron Oxide Nanoparticles. *Seeharaj, P.*, +, *TMAG Feb. 2019 9400104*

**Computational complexity**

- Exploiting Cyclic Symmetry in Stream Function-Based Boundary Integral Formulations. *Kapidani, B.*, +, *TMAG June 2019 7200504*

**Computational electromagnetics**

- A 3-D Hybrid Cell Boundary Element Method for Time-Harmonic Eddy Current Problems on Multiply Connected Domains. *Moro, F.*, +, *TMAG March 2019 9200111*
- A Krylov-Subspace-Based Exponential Time Integration Scheme for Discontinuous Galerkin Time-Domain Methods. *Wang, J.*, +, *TMAG June 2019 7204605*
- Deep Learning for Magnetic Field Estimation. *Khan, A.*, +, *TMAG June 2019 7202304*
- Finite-Difference Simulation of Eddy Currents in Nonmagnetic Sheets via Electric Vector Potential. *Nagel, J.R.*, +, *TMAG Dec. 2019 6300708*
- High-Performance PEEC Analysis of Electromagnetic Scatterers. *Voltolina, D.*, +, *TMAG June 2019 7201204*
- Improved Equilibrated Error Estimates for Open Boundary Magnetostatic Problems Based on Dual A and H Formulations. *Zhao, Y.*, +, *TMAG June 2019 7201105*
- Multi-Objective Optimization of Contactor's Characteristics Based on RBF Neural Networks and Hybrid Method. *Yang, W.*, +, *TMAG June 2019 8001104*
- Treatment of Multiply Connected Domains in Time-Domain Discontinuous Galerkin  $H-\Phi$  Eddy Current Analysis. *Smajic, J.*, +, *TMAG June 2019 7200604*

**Computational fluid dynamics**

- Analysis of Multi-Physics Coupling Field of Multi-Degree-of-Freedom Permanent Magnet Spherical Motor. *Li, Z.*, +, *TMAG June 2019 8201505*
- High-Reliable Temperature Prediction Considering Stray Load Loss for Large Induction Machine. *Moon, S.*, +, *TMAG June 2019 8201905*
- Improved Coupling Strategy to Cover Curved FE-Facets in the Non-Conforming Mesh Method. *Wallinger, G.J.*, +, *TMAG June 2019 7202404*
- Numerical Model for the Detection of Single Particle in Two-Phase Lorentz Force Velocimetry. *Hang, N.T.T.*, +, *TMAG Feb. 2019 4300204*
- Performance Analysis and Optimization of Liquid-Cooled and Flywheel-Type Eddy Current Retarder. *Ye, L.*, +, *TMAG June 2019 8001005*

**Computational geometry**

- A Study on Block-Based Neural Network Equalization in TDMR System With LDPC Coding. *Luo, K.*, +, *TMAG Nov. 2019 6700605*

**Computerized instrumentation**

- Low Power *In Situ* AI Calibration of a Three-Axial Magnetic Sensor. *Alimi, R.*, +, *TMAG July 2019 4002407*

**Computerized monitoring**

- Overview of Spintronic Sensors With Internet of Things for Smart Living. *Liu, X.*, +, *TMAG Nov. 2019 0800222*

**Condition monitoring**

- Magnetostrictive Sensors for Composite Damage Detection and Wireless Structural Health Monitoring. *Leong, Z.*, +, *TMAG July 2019 4003006*
- Stator Fault Detection on DTC-Driven IM via Magnetic Signatures Aided by 2-D FEA Co-Simulation. *Eldeeb, H.H.*, +, *TMAG June 2019 8101505*

**Conducting materials**

- High Power Density Electrical Machines for Electric Vehicles—Comprehensive Review Based on Material Technology. *Ramesh, P.*, +, *TMAG Nov. 2019 0900121*

**Conductivity**

- A Twice Subtraction Method for Obtaining LOI in Pulsed Eddy Current Signals of Ferromagnetic Samples. *Wen, D.*, +, *TMAG Dec. 2019 6201607*

**Conductors (electric)**

- A Hybrid Modeling Approach for Current Diffusion in Rectangular Conductors. *Morisco, D.P.*, +, *TMAG Sept. 2019 8002111*
- A Symmetric Field-Circuit Coupled Formulation for 3-D Transient Full-Wave Maxwell Problems. *Zhao, Y.*, +, *TMAG June 2019 7201804*
- Calculation of Ion Flow Fields of HVdc Transmission Lines Based on Error Minimization Using Nodal Current Density. *Kim, J.*, +, *TMAG June 2019 7204204*
- Exploiting Cyclic Symmetry in Stream Function-Based Boundary Integral Formulations. *Kapidani, B.*, +, *TMAG June 2019 7200504*
- Fake Conductivity or Cohomology: Which to Use When Solving Eddy Current Problems With  $h$ -Formulations?. *Dlotko, P.*, +, *TMAG June 2019 7204104*
- Lorentz Force Surface Integration Method: Calculation of Lorentz Force by Means of Surface Integrals. *Petkovic, B.*, +, *TMAG Dec. 2019 7205307*

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- Open-Circuit Field Prediction of Interior Permanent-Magnet Motor Using Hybrid Field Model Accounting for Saturation. *Li, Z.*, +, *TMAG July 2019 8104707*

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- Analysis of Current Density Inside Human Body Using Geometric Multi-Grid Method. *Nomura, M.*, +, *TMAG June 2019 7203605*

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- Evaluation of Static Magnetic Fields Produced by Magnetic Floors Composed of Strontium Ferrite Powder Utilized in the Construction Industry. *Magdaleno-Adame, S.*, +, *TMAG April 2019 2001907*

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- Stator Fault Detection on DTC-Driven IM via Magnetic Signatures Aided by 2-D FEA Co-Simulation. *Eldeeb, H.H.*, +, *TMAG June 2019 8101505*

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Fractional Order PID Control for Reduction of Vibration and Noise on Induction Motor. *Hsu, C.*, *TMAG Nov. 2019 6700507*

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A 3-D Hybrid Cell Boundary Element Method for Time-Harmonic Eddy Current Problems on Multiply Connected Domains. *Moro, F.*, +, *TMAG March 2019 9200111*

A Multiscale Topology Optimization Methodology Based on Sequential Element Rejection–Admission and Boundary Element Evolvement. *Yang, W.*, +, *TMAG June 2019 7201304*

Multi-Objective Optimization of Contactor's Characteristics Based on RBF Neural Networks and Hybrid Method. *Yang, W.*, +, *TMAG June 2019 8001104*

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Robust Air-Gap Control of Superconducting-Hybrid MagLev Intelligent Conveyor System in Smart Factory. *Kim, C.*, *TMAG June 2019 8300705*

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A Convolution-Free Finite-Element Time-Domain Method for the Nonlinear Dispersive Vector Wave Equation. *Abraham, D.S.*, +, *TMAG Dec. 2019 7501904*

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Deep Learning for Magnetic Field Estimation. *Khan, A.*, +, *TMAG June 2019 7202304*

Deep Neural Network Based Media Noise Predictors for Use in High-Density Magnetic Recording Turbo-Detectors. *Sayyafan, A.*, +, *TMAG Dec. 2019 6701406*

Multi-Objective Topology Optimization of Rotating Machines Using Deep Learning. *Doi, S.*, +, *TMAG June 2019 7202605*

Topology Optimization Accelerated by Deep Learning. *Sasaki, H.*, +, *TMAG June 2019 7401305*

**Cooling**

Numerical and Experimental Validation to the Ability of Magnetoconvection to Cool Vegetable-Based Transformer Oil With Magnetic Nanoparticles. *Lee, S.*, +, *TMAG July 2019 4600505*

Performance Analysis and Optimization of Liquid-Cooled and Flywheel-Type Eddy Current Retarder. *Ye, L.*, +, *TMAG June 2019 8001005*

Reducing the Maximum Temperature Rise of Coil Array Based on Current Proportion Commutation Algorithm for Magnetic Levitation Planar Motor. *Sun, H.*, +, *TMAG Sept. 2019 8600207*

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Microwave-Assisted Magnetization Reversal in Dispersed Nanosized Barium Ferrite Particles for High-Density Magnetic Recording Tape. *Ozawa, E.*, *TMAG July 2019 3200404*

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Electromagnetic Properties of Fe<sub>50</sub>Co<sub>50</sub>/Cu Granular Composite Materials Containing Flaky Particles. *Kasagi, T.*, +, *TMAG Feb. 2019 2800204*

Ferromagnetism and Giant Paramagnetism of Copper Nanoparticles in Carbon Matrix. *Kocharian, A.*, +, *TMAG Feb. 2019 2300604*

High GMR Effect and Perfect Microstructure in CoFe/Cu Multilayers. *Milyaev, M.*, +, *TMAG April 2019 2300904*

Passive Shield Structure to Reduce Acoustic Noise Around Magnetic Resonance Imaging Device and Prevent Deterioration of Images. *Kawamura, T.*, +, *TMAG Dec. 2019 5100509*

**Copper alloys**

Changes in Microstructure and Magnetic Properties of Fe–B–Cu–C Ribbons According to Annealing Conditions. *Lee, K.*, +, *TMAG Feb. 2019 2000904*

Effect of Annealing on Magnetic and Mechanical Behaviors of NANOPERM-Type Alloys. *Hasiak, M.*, +, *TMAG Feb. 2019 2001606*

Microstructure Characteristics of 2:17 SmCo Commercial Magnets With Different Coercivities. *Xie, Z.H.*, +, *TMAG July 2019 2101504*

Optimization of GMI Effect and Magnetic Properties of Co-Rich Microwires by Joule Heating. *Corte-Leon, P.*, +, *TMAG Feb. 2019 2000404*

**Copper compounds**

Effects of the Sintering Temperature on RF Complex Permeability of NiCu–CoZn Ferrites for Near-Field Communication Applications. *Lathiya, P.*, +, *TMAG Feb. 2019 2800404*

**Core-shell nanostructures**

Electromagnetic Properties and Absorption Evaluation of Processed Carbonyl Iron and MWCNT at PANI Nanocomposites in the X-Band. *Govahi, M.*, +, *TMAG March 2019 2501409*

Fabrication of Ferrite-Coated Magnetic Fe–Mn–Si–Cr–Ni Alloy Utilizing Selective Oxidation of Mn Element. *Peng, H.*, +, *TMAG May 2019 2900307*

Fe/C Nanocapsule-Decorated Fe<sub>2</sub>B/C Nanocapsule Hybrids With Improved Gigahertz Electromagnetic Absorption Properties. *Liu, X.*, +, *TMAG Feb. 2019 2501205*

Ferromagnetism and Giant Paramagnetism of Copper Nanoparticles in Carbon Matrix. *Kocharian, A.*, +, *TMAG Feb. 2019 2300604*

**Coers**

A Comparative Investigation of Presaturated Core Fault Current Limiters Biased by DC Current and Permanent Magnet. *Eladawy, M.*, +, *TMAG Nov. 2019 8002310*

Cogging Torque Reduction on Transverse-Flux Motor With Multilevel Skew Configuration of Toothed Cores. *Ueda, Y.*, +, *TMAG July 2019 8203005*

Design of Ferrite Core for the Improvement of Power Efficiency in Induction Range. *Im, S.H.*, +, *TMAG June 2019 8001304*

**Corona**

Calculation of Accumulated Charge on Surface of Insulated House Near DC Transmission Lines by Method of Characteristics. *Xiao, F.*, +, *TMAG June 2019 7201405*

Calculation of Ion Flow Fields of HVdc Transmission Lines Based on Error Minimization Using Nodal Current Density. *Kim, J.*, +, *TMAG June 2019 7204204*

Calculation of Ion-Flow Field Near the Crossing of HVdc Transmission Lines Using Equivalent Corona Conductors. *Wang, D.*, +, *TMAG Aug. 2019 7401805*

Calculation of the Ionized Field of ±800 kV High Voltage DC Power Lines With the Presence of Charged Atmospheric Particles. *Zou, Z.*, +, *TMAG Oct. 2019 7501304*

Study on the Corona Discharge Ionized Field of UHVdc Based on Particle-in-Cell Iterative Method. *Zhu, T.*, +, *TMAG June 2019 7202004*

**Corrosion resistance**

Microstructure Characterization and Magnetic Characteristics of Ce–Fe–B Based Spark Plasma Sintered Magnets. *Jiang, Q.*, +, *TMAG Sept. 2019 2101806*

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A Digitally Compensated AMR Magnetometer. *Novotny, D.*, +, *TMAG Jan. 2019 4000805*

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A Model-Assisted Probability of Detection Study on Induction Thermography Technique. *Azzabi Zouraq, B.*, +, *TMAG June 2019 6200904*

Circuit-Field Coupling and Magnetic-Thermal Coupling Analysis of RRF Converter Designed With Magnetic Integration. *Wang, S.*, +, *TMAG May 2019 8000608*

Circuit-Field Coupling Methodology for Incorporation of Power Electronic Devices: A Piecewise-Linear Approach. *Gonzalez-Montanez, F.*, +, *TMAG June 2019 8401004*

Integral Formulation for Magnetic and Conductive Wire Loops in an External Time-Harmonic Magnetoquasi-Static Field. *Giussani, L.*, +, *TMAG Nov. 2019 7502304*

**Coupled mode analysis**

Dynamically Controllable Terahertz Graphene Y-Circulator. *Dmitriev, V.*, +, *TMAG Feb. 2019 4001712*

**Crack detection**

A Model-Assisted Probability of Detection Study on Induction Thermography Technique. *Azzabi Zourag, B., +, TMAG June 2019 6200904*

Advanced Multi-Media Element for Simulating Distribution of Magnetic Flux Density Influenced by Narrow Crack. *Jomdecha, C., +, TMAG June 2019 6200804*

Aluminum Alloy Sensitization Evaluation by Using Eddy Current Techniques Based on IGMR-Magnetometer Head. *Mareschal, O., +, TMAG Jan. 2019 6200104*

Arbitrary Crack Depth Profiling Through ACFM Data Using Type-2 Fuzzy Logic and PSO Algorithm. *Ahmadkhal, S.M., +, TMAG Feb. 2019 6200210*

**Cracks**

An Activity Determination Method of Crack Defects in Aluminum Plate and Steel Plate Based on EMAT. *Jin, L., +, TMAG June 2019 6201005*

**Critical currents**

Insertion Layer Thickness Dependence of Magnetic and Electrical Properties for Double-CoFeB/MgO-Interface Magnetic Tunnel Junctions. *Miura, S., +, TMAG July 2019 3401004*

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Design and Demonstration of Novel Magnetoencephalogram Detectors. *Uchiyama, T., +, TMAG July 2019 4400408*

**Cryptography**

Exploration of Non-Volatile MTJ/CMOS Circuits for DPA-Resistant Embedded Hardware. *Kumar, S.D., +, TMAG Dec. 2019 3401308*

**Crystal field interactions**

Magnetic Properties and Critical and Compensation Temperatures in Mixed Spin-1/2–Spin-1 Ferrimagnetic-Centered Rectangular Structure Using Monte Carlo Simulation. *Obeidat, A.A., +, TMAG Sept. 2019 1000305*

Theoretical Study of Gilbert Damping in Rare-Earth Permanent Magnets. *Saito, F., +, TMAG July 2019 2101604*

**Crystal growth from melt**

Effects of Rare-Earth (R = Pr, Gd, Ho, Er) Doping on Magnetostructural Phase Transitions and Magnetocaloric Properties in  $\text{Ni}_{43-x}\text{R}_x\text{Mn}_{46}\text{Sn}_{11}$  Shape Memory Alloys. *Aryal, A., +, TMAG Feb. 2019 2500505*

**Crystal growth from solution**

Formation of Samarium Ferrites With Controllable Morphology by Changing the Addition of KOH. *Shen, W., +, TMAG Feb. 2019 2000305*

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Effect of Pt and FePt Layer Thickness on Microstructure and Magnetic Properties of  $\text{L}_{10}$  FePt Films With Perpendicular Anisotropy. *Bae, J., +, TMAG Aug. 2019 3200506*

Electromagnetic Properties and Absorption Evaluation of Processed Carbonyl Iron and MWCNT at PANI Nanocomposites in the X-Band. *Govahi, M., +, TMAG March 2019 2501409*

Enhanced Microwave Absorption Properties of Absorbing Materials Induced by Complex Coupling Agents. *Ye, L., +, TMAG Feb. 2019 2800605*

Formation of Samarium Ferrites With Controllable Morphology by Changing the Addition of KOH. *Shen, W., +, TMAG Feb. 2019 2000305*

In-Field Annealing and Quenching for Ferromagnetic MnBi Under 19 T. *Kobayashi, R., +, TMAG Feb. 2019 1000204*

Microstructural Stability of Magnetorheological Fluids Based on Magnetic Energy Analysis. *Zheng, J., +, TMAG Oct. 2019 4600910*

Microstructure and Magnetic Properties of Anisotropic Strontium Hexaferrite Powders. *Dilipan, A.R., +, TMAG Aug. 2019 2101705*

Permanent Magnets Beyond Nd-Dy-Fe-B. *Hirosawa, S., TMAG Feb. 2019 2100506*

Texture Evolution and Magnetostriction of Rolled  $(\text{Co}_{70}\text{Fe}_{30})_{99.8}(\text{NbC})_{0.2}$  Sheets. *Zhao, Y., +, TMAG Oct. 2019 2501805*

The Comparison of Magnetic Properties at Room Temperature in  $\text{RCO}_5$  (R = Y, Sm, and Gd) Nanoflakes Synthesized via Time-Staged HEBM. *Bajorek, A., +, TMAG Feb. 2019 2100904*

Tuning the Structural Transitions and Magnetocaloric Response in  $\text{Gd}_5\text{Si}_{1.7}\text{Ge}_{2.3}$  Alloys Through Cobalt Addition. *Uthaman, B., +, TMAG Oct. 2019 2501911*

**Crystal morphology**

Field Dependence of the Magnetization at Increasing Size: An Empirical Approach for Cobalt Ferrite Nanoparticles. *Stein, C.R., +, TMAG Feb. 2019 6000203*

In-Field Annealing and Quenching for Ferromagnetic MnBi Under 19 T. *Kobayashi, R., +, TMAG Feb. 2019 1000204*

**Crystal orientation**

Anomalous Hall Effect in a Magnetic Topological Insulator  $(\text{BiMn})_2\text{Te}_3$ . *Pilidi, A., +, TMAG July 2019 2400506*

Behavior of Monosodium Urate Crystals in a Highly Viscous Model of Synovial Fluid. *Takeuchi, Y., +, TMAG July 2019 5000704*

Effect of Heat Treatment Under High Magnetic Field on Crystallographic Orientation and Magnetic Properties of Non-Oriented Electrical Steel Sheets. *Kinoshita, T., +, TMAG Feb. 2019 2001105*

MnGa (001)-Textured Film Fabricated on Thermally Oxidized Si Substrate for Application to Ion Beam Bit Patterned Media. *Ishikawa, T., +, TMAG July 2019 3200104*

The Effect of the Superlattice on the Magnetic and Transport Properties of Epitaxial Magnetite Thin Films. *Alraddadi, S., +, TMAG March 2019 2700205*

The Network-Shaped Upheaval Structure in (002) Textured MgO Layer for  $\text{L}_{10}$  FePt-Based Granular Media With Columnar Nanostructure. *Shimizu, A., +, TMAG July 2019 3200208*

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A Comparative Study of the Magnetocaloric Effect in  $\text{MnFePSiGeB}$  Prepared by Traditional Sintering and Spark Plasma Sintering. *Wang, G.F., +, TMAG Feb. 2019 2500705*

Effect of Pt and FePt Layer Thickness on Microstructure and Magnetic Properties of  $\text{L}_{10}$  FePt Films With Perpendicular Anisotropy. *Bae, J., +, TMAG Aug. 2019 3200506*

Effect of  $\text{Sn}^{4+}$ – $\text{Zn}^{2+}$ – $\text{Co}^{2+}$  Doping on Structural and Magnetic Properties of M-Type Barium Hexaferrites. *Mesdaghi, S., +, TMAG Jan. 2019 2100106*

Enhanced Microwave Absorption Properties of Absorbing Materials Induced by Complex Coupling Agents. *Ye, L., +, TMAG Feb. 2019 2800605*

High GMR Effect and Perfect Microstructure in CoFe/Cu Multilayers. *Milyaev, M., +, TMAG April 2019 2300904*

Influence of pH on Dynamic Magnetic Susceptibility of Iron-Oxide Nanoparticles in a Chitosan Hydrogel Matrix. *Villamin, M.E., +, TMAG Feb. 2019 5000204*

Magnetic Phase Transition and Magnetocaloric Effect in Ternary  $\text{Er}_2\text{Ni}_2\text{Ga}$  Compound. *Guo, D., +, TMAG Jan. 2019 2500204*

Magnetic States and Bandgaps of B-Site Substituted Double-Perovskite  $\text{Ba}_2\text{Pr}(\text{Bi}, \text{Sb})\text{O}_6$ . *Taniguchi, H., +, TMAG Feb. 2019 2400404*

Structural and Magnetic Properties and Magnetocaloric Effect in  $\text{SmNi}_5$  Compound. *Bajorek, A., +, TMAG Feb. 2019 2500304*

Tuning the Structural Transitions and Magnetocaloric Response in  $\text{Gd}_5\text{Si}_{1.7}\text{Ge}_{2.3}$  Alloys Through Cobalt Addition. *Uthaman, B., +, TMAG Oct. 2019 2501911*

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Crystal Structure and Dzyaloshinski–Moriya Micromagnetics. *Ullah, A., +, TMAG July 2019 7100305*

Size Effects on Magnetic Property and Crystal Structure of  $\text{Mn}_3\text{O}_4$  Nanoparticles in Mesoporous Silica. *Tajiri, T., +, TMAG Feb. 2019 2300204*

The Effect of Interstitial Nitrogen Addition on the Structural Properties of Supercells of  $\text{NdFe}_{12-x}\text{Ti}_x$ . *Skelland, C., +, TMAG Oct. 2019 6700205*

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Observation of Longitudinal Spin Seebeck Voltage in YIG Films Chemically Prepared by Co-Precipitation and Spin Coating. *Yamada, K., +, TMAG Feb. 2019 4500104*

The Comparison of Magnetic Properties at Room Temperature in  $\text{RCO}_5$  (R = Y, Sm, and Gd) Nanoflakes Synthesized via Time-Staged HEBM. *Bajorek, A., +, TMAG Feb. 2019 2100904*

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Effect of Annealing on Magnetic and Mechanical Behaviors of NANOPERM-Type Alloys. *Hasiak, M., +, TMAG Feb. 2019 2001606*

Effects of Rare-Earth (R = Pr, Gd, Ho, Er) Doping on Magnetostructural Phase Transitions and Magnetocaloric Properties in  $\text{Ni}_{43-x}\text{R}_x\text{Mn}_{46}\text{Sn}_{11}$  Shape Memory Alloys. *Aryal, A., +, TMAG Feb. 2019 2500505*

Improvement of Large Anomalous Hall Effect in Polycrystalline Antiferromagnetic  $\text{Mn}_{3-x}\text{Sn}$  Thin Films. *Ikeda, T., +, TMAG July 2019 2501704*

The Network-Shaped Upheaval Structure in (002) Textured MgO Layer for L1<sub>0</sub> FePt-Based Granular Media With Columnar Nanostructure. *Shimizu, A.*, +, *TMAG July 2019 3200208*

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A Comparative Study of the Magnetocaloric Effect in MnFePSiGeB Prepared by Traditional Sintering and Spark Plasma Sintering. *Wang, G.F.*, +, *TMAG Feb. 2019 2500705*

Curie Temperature of Sm<sub>2</sub>Fe<sub>17</sub> and Nd<sub>2</sub>Fe<sub>14</sub>B: A First-Principles Study. *Fukazawa, T.*, +, *TMAG July 2019 2101305*

Different Magnetic Field Effects on the  $\epsilon$ - $\tau$  Phase Transformation Between (Mn,Zn)-Al and Mn-Al-C. *Mitsui, Y.*, +, *TMAG Feb. 2019 2100704*

Improvement of Large Anomalous Hall Effect in Polycrystalline Antiferromagnetic Mn<sub>3-x</sub>Sn Thin Films. *Ikedo, T.*, +, *TMAG July 2019 2501704*

Magnetic and Thermoelectric Properties of Fe-Ti-Sn Alloys. *Saito, T.*, +, *TMAG Feb. 2019 2900104*

Magnetization Studies on Tb-Fe and Tb-Fe-Co Thin Films. *Rajasekhar, P.*, +, *TMAG Feb. 2019 2500804*

Optical Analysis of HAMR Media. *Victoria, R.H.*, +, *TMAG March 2019 3000908*

Studies of HAMR Recording by Hybrid Monte Carlo Micromagnetics. *Miao, J.*, +, *TMAG July 2019 3001604*

Tuning the Structural Transitions and Magnetocaloric Response in Gd<sub>5</sub>Si<sub>1.7</sub>Ge<sub>2.3</sub> Alloys Through Cobalt Addition. *Uthaman, B.*, +, *TMAG Oct. 2019 2501911*

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3-D Numerical Modeling for the Magnetization of Superconductors Using a Local Discontinuous Galerkin Finite Element Method. *Law, Y.*, +, *TMAG Aug. 2019 9000111*

Analysis of Current Density Inside Human Body Using Geometric Multi-Grid Method. *Nomura, M.*, +, *TMAG June 2019 7203605*

Cache Memory Design With Magnetic Skyrmions in a Long Nanotrack. *Chen, M.*, +, *TMAG Aug. 2019 1500309*

Calculation of Ion Flow Fields of HVdc Transmission Lines Based on Error Minimization Using Nodal Current Density. *Kim, J.*, +, *TMAG June 2019 7204204*

Fault Identification on a Fuel Cell by 3-D Current Density Reconstruction From External Magnetic Field Measurements. *Ifrek, L.*, +, *TMAG June 2019 6200705*

Mixed Numerical Methodology for Evaluation of Low-Frequency Electric and Magnetic Fields Near Power Facilities. *Diamantis, A.*, +, *TMAG June 2019 7000704*

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Fault Identification on a Fuel Cell by 3-D Current Density Reconstruction From External Magnetic Field Measurements. *Ifrek, L.*, +, *TMAG June 2019 6200705*

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Insertion Layer Thickness Dependence of Magnetic and Electrical Properties for Double-CoFeB/MgO-Interface Magnetic Tunnel Junctions. *Miura, S.*, +, *TMAG July 2019 3401004*

Magnetic Damping Constant of CoFeB/Pt Thin Films With Varying the Thicknesses of Pt and Insertion Layer of Al. *Wu, K.*, +, *TMAG July 2019 4100305*

Theoretical Study of Gilbert Damping Constants in Magnetic Multilayer Films. *Ozaki, D.*, +, *TMAG July 2019 1300505*

Theoretical Study of Gilbert Damping in Rare-Earth Permanent Magnets. *Saito, F.*, +, *TMAG July 2019 2101604*

#### Data acquisition

Circuit-Field Coupling Methodology for Incorporation of Power Electronic Devices: A Piecewise-Linear Approach. *Gonzalez-Montanez, F.*, +, *TMAG June 2019 8401004*

Magnetostrictive Tactile Sensor Array for Object Recognition. *Zhang, B.*, +, *TMAG July 2019 4002207*

Using the Standard Linear Ramps of the CMS Superconducting Magnet for Measuring the Magnetic Flux Density in the Steel Flux-Return Yoke. *Klyukhin, V.*, +, *TMAG Feb. 2019 8300504*

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A Study on Block-Based Neural Network Equalization in TDMR System With LDPC Coding. *Luo, K.*, +, *TMAG Nov. 2019 6700605*

ISI/ITI Turbo Equalizer for TDMR Using Trained Local Area Influence Probabilistic Model. *Sun, X.*, +, *TMAG April 2019 3100515*

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Proper Generalized Decomposition of Parameterized Electrothermal Problems Discretized by the Finite Integration Technique. *Krimm, A.*, +, *TMAG June 2019 7204404*

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External Loading Effects on Guided Wave Magnetostrictive Sensor Using a Surface-Bonded Nickel Patch. *Yoo, B.*, +, *TMAG Feb. 2019 2500905*

Homogenization of Magnetolectric 0-3 Type Composites by 3-D Multiphysics Finite-Element Modeling. *Do, T.A.*, +, *TMAG June 2019 7401004*

Self-Sensing Estimation of Mechanical Stress in Magnetostrictive Actuators. *Apicella, V.*, +, *TMAG Jan. 2019 2500106*

Spin Transport in Poly-Acene Films and the Derivative Films by Using the Spin Pumping. *Tanaka, Y.*, +, *TMAG Feb. 2019 1400304*

Tailoring the Microstructure of Soft Magnetic Composites for Electric Motor Applications. *Schuller, D.*, +, *TMAG Feb. 2019 2001204*

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A Parallel Hybrid Excited Machine Using Consequent Pole Rotor and AC Field Winding. *Li, J.*, +, *TMAG June 2019 8101605*

Analytical Modeling and Experimental Validation of Rotor Harmonic Eddy-Current Loss in High-Speed Surface-Mounted Permanent Magnet Motors. *Zhang, Z.*, +, *TMAG Feb. 2019 8100811*

Closed-Circuit Versus Open-Circuit Characterization of Hard Magnets. *Fliegans, J.*, +, *TMAG Feb. 2019 2101105*

Comparative Study of Two Novel Double-Sided Hybrid-Excitation Flux-Reversal Linear Motors With Surface and Interior PM Arrangements. *Zeng, Z.*, +, *TMAG June 2019 8202007*

Demagnetizing Effects and Correction in Permeameter Measurements of Soft Magnetic Cylinders. *Chen, D.*, *TMAG May 2019 6000410*

Design and Analysis of a New Hybrid-Excited Permanent Magnet Machine With Unequal Teeth. *Qu, G.*, +, *TMAG July 2019 8105805*

Hybrid Adopted Materials in Permanent Magnet-Assisted Synchronous Reluctance Motor With Rotating Losses Computation. *Amin, M.*, +, *TMAG June 2019 8103305*

Influence of Design Parameters on On-Load Demagnetization Characteristics of Switched Flux Hybrid Magnet Memory Machine. *Lyu, S.*, +, *TMAG July 2019 8106405*

Influence of Magnetic Interactions on the Demagnetization Scheme of Multiple Ferromagnetic Materials by Using Preisach Model. *Im, S.H.*, +, *TMAG Nov. 2019 7502504*

Irreversible Demagnetization Analysis for Multilayer Magnets of Permanent Magnet-Assisted Synchronous Reluctance Machines Considering Current Phase Angle. *Huynh, T.A.*, +, *TMAG July 2019 8106609*

Micromagnetic Study of Reducing Forbidden Bandgaps and its Width in a Triangular Antidot Array Waveguide With Different Orientations. *Vivek, T.*, +, *TMAG Feb. 2019 7200106*

Microstructure Characteristics of 2:17 SmCo Commercial Magnets With Different Coercivities. *Xie, Z.H.*, +, *TMAG July 2019 2101504*

Modeling and Analyzing a Novel Dual-Flux-Modulation Consequent-Pole Linear Permanent-Magnet Machine. *Zhou, Y.*, +, *TMAG July 2019 8203906*

#### Densification

A Comparative Study of the Magnetocaloric Effect in MnFePSiGeB Prepared by Traditional Sintering and Spark Plasma Sintering. *Wang, G.F.*, +, *TMAG Feb. 2019 2500705*

Effects of the Sintering Temperature on RF Complex Permeability of NiCu-CoZn Ferrites for Near-Field Communication Applications. *Lathiya, P.*, +, *TMAG Feb. 2019 2800404*

#### Density functional theory

Electronic and Magnetic Properties of Transition-Metal-Doped WS<sub>2</sub> Monolayer; First-Principles Investigations. *Hyun, J.*, +, *TMAG Feb. 2019 7000204*

Magnetic States and Bandgaps of B-Site Substituted Double-Perovskite Ba<sub>2</sub>Pr(Bi, Sb)O<sub>6</sub>. *Taniguchi, H.*, +, *TMAG Feb. 2019 2400404*

Shape Magnetic Anisotropy From Spin Density in Nanoscale Slab Systems. *Oda, T.*, +, *TMAG Feb. 2019 1300104*

Tuning the Magnetic Anisotropy of NiPtMnGa by Substitution and Epitaxial Strain. *Herper, H.C.*, +, *TMAG Feb. 2019 2100804*

#### Density measurement

Magnetic-Field-Sensing-Based Approach for Current Reconstruction, Sag Detection, and Inclination Detection for Overhead Transmission System. *Xu, Q.*, +, *TMAG July 2019 4003307*

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A Surface-Mounted Permanent-Magnet Motor With Sinusoidal Pulse-width-Modulation-Shaped Magnets. *Yang, Y.*, +, *TMAG Jan. 2019 8100108*

Genetic Algorithm With Species Differentiation Based on Kernel Support Vector Machine for Optimal Design of Wind Generator. *Son, B.*, +, *TMAG Sept. 2019 7500704*

Multi-Objective Robust Optimization for a Dual-Flux-Modulator Coaxial Magnetic Gear. *Liu, X.*, +, *TMAG July 2019 8002008*

Robust Design of an Outer Rotor Permanent Magnet Motor Through Six-Sigma Methodology Using Response Surface Surrogate Model. *Rafiee, V.*, +, *TMAG Oct. 2019 8107110*

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Optimization of the 3-D-MAMR Media Stack. *Chan, K.S.*, +, *TMAG Sept. 2019 7204905*

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3-D Magnetic Orientation Control of Ferromagnetic Film/Guanine Crystal Hybrid Plate. *Sogame, T.*, +, *TMAG July 2019 5000604*

A Novel Electromagnetic Testing Method Based on the Magnetic Field Interaction. *Sun, Y.*, +, *TMAG Aug. 2019 6201312*

Low-Temperature Magnetism of Gold Nano Particles Contained in Electrochemical Sugar Recognition System. *Goto, T.*, +, *TMAG Feb. 2019 2300404*

Material Identification of Single-Organic Particles Realized by Observing Their Field-Induced Translations. *Fukuyama, H.*, +, *TMAG Feb. 2019 6000304*

#### Diamagnetism

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#### Dielectric losses

Electromagnetic Properties and Absorption Evaluation of Processed Carbonyl Iron and MWCNT at PANI Nanocomposites in the X-Band. *Govahi, M.*, +, *TMAG March 2019 2501409*

Enhanced Microwave Absorption Properties of Absorbing Materials Induced by Complex Coupling Agents. *Ye, L.*, +, *TMAG Feb. 2019 2800605*

Extraordinary Ferromagnetic Coupling and Magnetodielectric Phenomena in NiO Nanoparticles. *Roy, S.*, +, *TMAG Feb. 2019 2501304*

Fe/C Nanocapsule-Decorated Fe<sub>2</sub>B/C Nanocapsule Hybrids With Improved Gigahertz Electromagnetic Absorption Properties. *Liu, X.*, +, *TMAG Feb. 2019 2501205*

Microwave Absorption Properties of Flake-Like Nd<sub>2</sub>Co<sub>16.5</sub>Si<sub>0.5</sub> Powders-Paraffin Composite. *Qiao, G.Y.*, +, *TMAG Feb. 2019 2800504*

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Electric Field Computation in Unbounded Domain Using Axial Green Function Method. *Jo, J.*, +, *TMAG June 2019 7202804*

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Effects of Rare-Earth (R = Pr, Gd, Ho, Er) Doping on Magnetostructural Phase Transitions and Magnetocaloric Properties in Ni<sub>43-x</sub>R<sub>x</sub>Mn<sub>46</sub>Sn<sub>11</sub> Shape Memory Alloys. *Aryal, A.*, +, *TMAG Feb. 2019 2500505*

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Finite-Element Computation of Antenna Impedance Frequency Response Considering Finite Conductivity. *Koczka, G.*, +, *TMAG June 2019 7400604*

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Behavior of Monosodium Urate Crystals in a Highly Viscous Model of Synovial Fluid. *Takeuchi, Y.*, +, *TMAG July 2019 5000704*

Biofunctionalizing Magnetic Nanowires Toward Targeting and Killing Leukemia Cancer Cells. *Alsharif, N.A.*, +, *TMAG Feb. 2019 5400105*

Modeling of Transcranial Magnetic Stimulation Versus Pallidal Deep Brain Stimulation for Parkinson's Disease. *Syeda, F.*, +, *TMAG July 2019 5000805*

#### Disk drives

A Detection Scheme With TMR Estimation Based on Multi-Layer Perceptrons for Bit Patterned Media Recording. *Han, S.*, +, *TMAG July 2019 3100704*

A Partially Pole-Embedded Transducer for Heat-Assisted Magnetic Recording. *Eason, K.*, *TMAG March 2019 3000306*

A Study on Iterative Decoding With LLR Modulator by Neural Network Using Adjacent Track Information in SMR System. *Nishikawa, M.*, +, *TMAG Dec. 2019 6701305*

- A Study on Iterative Decoding With LLR Modulator Using Neural Network in SMR System. *Nishikawa, M.*, +, *TMAG July 2019 3100604*
- Areal Density Comparison Between Conventional, Shingled, and Interlaced Heat-Assisted Magnetic Recording With Multiple Sensor Magnetic Recording. *Granz, S.*, +, *TMAG March 2019 3100203*
- ATI Considerations in Helium-Filled Hard Disk Drives. *Brockie, R.M.*, +, *TMAG March 2019 3000209*
- Characterizing Curvature in Heat-Assisted Magnetic Recording Using Spin-Stand Imaging. *Gilbert, I.*, +, *TMAG July 2019 3001204*
- Deep Neural Network Based Media Noise Predictors for Use in High-Density Magnetic Recording Turbo-Detectors. *Sayyafan, A.*, +, *TMAG Dec. 2019 6701406*
- Domain Wall Motion Control for Racetrack Memory Applications. *Kumar, D.*, +, *TMAG March 2019 2300708*
- Fretting Wear Simulation of the Dimple/Gimbal Interface. *Tang, Z.*, +, *TMAG March 2019 3300406*
- Joint Equalization of Asynchronous Reads in Array-Reader-Based Interlaced Magnetic Recording. *Hwang, E.*, +, *TMAG March 2019 3100107*
- Measuring Cross-Track Thermal Gradient in Heat-Assisted Magnetic Recording. *Gilbert, I.*, +, *TMAG Dec. 2019 6701005*
- Mitigating the Effects of Track Mis-Registration in Single-Reader/Two-Track Reading BPRM Systems. *Warisam, C.*, *TMAG July 2019 3001106*
- Sensing and Modeling Heat Transfer Between a Recording Head and Medium for Clearance Setting in HAMR. *Zuckerman, N.*, +, *TMAG March 2019 3300205*
- Skew-Aware Joint Multi-Track Equalization for Array Reader-Based Interlaced Magnetic Recording. *Hwang, E.*, +, *TMAG July 2019 3100804*
- Spacing Control in Heat-Assisted Magnetic Recording. *Xiong, S.*, +, *TMAG March 2019 3300306*
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- Displacement measurement**
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- Effects of Rare-Earth (R = Pr, Gd, Ho, Er) Doping on Magnetostructural Phase Transitions and Magnetocaloric Properties in  $\text{Ni}_{43-x}\text{R}_x\text{Mn}_{46}\text{Sn}_{11}$  Shape Memory Alloys. *Aryal, A.*, +, *TMAG Feb. 2019 2500505*
- Electron-Doping Effect on the Magnetic-Field-Sensitive Dielectric Anomaly in  $\text{CaMn}_{1-x}\text{Sb}_x\text{O}_3$ . *Taniguchi, H.*, +, *TMAG Feb. 2019 1000104*
- Enhanced Microwave Absorption Properties of Absorbing Materials Induced by Complex Coupling Agents. *Ye, L.*, +, *TMAG Feb. 2019 2800605*
- Temperature-Dependent Magnetic Properties of Bi-Doped  $\text{Fe}_{16}\text{N}_2$ : First Principles and Atomistic Study. *Khan, I.*, +, *TMAG Dec. 2019 2102005*
- Dosimetry**
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- Drugs**
- Photomagnetic Control of Nanoparticles With Radical Pair System: A Promising New Area of Liposomal Drug-Delivery System. *Nakagawa, H.*, +, *TMAG Feb. 2019 5000104*
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Effect of the Silicon Content on the Hysteresis Loss of Non-Oriented Steels. *Almeida, A.A.*, +, *TMAG Aug. 2019 2002404*

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Estimation of the Core Losses of Induction Machines Based on the Corrected Epstein Test Method. *Su, W.*, +, *TMAG March 2019 6300208*



- Evaluation of the Rotor Eddy-Current Losses in High-Speed PMSMs With a Shielding Cylinder for Different Stator Sources. *Hannon, B.*, +, *TMAG March 2019 8101010*
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- Iron Loss Analysis of Interior Permanent Magnet Synchronous Motors Using Dynamic Hysteresis Model Represented by Cauer Circuit. *Minowa, N.*, +, *TMAG June 2019 7401404*
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- Measurements of Iron Loss in PMSM Stator Cores Based on CoFe and SiFe Lamination Sheets and Stemmed From Different Manufacturing Processes. *Boubaker, N.*, +, *TMAG Jan. 2019 8100309*
- Novel Analytical Formulas for Eddy-Current Losses in Semicircle-Section Wound Core of Transformer. *Zhang, C.*, +, *TMAG Nov. 2019 6300612*
- Reduction of Eddy Current Loss in Rectangular Coils Using Magnetic Shield: Analysis With Homogenization Method. *Fujita, S.*, +, *TMAG June 2019 7000604*
- Reduction of Magnet Eddy Current Loss in PMSM by Using Partial Magnet Segment Method. *Wang, Y.*, +, *TMAG July 2019 8105105*
- Research of Harmonic Effects on Core Loss in Soft Magnetic Composite Materials. *Yu, X.*, +, *TMAG Feb. 2019 6100305*
- Simple Numerical Calculation Method of Rotational Iron Loss in Silicon Steel Sheets. *Gao, Y.*, +, *TMAG June 2019 6300404*
- Eddy current testing**
- Advanced Multi-Media Element for Simulating Distribution of Magnetic Flux Density Influenced by Narrow Crack. *Jomdecha, C.*, +, *TMAG June 2019 6200804*
- Aluminum Alloy Sensitization Evaluation by Using Eddy Current Techniques Based on IGMR-Magnetometer Head. *Mareschal, O.*, +, *TMAG Jan. 2019 6200104*
- Optimal Frequency of Low-Frequency Eddy-Current Testing for Detecting Defects on the Backside of Thick Steel Plates. *Yoshimura, W.*, +, *TMAG July 2019 6201205*
- Stochastic Metamodel for Probability of Detection Estimation of Eddy-Current Testing Problem in Random Geometric. *Abdelli, D.E.*, +, *TMAG June 2019 6200604*
- Eddy currents**
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- A 3-D Hybrid Cell Boundary Element Method for Time-Harmonic Eddy Current Problems on Multiply Connected Domains. *Moro, F.*, +, *TMAG March 2019 9200111*
- A Ferrite-Filled Cavity Resonator for Electronic Article Surveillance on Metallic Packaging. *Keatley, P.S.*, +, *TMAG Dec. 2019 4004110*
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- A Scalable, Broadband, and Physics-Based Model for On-Chip Rectangular Spiral Inductors. *Jayaraman, S.S.*, +, *TMAG Sept. 2019 8402006*
- A Twice Subtraction Method for Obtaining LOI in Pulsed Eddy Current Signals of Ferromagnetic Samples. *Wen, D.*, +, *TMAG Dec. 2019 6201607*
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- Estimation of the Core Losses of Induction Machines Based on the Corrected Epstein Test Method. *Su, W.*, +, *TMAG March 2019 6300208*
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Numerical Calculation of Dispersion Diagrams and Field Distributions of Waves in 3-D Periodic Split-Ring Resonator Media. *Nitas, M., +, TMAG Dec. 2019 7502004*

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Analysis of Zero Stiffness Permanent Magnet Bearing Including Reluctance Effect. *Zeng, L., +, TMAG Oct. 2019 8204908*

Elastic and Magnetoelastic Properties of Fe-Rich Tetragonal Y–Fe Compounds: Phenomenology and Electron Theory. *Inoue, J., +, TMAG Feb. 2019 2100304*

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#### Electric breakdown

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Flux-Density Harmonics Analysis of Switched-Flux Permanent Magnet Machines. *Zeng, Z., +, TMAG June 2019 8103607*

Influence of Exciting Field on Electromagnetic Torque of Novel Switched Reluctance Motor. *Liu, A., +, TMAG July 2019 8202807*

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DC Drift Error Mitigation Method for Three-Phase Current Reconstruction With Single Hall Current Sensor. *Yan, H., +, TMAG Feb. 2019 8100604*

Design and Implementation of a New 6-DoF Magnetic Levitation Positioning System. *Lahdo, M., +, TMAG Dec. 2019 8107407*

Magnetic Calibration System With Interference Compensation. *Janosek, M., +, TMAG Jan. 2019 6000104*

Magnetic-Field-Sensing-Based Approach for Current Reconstruction, Sag Detection, and Inclination Detection for Overhead Transmission System. *Xu, Q., +, TMAG July 2019 4003307*

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Practical Use of the GMI Effect to Make a Current Sensor. *Asfour, A., +, TMAG Jan. 2019 4000410*

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Calculation of Accumulated Charge on Surface of Insulated House Near DC Transmission Lines by Method of Characteristics. *Xiao, F., +, TMAG June 2019 7201405*

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Electric Field Computation in Unbounded Domain Using Axial Green Function Method. *Jo, J., +, TMAG June 2019 7202804*

Mixed Numerical Methodology for Evaluation of Low-Frequency Electric and Magnetic Fields Near Power Facilities. *Diamantis, A., +, TMAG June 2019 7000704*

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Study on the Corona Discharge Ionized Field of UHVdc Based on Particle-in-Cell Iterative Method. *Zhu, T., +, TMAG June 2019 7202004*

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#### Electric generators

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Genetic Algorithm With Species Differentiation Based on Kernel Support Vector Machine for Optimal Design of Wind Generator. *Son, B., +, TMAG Sept. 2019 7500704*

Influence of Slot Combination on Performance of Brushless Doubly Fed Generator With Hybrid Rotor. *Zhang, F., +, TMAG Nov. 2019 6700406*

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Topology Optimization Accelerated by Deep Learning. *Sasaki, H.*, +, *TMAG June 2019 7401305*

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Computation of Leakage Inductance of End Coils in Electrical Machines Considering Core Effects. *Aragon-Verduzco, D.A.*, +, *TMAG Dec. 2019 8107812*

Diagnosis Method of Magnetization Distribution in Permanent Magnet Using Approximate Function Based on 1-D Fourier Series Expansion. *Okamoto, Y.*, +, *TMAG June 2019 7204704*

Family Phenomenon in Electric Machine Winding MMF Space Harmonics: Attribution and Applications. *Tang, N.*, +, *TMAG May 2019 8101310*

Method-Specific Significance of Field Components in Three Methods of Torque Estimation. *Naveen Kumar, E.*, +, *TMAG Dec. 2019 8107909*

Research of Harmonic Effects on Core Loss in Soft Magnetic Composite Materials. *Yu, X.*, +, *TMAG Feb. 2019 6100305*

Tolerance Analysis for Electric Machine Design Optimization: Classification, Modeling and Evaluation, and Example. *Bramerdorfer, G.*, *TMAG Aug. 2019 8106809*

Two-Dimensional Fourier-Based Modeling of Electric Machines—An Overview. *Hannon, B.*, +, *TMAG Oct. 2019 8107217*

#### Electric motors

A New Multi-Objective Optimization Method of Magnetic Levitation Planar Motor. *Zheng, T.*, +, *TMAG Aug. 2019 8204408*

Evaluating the Suitability of Partial Recrystallization as a Strengthening Method for Thin-Gauge, High-Strength Non-Orientated Electrical Steel. *O'Reilly, M.*, +, *TMAG Feb. 2019 2001405*

Multi-Objective Topology Optimization of Rotating Machines Using Deep Learning. *Doi, S.*, +, *TMAG June 2019 7202605*

Simple Numerical Calculation Method of Rotational Iron Loss in Silicon Steel Sheets. *Gao, Y.*, +, *TMAG June 2019 6300404*

#### Electric potential

A Hybrid Interior Permanent Magnet Variable Flux Memory Machine Using Two-Part Rotor. *Zheng, Y.*, +, *TMAG July 2019 8106008*

A Novel Modular Stator Hybrid-Excited Doubly Salient Synchronous Machine With Stator Slot Permanent Magnets. *Zheng, M.*, +, *TMAG July 2019 8104409*

A Novel Tubular Partitioned Stator Flux-Reversal Permanent Magnet Linear Machine for Direct-Drive Wave Energy Generation. *Zhao, L.*, +, *TMAG Nov. 2019 7502707*

A Parallel Hybrid Excited Machine Using Consequent Pole Rotor and AC Field Winding. *Li, J.*, +, *TMAG June 2019 8101605*

A Planar Generator for a Wave Energy Converter. *Trapanese, M.*, +, *TMAG Dec. 2019 6700307*

A Surface-Mounted Permanent-Magnet Motor With Sinusoidal Pulse-width-Modulation-Shaped Magnets. *Yang, Y.*, +, *TMAG Jan. 2019 8100108*

An Analytical Subdomain Model for Dual-Rotor Permanent Magnet Motor With Halbach Array. *Golovanov, D.*, +, *TMAG Dec. 2019 8205216*

Analysis and Optimization of Asymmetrical Double-Sided Electrodynamic Suspension Devices. *Duan, J.*, +, *TMAG June 2019 8300605*

Analysis of a Novel Hybrid-PM Variable-Flux Machine Using New Magnet Material CeFeB. *Wang, M.*, +, *TMAG July 2019 8106207*

Analytical Model of Magnetic Field of a Permanent Magnet Synchronous Motor With a Trapezoidal Halbach Permanent Magnet Array. *Zhang, X.*, +, *TMAG July 2019 8105205*

Comparative Study Between a Novel Multi-Tooth and a V-Shaped Flux-Switching Permanent Magnet Machines. *Zhao, G.*, +, *TMAG July 2019 8104908*

Comparison of Electromagnetic and Dynamic Characteristics of Linear Oscillating Actuators With Rare-Earth and Ferrite Magnets. *Kim, C.*, +, *TMAG July 2019 8203204*

Design and Analysis of a New Five-Phase Dual-Stator Consequent-Pole Brushless Hybrid Excitation Machine. *Fan, Y.*, +, *TMAG Jan. 2019 8100410*

Design and Analysis of Double-Air-Gap Flux-Modulated Permanent Magnet Motor Considering Leading Working Harmonics. *Xiang, Z.*, +, *TMAG June 2019 8101705*

Design and Analysis of Permanent Magnet Homopolar Machine for Fly-wheel Energy Storage System. *Liu, Z.Q.*, +, *TMAG July 2019 8105706*

Establishment of a New Dual Rotor Flux Switching Motor Magnetic Circuit Model and Optimization of No-Load Back EMF. *Liu, Y.*, +, *TMAG Dec. 2019 7503005*

Fast and Systematic Design Optimization of Surface-Mounted PM Machines Using Advanced Analytical Models and Subharmonic Elimination Methods. *Min, S.G.*, +, *TMAG Jan. 2019 8100216*

General Analytical Magnetic Model for Partitioned-Stator Flux-Reversal Machines With Four Types of Magnetization Patterns. *Vahaj, A.A.*, +, *TMAG Nov. 2019 8107621*

High-Performance Ferrite Permanent Magnet Brushless Machines. *Shan-shal, A.*, +, *TMAG July 2019 8104504*

New Hybrid Stator Design for High-Speed PMSMS Based on Selective Laser Melting of 3-D Printing. *Huang, P.*, +, *TMAG July 2019 8203404*

Novel Modular Fractional Slot Permanent Magnet Machines With Redundant Teeth. *Li, Y.X.*, +, *TMAG Sept. 2019 8204810*

Optimal Slot Design of IPMSM in Railway With Independently Rotating Wheelsets. *Liu, H.*, +, *TMAG Feb. 2019 8200404*

Proposal of Wind Vibrational Power Generator Using Magnetostrictive Material. *Hasegawa, K.*, +, *TMAG July 2019 8203104*

Quantitative Comparison of Distinct Dual-Stator Permanent Magnet Vernier Machines for Direct-Drive Applications. *Song, Z.*, +, *TMAG July 2019 8104806*

Research on Improved Permanent Magnet Linear Synchronous Motor for Direct-Drive Application. *Wen, C.*, +, *TMAG Oct. 2019 8107007*

The Influence of Winding Location in Flux-Switching Permanent-Magnet Machines. *Zhang, H.*, +, *TMAG July 2019 8104205*

Two-Dimensional Fourier-Based Modeling of Electric Machines—An Overview. *Hannon, B.*, +, *TMAG Oct. 2019 8107217*

#### Electric propulsion

MPTC for PMSMs of EVs With Multi-Motor Driven System Considering Optimal Energy Allocation. *Sun, X.*, +, *TMAG July 2019 8104306*

#### Electric sensing devices

Curved Trapezoidal Magnetic Flux Concentrator Design for Current Measurement of Multi-Core Power Cable With Magnetic Sensing. *Zhu, K.*, +, *TMAG April 2019 4001809*

Design and Implementation of an New 6-DoF Magnetic Levitation Positioning System. *Lahdo, M.*, +, *TMAG Dec. 2019 8107407*

Magnetic-Field-Sensing-Based Approach for Current Reconstruction, Sag Detection, and Inclination Detection for Overhead Transmission System. *Xu, Q.*, +, *TMAG July 2019 4003307*

Overview of Spintronic Sensors With Internet of Things for Smart Living. *Liu, X.*, +, *TMAG Nov. 2019 0800222*

Practical Use of the GMI Effect to Make a Current Sensor. *Asfour, A.*, +, *TMAG Jan. 2019 4000410*

Rotational Eddy Current Speed Sensor. *Mirzaei, M.*, +, *TMAG Sept. 2019 4003710*

#### Electric vehicle charging

Magnetic and Thermal Coupled Field Analysis of Wireless Charging Systems for Electric Vehicles. *Alsayegh, M.*, +, *TMAG June 2019 7400704*

Power Allocation for Dynamic Dual-Pickup Wireless Charging System of Electric Vehicle. *Huang, Y.*, +, *TMAG July 2019 8600106*

TMR-Sensor-Array-Based Misalignment-Tolerant Wireless Charging Technique for Roadway Electric Vehicles. *Liu, X.*, +, *TMAG July 2019 4003107*

#### Electric vehicles

A New Modular Relieving-DC-Saturation Vernier Reluctance Machine Excited by Zero-Sequence Current for Electric Vehicle. *Zhao, X.*, +, *TMAG July 2019 8104605*

A Novel Vernier Reluctance Machine Excited by Slot PMs and Zero-Sequence Current for Electric Vehicle. *Zhao, X.*, +, *TMAG June 2019 8102405*

A Study on the Reduction of Cogging Torque for the Skew of a Magnetic Gearing Synchronous Motor. *Jo, L.*, +, *TMAG Feb. 2019 8100505*

A Surface-Mounted Permanent-Magnet Motor With Sinusoidal Pulse-width-Modulation-Shaped Magnets. *Yang, Y.*, +, *TMAG Jan. 2019 8100108*

Analysis of a Novel Hybrid-PM Variable-Flux Machine Using New Magnet Material CeFeB. *Wang, M.*, +, *TMAG July 2019 8106207*

Calculation of the Iron losses in a Spoke-Type Permanent Magnet Synchronous In-Wheel Motor for Electric Vehicles by Utilizing the Bertotti Model. *Liang, P.*, +, *TMAG July 2019 8202407*

Design and Analysis of a New Five-Phase Dual-Stator Consequent-Pole Brushless Hybrid Excitation Machine. *Fan, Y.*, +, *TMAG Jan. 2019 8100410*

Design and Analysis of Double-Air-Gap Flux-Modulated Permanent Magnet Motor Considering Leading Working Harmonics. *Xiang, Z.*, +, *TMAG June 2019 8101705*

Influences of Stator Teeth Number on PM Coupling Levels of Co-Axial Dual-Mechanical-Port Flux-Switching PM Machines. *Zhou, L.*, +, *TMAG July 2019 8104007*

MPTC for PMSMs of EVs With Multi-Motor Driven System Considering Optimal Energy Allocation. *Sun, X.*, +, *TMAG July 2019 8104306*

Thermal Analysis of Modular-Spoke-Type Permanent-Magnet Machines Based on Thermal Network and FEA Method. *Qi, J.*, +, *TMAG July 2019 8104105*

#### Electrical conductivity

Electromagnetic Properties of Au/Fe<sub>53</sub>Ni<sub>47</sub> Hybrid Granular Composite Materials. *Kono, K.*, +, *TMAG Feb. 2019 2800104*

Numerical Simulations of Temperature Stability Limits in High-Voltage Direct Current Cable Insulations. *Jorgens, C.*, +, *TMAG June 2019 8000904*

Study of Insulation Material Properties Subjected to Nonlinear AC-DC Composite Electric Field for Converter Transformer. *Wang, Q.*, +, *TMAG Feb. 2019 8400604*

The Effect of the Superlattice on the Magnetic and Transport Properties of Epitaxial Magnetite Thin Films. *Alraddadi, S.*, +, *TMAG March 2019 2700205*

#### Electrical discharge machining

Measurements of Iron Loss in PMSM Stator Cores Based on CoFe and SiFe Lamination Sheets and Stemmed From Different Manufacturing Processes. *Boubaker, N.*, +, *TMAG Jan. 2019 8100309*

#### Electrical resistivity

3-D Numerical Modeling for the Magnetization of Superconductors Using a Local Discontinuous Galerkin Finite Element Method. *Law, Y.*, +, *TMAG Aug. 2019 9000111*

Anomalous Hall Effect in a Magnetic Topological Insulator (BiMn)<sub>2</sub>Te<sub>3</sub>. *Pilidi, A.*, +, *TMAG July 2019 2400506*

Effect of the Silicon Content on the Hysteresis Loss of Non-Oriented Steels. *Almeida, A.A.*, +, *TMAG Aug. 2019 2002404*

Electrical Resistivity and Magnetic Performance of Ceramics-Bonded Nd-Fe-B-Type Magnet Consolidated Using Dielectric Oxide Binder. *Kang, M.S.*, +, *TMAG July 2019 2101405*

Influence of DC-Biased Magnetic Induction on Magnetic Property of Silicon Steel. *Chen, J.*, +, *TMAG May 2019 2002007*

Magnetic and Thermoelectric Properties of Fe-Ti-Sn Alloys. *Saito, T.*, +, *TMAG Feb. 2019 2900104*

Synthesis of  $\gamma^3$ -Fe<sub>4</sub>N Soft Magnetic Material by High-Pressure Nitriding Approach. *Jiang, Y.*, +, *TMAG Feb. 2019 2001504*

#### Electrochemistry

Microstructure Characterization and Magnetic Characteristics of Ce-Fe-B Based Spark Plasma Sintered Magnets. *Jiang, Q.*, +, *TMAG Sept. 2019 2101806*

#### Electrodeposition

Advanced Processing of Micropatterned Elasto-Magnetic Membranes. *Martin, E.L.*, +, *TMAG July 2019 2900406*

#### Electrodes

A Novel Three-Axial Force Tactile Sensor Based on the Fringing Effect of Electric Field. *Sun, Y.*, +, *TMAG Sept. 2019 7500305*

#### Electrodynamics

Analysis and Optimization of Asymmetrical Double-Sided Electrodynamics Suspension Devices. *Duan, J.*, +, *TMAG June 2019 8300605*

Numerical and Experimental Determination of Local Building Factors of a Three-Phase Transformer Core Package. *Kanto, Y.*, +, *TMAG Feb. 2019 8400808*

#### Electroencephalography

Alpha Rhythm and Visual Event-Related Fields Measurements at Room Temperature Using Magneto-Impedance Sensor System. *Ma, J.*, +, *TMAG July 2019 4002706*

Electroencephalogram Characteristics Induced by Different Magnetic Stimulation Modes of Acupuncture Point. *Fu, L.*, +, *TMAG June 2019 5000304*

#### Electrohydrodynamics

Numerical Model for the Detection of Single Particle in Two-Phase Lorentz Force Velocimetry. *Hang, N.T.T.*, +, *TMAG Feb. 2019 4300204*

#### Electroluminescence

Spin Injection From EuS/Co Multilayers Into GaAs Detected by Polarized Electroluminescence. *Goschew, A.*, +, *TMAG July 2019 1400804*

#### Electromagnetic actuators

Adaptive Isogeometric Analysis Applied to an Electromagnetic Actuator. *Friedrich, L.A.J.*, +, *TMAG June 2019 7401104*

Exact Analytical Method for Active Magnetic Bearings With Rotor Eccentricity. *Du, T.*, +, *TMAG Dec. 2019 8301112*

Material Interpolation in Multi-Material Topology Optimization for Magnetic Device Design. *Jung, Y.*, +, *TMAG Nov. 2019 7502404*

Rational Approximation of the Analytical Model of Nonlaminated Cylindrical Magnetic Actuators for Flux Estimation and Control. *Seifert, R.*, +, *TMAG Dec. 2019 8301016*

Selection of Spatial Filters for ON/OFF Based Topology Optimization of a C-Core Electromagnetic Actuator. *Midha, C.*, +, *TMAG Oct. 2019 7501504*

Self-Sensing Estimation of Mechanical Stress in Magnetostrictive Actuators. *Apicella, V.*, +, *TMAG Jan. 2019 2500106*

#### Electromagnetic coupling

Coupled Electromagnetic-Thermal Optimization of a Separate-Stator Modular Machine With Biased Flux. *Liu, Y.*, +, *TMAG June 2019 8103405*

Enhanced Field Sensitivity by Strong Mutual Coupling and Magnetoinduction in Amorphous Film/Planar Coil Multilayers. *Song, F.*, +, *TMAG Feb. 2019 4001505*

Overview of 2-Degree-of-Freedom Rotary-Linear Motors Focusing on Coupling Effect. *Xie, L.*, +, *TMAG April 2019 8200611*

#### Electromagnetic devices

A Methodology Based on Quantum Evolutionary Algorithm for Topology Optimization of Electromagnetic Devices. *Li, Y.*, +, *TMAG June 2019 7204004*

A Multilevel Monte Carlo Method for High-Dimensional Uncertainty Quantification of Low-Frequency Electromagnetic Devices. *Galatzka, A.*, +, *TMAG Aug. 2019 7401712*

Deep Learning for Magnetic Field Estimation. *Khan, A.*, +, *TMAG June 2019 7202304*

Design of a Novel Electromagnetic Energy Harvester With Dual Core for Deicing Device of Transmission Lines. *Paul, S.*, +, *TMAG Feb. 2019 8000104*

Multi-Objective Optimization of Contactors' Characteristics Based on RBF Neural Networks and Hybrid Method. *Yang, W.*, +, *TMAG June 2019 8001104*

Proposal of a Bi-Objective Kriging Adapted Output Space Mapping Technique for Electromagnetic Design Optimization. *Gong, J.*, +, *TMAG June 2019 9400505*

#### Electromagnetic field theory

Stochastic PEEC Method Based on Polynomial Chaos Expansion. *Torchio, R.*, +, *TMAG June 2019 7204504*

Treatment of Multiply Connected Domains in Time-Domain Discontinuous Galerkin  $H-\Phi$  Eddy Current Analysis. *Smajic, J.*, +, *TMAG June 2019 7200604*

#### Electromagnetic fields

A Symmetric Field-Circuit Coupled Formulation for 3-D Transient Full-Wave Maxwell Problems. *Zhao, Y.*, +, *TMAG June 2019 7201804*

Acceleration of Transient Non-Linear Electromagnetic Field Analyses Using an Automated Subspace Correction Method. *Iwashita, T.*, +, *TMAG June 2019 7203704*

Analysis of Axial Field Flux-Switching Memory Machine Based on 3-D Magnetic Equivalent Circuit Network Considering Magnetic Hysteresis. *Li, N.*, +, *TMAG June 2019 7203104*

Detection and Imaging of Magnetic Field in the Microwave Regime With a Combination of Magnetic Losses Material and Thermofluorescent Molecules. *Ragazzo, H.*, +, *TMAG Feb. 2019 6500104*

Levitation of Conductive and Magnetically Anisotropic Ball. *Spalek, D.*, *TMAG March 2019 8000507*

Lightning-Generated Transients in Buildings With an Efficient PEEC Method. *Qi, R.*, +, *TMAG Nov. 2019 7502605*

Massively Parallel Computation for 3-D Nonlinear Finite Edge Element Problem With Transmission Line Decoupling Technique. *Li, J.*, +, *TMAG Oct. 2019 7401908*

Novel Analytical Formulas for Eddy-Current Losses in Semicircle-Section Wound Core of Transformer. *Zhang, C.*, +, *TMAG Nov. 2019 6300612*

Performance Analysis and Optimization of Liquid-Cooled and Fly-wheel-Type Eddy Current Retarder. *Ye, L.*, +, *TMAG June 2019 8001005*

Performance Calculation of a Dual Stator Solid Rotor Axial Flux Induction Motor Using the Multi-Slice and Multi-Layer Method. *Hong, C.*, +, *TMAG Feb. 2019 8100709*

Three-Phase AC Linear Proportional Solenoid Actuator With Zero Hysteresis in Current–Thrust Force Characteristics. *Tominari, Y.*, +, *TMAG July 2019 8203508*

#### Electromagnetic forces

A Magnetic Bearing Switched Reluctance Motor With Simultaneous Excitation by a Modified Half-Bridge Converter. *Liu, Z.*, +, *TMAG Oct. 2019 7500905*

Calculation and Analysis of Mechanical Characteristics of Transformer Windings Under Short-Circuit Condition. *Wang, S.*, +, *TMAG July 2019 8401804*

Modeling Electromagnetic Force and Axial-Stiffness for an Electromagnetic Negative-Stiffness Spring Toward Vibration Isolation. *Sun, Y.*, +, *TMAG March 2019 8000410*

#### Electromagnetic induction

A Novel Electromagnetic Testing Method Based on the Magnetic Field Interaction. *Sun, Y.*, +, *TMAG Aug. 2019 6201312*

An Electromagnetic Tracking Method Based on Phase Difference Detection. *Huang, X.*, +, *TMAG Sept. 2019 5700108*

An Integral Face Formulation for Thin Non-Conductive Magnetic Regions. *Chavin-Collin, G.*, +, *TMAG June 2019 7000504*

Bio-Inspired Magnetostrictive Tactile Sensor for Surface Material Recognition. *Zheng, W.*, +, *TMAG July 2019 4002307*

Calibration of Numerical Model of Magnetic Induction Brazing. *Panek, D.*, +, *TMAG June 2019 7202104*

Influence of DC-Biased Magnetic Induction on Magnetic Property of Silicon Steel. *Chen, J.*, +, *TMAG May 2019 2002007*

Magnetic Sensors: Taxonomy, Applications, and New Trends. *Hristoforou, E.*, +, *TMAG July 2019 4002814*

Simplified Magnetic Induction Field of Magnetite Particles With Irregular Shape. *Ku, J.*, +, *TMAG Jan. 2019 7400105*

The Localization of Buried Objects in the Soil Using an RFID Tag: Protocol Description and Parameter Estimation With the Model of the Oscillating Magnetic Field in Media. *Khokhlova, V.*, +, *TMAG May 2019 6500616*

#### Electromagnetic interference

A Measurement-Based Wide-Frequency Model for Aircraft Wound-Rotor Synchronous Machine. *Zhao, D.*, +, *TMAG July 2019 8105408*

Unstable Playback Response of CPP-GMR Read Head Induced by Electromagnetic Interference: Structural Dependence. *Khunkitti, P.*, +, *TMAG Dec. 2019 3001906*

#### Electromagnetic launchers

Selection of Spatial Filters for ON/OFF Based Topology Optimization of a C-Core Electromagnetic Actuator. *Midha, C.*, +, *TMAG Oct. 2019 7501504*

#### Electromagnetic metamaterials

Electromagnetic Properties of Fe<sub>50</sub>Co<sub>50</sub>/Cu Granular Composite Materials Containing Flaky Particles. *Kasagi, T.*, +, *TMAG Feb. 2019 2800204*

Genetic Optimization With Mixed-Order Prism Macroelements for 3-D Metamaterial Multilayered Structures. *Karatzidis, D.I.*, +, *TMAG June 2019 7203904*

Metasurface for Bending the Reflected Wave Under Oblique Incidence. *Ding, X.*, +, *TMAG Nov. 2019 7502804*

Numerical Calculation of Dispersion Diagrams and Field Distributions of Waves in 3-D Periodic Split-Ring Resonator Media. *Nitas, M.*, +, *TMAG Dec. 2019 7502004*

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Fe/C Nanocapsule-Decorated Fe<sub>2</sub>B/C Nanocapsule Hybrids With Improved Gigahertz Electromagnetic Absorption Properties. *Liu, X.*, +, *TMAG Feb. 2019 2501205*

Microwave Absorption Properties of Flake-Like Nd<sub>2</sub>Co<sub>16.5</sub>Si<sub>0.5</sub> Powders–Paraffin Composite. *Qiao, G.Y.*, +, *TMAG Feb. 2019 2800504*

Silica-Coated Iron Microflakes (Fe/SiO<sub>2</sub>)-Based Elastomeric Composites as Thin Microwave Absorber. *Janu, Y.*, +, *TMAG March 2019 2800707*

Surface Texturing and Enhanced Microwave Absorption of Fe–B Alloy Flakes Through a Dealloying Process. *Tian, N.*, +, *TMAG July 2019 4002105*

#### Electromagnetic wave attenuation

A Perfectly Matched Layer for the Nonlinear Dispersive Finite-Element Time-Domain Method. *Abraham, D.S.*, +, *TMAG June 2019 7400804*

#### Electromagnetic wave polarization

Metasurface for Bending the Reflected Wave Under Oblique Incidence. *Ding, X.*, +, *TMAG Nov. 2019 7502804*

#### Electromagnetic wave propagation

A Perfectly Matched Layer for the Nonlinear Dispersive Finite-Element Time-Domain Method. *Abraham, D.S.*, +, *TMAG June 2019 7400804*

Dyadic Green's Function for the Tensor Surface Conductivity Boundary Condition. *Hayati Raad, S.*, +, *TMAG Nov. 2019 2801807*

Numerical Calculation of Dispersion Diagrams and Field Distributions of Waves in 3-D Periodic Split-Ring Resonator Media. *Nitas, M.*, +, *TMAG Dec. 2019 7502004*

Spatial Rotation Operations on Huygens Metasurface Hologram in Microwave Regime. *Ding, X.*, +, *TMAG Oct. 2019 7501204*

#### Electromagnetic wave reflection

Metasurface for Bending the Reflected Wave Under Oblique Incidence. *Ding, X.*, +, *TMAG Nov. 2019 7502804*

#### Electromagnetic wave scattering

Dyadic Green's Function for the Tensor Surface Conductivity Boundary Condition. *Hayati Raad, S.*, +, *TMAG Nov. 2019 2801807*

#### Electromagnetic waves

Eigenmode Solution for TE-Wave Propagation Through Anisotropic Metamaterial Particle 3-D Arrays via Dipole Approximation. *Karamanos, T.D.*, +, *TMAG Dec. 2019 7502904*

Numerical Calculation of Dispersion Diagrams and Field Distributions of Waves in 3-D Periodic Split-Ring Resonator Media. *Nitas, M.*, +, *TMAG Dec. 2019 7502004*

#### Electromagnetism

CAE v1.1—A Code for the Magnetic Field Due to Arbitrary Electromagnets. *Prajapati, D.R.*, +, *TMAG Nov. 2019 8002408*

Magnetostrictive Tactile Sensor Array for Object Recognition. *Zhang, B.*, +, *TMAG July 2019 4002207*

Mesh Deformation Based on Radial Basis Function Interpolation Applied to Low-Frequency Electromagnetic Problem. *Henneron, T.*, +, *TMAG June 2019 7201704*

Modeling and Analysis of a Biaxial Noncontact Lorentz Force Actuator. *Li, J.*, +, *TMAG April 2019 4900209*

Semi-Analytical Solution of Magnetic Force and Torque for a Novel Magnetically Levitated Actuator in Rotary Table. *Lu, X.*, +, *TMAG Dec. 2019 8108008*

#### Electromagnets

Comparison of Magnetic Levitation Systems Using Ring-Shaped Permanent Magnets. *Kim, K.B.*, +, *TMAG July 2019 8300804*

#### Electron backscattering

Diagnosis Method of Magnetization Distribution in Permanent Magnet Using Approximate Function Based on 1-D Fourier Series Expansion. *Okamoto, Y.*, +, *TMAG June 2019 7204704*

Effect of Cut-Edge Residual Stress on Magnetic Properties in Non-Oriented Electrical Steel. *Lee, H.*, +, *TMAG Feb. 2019 2000804*

Effect of Heat Treatment Under High Magnetic Field on Crystallographic Orientation and Magnetic Properties of Non-Oriented Electrical Steel Sheets. *Kinoshita, T.*, +, *TMAG Feb. 2019 2001105*

- Tailoring the Microstructure of Soft Magnetic Composites for Electric Motor Applications. *Schuller, D.*, +, *TMAG Feb. 2019 2001204*
- Electron diffraction**  
Effect of Heat Treatment Under High Magnetic Field on Crystallographic Orientation and Magnetic Properties of Non-Oriented Electrical Steel Sheets. *Kinoshita, T.*, +, *TMAG Feb. 2019 2001105*  
Tailoring the Microstructure of Soft Magnetic Composites for Electric Motor Applications. *Schuller, D.*, +, *TMAG Feb. 2019 2001204*
- Electron probe analysis**  
Microstructure Characteristics of 2:17 SmCo Commercial Magnets With Different Coercivities. *Xie, Z.H.*, +, *TMAG July 2019 2101504*
- Electron spin polarization**  
AC Small-Signal Model for Magnetoresistive Lateral Spin Valves. *Hu, J.*, +, *TMAG March 2019 1600108*  
Spin Injection From EuS/Co Multilayers Into GaAs Detected by Polarized Electroluminescence. *Goschew, A.*, +, *TMAG July 2019 1400804*
- Electronic design automation**  
An Integral Equation Hybrid Method for the Impedance Calculation of the Grid Power Distribution Network With an Arbitrary Shape. *Zou, G.*, +, *TMAG June 2019 7203804*
- Electronic engineering computing**  
Mesh Deformation Based on Radial Basis Function Interpolation Applied to Low-Frequency Electromagnetic Problem. *Henneron, T.*, +, *TMAG June 2019 7201704*
- Electronics packaging**  
A Ferrite-Filled Cavity Resonator for Electronic Article Surveillance on Metallic Packaging. *Keatley, P.S.*, +, *TMAG Dec. 2019 4004110*  
An Integral Equation Hybrid Method for the Impedance Calculation of the Grid Power Distribution Network With an Arbitrary Shape. *Zou, G.*, +, *TMAG June 2019 7203804*
- Electrophoresis**  
Microwave Monolithic Devices Using Magnetic Hard–Soft Nanocomposite. *Sharma, V.*, +, *TMAG July 2019 4002004*
- Electroplating**  
Design, Fabrication, and Characterization of Package Embedded Solenoidal Magnetic Core Inductors for High-Efficiency System-In-Package Integrated Voltage Regulators. *Bellaredj, M.L.F.*, +, *TMAG July 2019 8401607*
- Elemental semiconductors**  
Area and Energy Efficient Series Multilevel Cell STT-MRAMs for Optimized Read–Write Operations. *Prajapati, S.*, +, *TMAG Jan. 2019 3400110*  
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High-*Q* On-Chip C-Band Inductor With a Nanocrystalline MnZn-Ferrite Film Core. *Sai, R.*, +, *TMAG July 2019 2801304*  
Three-Axis Micofluxgate With a Fluxguide. *Jeng, J.*, +, *TMAG July 2019 2002304*
- Elliptic equations**  
Electric Field Computation in Unbounded Domain Using Axial Green Function Method. *Jo, J.*, +, *TMAG June 2019 7202804*
- Elongation**  
In-Field Annealing and Quenching for Ferromagnetic MnBi Under 19 T. *Kobayashi, R.*, +, *TMAG Feb. 2019 1000204*
- Embedded systems**  
Exploration of Non-Volatile MTJ/CMOS Circuits for DPA-Resistant Embedded Hardware. *Kumar, S.D.*, +, *TMAG Dec. 2019 3401308*
- Emulsions**  
Hybrid Plasmonic-Superparamagnetic Nanoparticle Clusters: Facile Synthesis and Characterization. *Pourmiri, S.*, +, *TMAG July 2019 5300104*  
Magnetic PolyHIPE Composites With Activated Carbon and Iron Oxide Nanoparticles. *Seeharaj, P.*, +, *TMAG Feb. 2019 9400104*
- Encoding**  
Partial Discharge Pattern Recognition of XLPE Cable Based on Vector Quantization. *Cheng, Z.*, +, *TMAG June 2019 7202704*
- End effectors**  
The ARMM System: An Optimized Mobile Electromagnetic Coil for Non-Linear Actuation of Flexible Surgical Instruments. *Sikorski, J.*, +, *TMAG Sept. 2019 5600109*
- Energy barrier**  
Erratum to “gpu accelerated atomistic energy barrier calculations of skyrmion annihilations” [nov 18 art. no. 7206105]. *Heistracher, P.*, +, *TMAG March 2019 9700101*
- Energy conservation**  
Analytical Analysis of an Adjustable-Speed Permanent Magnet Eddy-Current Coupling With a Non-Rotary Mechanical Flux Adjuster. *Li, Y.*, +, *TMAG June 2019 8000805*  
MEMS-Based Vibrational Energy Harvesting and Conversion Employing Micro-/Nano-Magnetics. *Roy, S.*, +, *TMAG July 2019 4700315*  
Non-Volatile Spintronic Flip-Flop Design for Energy-Efficient SEU and DNU Resilience. *Alghareb, F.S.*, +, *TMAG March 2019 3400611*
- Energy gap**  
Electronic and Magnetic Properties of Transition-Metal-Doped WS<sub>2</sub> Monolayer: First-Principles Investigations. *Hyun, J.*, +, *TMAG Feb. 2019 7000204*  
Magnetic States and Bandgaps of B-Site Substituted Double-Perovskite Ba<sub>2</sub>Pt(Bi, Sb)O<sub>6</sub>. *Taniguchi, H.*, +, *TMAG Feb. 2019 2400404*  
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- Energy harvesting**  
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Joint Four-Reader Array Equalization and Detection for a Single Track in TDMR. *Wang, S.*, +, *TMAG Dec. 2019 3002006*

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Performance Evaluation of LDPC Coding and Iterative Decoding System for 3-D Magnetic Recording With Dot Position Fluctuation. *Masuda, K.*, +, *TMAG July 2019 3001404*

Performance of Interleaved Block Codes With Burst Errors. *Cideciyan, R.D.*, +, *TMAG March 2019 3100305*

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Magnetic Properties and Critical and Compensation Temperatures in Mixed Spin-1/2–Spin-1 Ferrimagnetic-Centered Rectangular Structure Using Monte Carlo Simulation. *Obeidat, A.A.*, +, *TMAG Sept. 2019 1000305*

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Microstructure Characterization and Magnetic Characteristics of Ce–Fe–B Based Spark Plasma Sintered Magnets. *Jiang, Q.*, +, *TMAG Sept. 2019 2101806*

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Effect of  $\text{Sn}^{4+}$ – $\text{Zn}^{2+}$ – $\text{Co}^{2+}$  Doping on Structural and Magnetic Properties of M-Type Barium Hexaferrites. *Mesdaghi, S.*, +, *TMAG Jan. 2019 2100106*

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Exploration of the 3-D Printing of Transformer Structures With Embedded Ferrite Cores. *Bowen, D.*, +, *TMAG Feb. 2019 8400705*

Fabrication of Ferrite-Coated Magnetic Fe–Mn–Si–Cr–Ni Alloy Utilizing Selective Oxidation of Mn Element. *Peng, H.*, +, *TMAG May 2019 2900307*

Field Dependence of the Magnetization at Increasing Size: An Empirical Approach for Cobalt Ferrite Nanoparticles. *Stein, C.R.*, +, *TMAG Feb. 2019 6000203*

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High-Performance Ferrite Permanent Magnet Brushless Machines. *Shan-shal, A.*, +, *TMAG July 2019 8104504*

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Magnetic Anisotropy and Ferromagnetic Resonance in Nitrogen-Incorporated  $\text{NiFe}_2\text{O}_4$  Thin Films. *Anoop Baby, K.B.*, +, *TMAG Feb. 2019 2000704*

Magnetic Domain Observation of Ferrite Sintered Magnets Using MFM Images Observed from Multiple Distances and Image Processing. *Obara, G.*, +, *TMAG April 2019 6500504*

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Microstructure and Magnetic Properties of Anisotropic Strontium Hexaferrite Powders. *Dilipan, A.R.*, +, *TMAG Aug. 2019 2101705*

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Microwave-Assisted Magnetization Reversal in Dispersed Nanosized Barium Ferrite Particles for High-Density Magnetic Recording Tape. *Ozawa, E.*, *TMAG July 2019 3200404*

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Anomalous Hall Effect in a Magnetic Topological Insulator  $(\text{BiMn})_2\text{Te}_3$ . *Pilidi, A.*, +, *TMAG July 2019 2400506*

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Different Magnetic Field Effects on the  $\epsilon$ – $\tau$  Phase Transformation Between  $(\text{Mn,Zn})$ –Al and Mn–Al–C. *Mitsui, Y.*, +, *TMAG Feb. 2019 2100704*

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Electron-Doping Effect on the Magnetic-Field-Sensitive Dielectric Anomaly in  $\text{CaMn}_{1-x}\text{Sb}_x\text{O}_3$ . *Taniguchi, H.*, +, *TMAG Feb. 2019 1000104*

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- Magnetic Properties of Pure Iron for the Upgrade of the LHC Superconducting Dipole and Quadrupole Magnets. *Parrella, A.*, +, *TMAG Feb. 2019 2001004*
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- Measurements of Iron Loss in PMSM Stator Cores Based on CoFe and SiFe Lamination Sheets and Stemmed From Different Manufacturing Processes. *Boubaker, N.*, +, *TMAG Jan. 2019 8100309*
- Micromagnetic Study of Edge-Damage Effects in Perpendicular CoFeB/MgO Magnetic Tunnel Junction. *Yoshida, C.*, +, *TMAG July 2019 3401105*
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- Modulation of Magnetism and Magnetic Anisotropy at the Heavy-Metal/FeRh Interface. *Odkhuu, D.*, *TMAG Feb. 2019 7000104*
- Novel Analytical Formulas for Eddy-Current Losses in Semicircle-Section Wound Core of Transformer. *Zhang, C.*, +, *TMAG Nov. 2019 6300612*
- Optical Detection of Phase-Resolved Ferromagnetic Resonance in Epitaxial FeCo Thin Films. *Li, Y.*, +, *TMAG July 2019 6100605*
- Optical Receiver With Helicity-Dependent Magnetization Reversal. *Azim, Z.A.*, +, *TMAG Jan. 2019 4400206*
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- Rotational Single Sheet Tester for Multiaxial Magneto-Mechanical Effects in Steel Sheets. *Aydin, U.*, +, *TMAG March 2019 2001810*
- Shape Magnetic Anisotropy From Spin Density in Nanoscale Slab Systems. *Oda, T.*, +, *TMAG Feb. 2019 1300104*
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- Spin-Orbit Torque-Driven Magnetic Switching of Co/Pt-CoFeB Exchange Spring Ferromagnets. *Song, M.*, +, *TMAG Aug. 2019 1401004*
- Spin-Orbit-Induced Effective Magnetic Field in GaMnAs Ferromagnetic Semiconductor. *Lee, S.*, +, *TMAG Feb. 2019 2400206*
- Studying of the Interlayer Interaction in Magnetic Multilayers (FM//FM) Measuring the FMR Peak Asymmetry. *Vdovichev, S.N.*, +, *TMAG Aug. 2019 6100906*
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- Tuning the Magnetic Anisotropy of  $\text{Fe}_3\text{O}_4/\text{Pt}$  Heterostructures Fabricated by Atomic Layer Deposition With *In Situ* Magnetic Field. *Zhang, L.*, +, *TMAG March 2019 2001707*
- Tuning the Structural Transitions and Magnetocaloric Response in  $\text{Gd}_5\text{Si}_{1.7}\text{Ge}_{2.3}$  Alloys Through Cobalt Addition. *Uthaman, B.*, +, *TMAG Oct. 2019 2501911*
- Vector-Resolved Magneto-optic Kerr Effect Measurements of Spin-Orbit Torque. *Celik, H.*, +, *TMAG Jan. 2019 4100105*
- Ferromagnetic resonance**
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- Effects of Thickness and Thermal Annealing of FeCoB Thin Films on Ferromagnetic Resonance and Microwave Propagation Properties. *Arteaga-Duran, A.*, +, *TMAG Feb. 2019 2800303*
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- Magnetic Damping Constant of CoFeB/Pt Thin Films With Varying the Thicknesses of Pt and Insertion Layer of Al. *Wu, K.*, +, *TMAG July 2019 4100305*
- Magnetoimpedance Response of a Double-Exchange Metallic Ferromagnet  $\text{La}_{0.80}\text{Sr}_{0.20}\text{MnO}_3$ . *Chaudhuri, U.*, +, *TMAG July 2019 2801205*
- Microwave Monolithic Devices Using Magnetic Hard-Soft Nanocomposite. *Sharma, V.*, +, *TMAG July 2019 4002004*
- Microwave-Assisted Magnetization Reversal in Dispersed Nanosized Barium Ferrite Particles for High-Density Magnetic Recording Tape. *Ozawa, E.*, *TMAG July 2019 3200404*
- Optical Detection of Phase-Resolved Ferromagnetic Resonance in Epitaxial FeCo Thin Films. *Li, Y.*, +, *TMAG July 2019 6100605*
- Resonant Spin-Transfer Torque Magnetoresistive Memory. *Zhu, J.*, +, *TMAG March 2019 3400407*
- Studying of the Interlayer Interaction in Magnetic Multilayers (FM//FM) Measuring the FMR Peak Asymmetry. *Vdovichev, S.N.*, +, *TMAG Aug. 2019 6100906*
- Theoretical Study of Gilbert Damping Constants in Magnetic Multilayer Films. *Ozaki, D.*, +, *TMAG July 2019 1300505*
- Ferromagnetic-antiferromagnetic transitions**
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A 3-D Hybrid Cell Boundary Element Method for Time-Harmonic Eddy Current Problems on Multiply Connected Domains. *Moro, F.*, +, *TMAG March 2019 9200111*

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A Consequent-Pole PM Magnetic-Geared Double-Rotor Machine With Flux-Weakening Ability for Hybrid Electric Vehicle Application. *Zhao, H.*, +, *TMAG July 2019 8202507*

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A Generalized Parallel Transmission Line Iteration for Finite Element Analysis of Permanent Magnet Axisymmetrical Actuator. *Yang, W.*, +, *TMAG March 2019 7400410*

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A Hybrid Modeling Approach for Current Diffusion in Rectangular Conductors. *Morisco, D.P.*, +, *TMAG Sept. 2019 8002111*

A Magnetic Bearing Switched Reluctance Motor With Simultaneous Excitation by a Modified Half-Bridge Converter. *Liu, Z.*, +, *TMAG Oct. 2019 7500905*

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A New Asymmetric Planar V-Shaped Magnet Arrangement for A Linear PM Synchronous Motor. *Boduroglu, A.*, +, *TMAG July 2019 8105905*

A New Double-Sided Flux Reversal Arc Permanent Magnet Machine With Enhanced Torque Density Capability. *Pan, Z.*, +, *TMAG June 2019 8102506*

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A Novel Multi-Function Saturated-Core Fault Current Limiter. *Zhong, Y.*, +, *TMAG June 2019 8401105*

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A Novel Vernier Reluctance Machine Excited by Slot PMs and Zero-Sequence Current for Electric Vehicle. *Zhao, X.*, +, *TMAG June 2019 8102405*

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A Permanent Magnet Linear Motor With Complementary Flux and Its Optimization. *Liu, Y.*, +, *TMAG June 2019 8201005*

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A Surface-Mounted Permanent-Magnet Motor With Sinusoidal Pulse-width-Modulation-Shaped Magnets. *Yang, Y.*, +, *TMAG Jan. 2019 8100108*

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- Circuit-Field Coupling Methodology for Incorporation of Power Electronic Devices: A Piecewise-Linear Approach. *Gonzalez-Montanez, F.*, +, *TMAG June 2019 8401004*
- Comparative Study Between a Novel Multi-Tooth and a V-Shaped Flux-Switching Permanent Magnet Machines. *Zhao, G.*, +, *TMAG July 2019 8104908*
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- Eddy Current Linear Speed Sensor. *Mirzaei, M.*, +, *TMAG Jan. 2019 4000304*
- Eddy Current Loss Effect in Foil Winding of Transformer Based on Magneto-Fluid-Thermal Simulation. *Li, Y.*, +, *TMAG July 2019 8401705*
- Effect of Pulsewidth Modulation on Electromagnetic Noise of Interior Permanent Magnet Synchronous Motor Drives. *Ibrahim, I.*, +, *TMAG Oct. 2019 7500805*
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- Evaluation of Static Magnetic Fields Produced by Magnetic Floors Composed of Strontium Ferrite Powder Utilized in the Construction Industry. *Magdaleno-Adame, S.*, +, *TMAG April 2019 2001907*
- Exact Analytical Method for Active Magnetic Bearings With Rotor Eccentricity. *Du, T.*, +, *TMAG Dec. 2019 8301112*

- Experimental Verification and Electromagnetic–Mechanics–Acoustic Field Coupling Analysis of Transformer Pressure Relief Valve Malfunctions Due to External Short-Circuit Faults. *Yan, C.*, +, *T MAG June 2019 8102904*
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- MSFEM for the Eddy Current Problem in a Laminated Core Including Hysteresis. *Schobinger, M.*, +, *T MAG Aug. 2019 7300809*
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Modeling of a Halbach Array Voice Coil Actuator via Fourier Analysis Based on Equivalent Structure. *Huang, X.*, +, *TMAG Aug. 2019 8204606*

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- Genetic Optimization With Mixed-Order Prism Macroelements for 3-D Metamaterial Multilayered Structures. *Karatzidis, D.I., +, TMAG June 2019 7203904*
- Moving Least Square-Based Hybrid Genetic Algorithm for Optimal Design of W-Band Dual-Reflector Antenna. *Lee, K., +, TMAG June 2019 9400404*
- Multi-Objective Optimization of a Direct-Drive Dual-Structure Permanent Magnet Machine. *Ma, Y., +, TMAG Oct. 2019 7501704*
- Multi-Objective Topology Optimization of Rotating Machines Using Deep Learning. *Doi, S., +, TMAG June 2019 7202605*
- Geomagnetism**
- Efficient Performance Optimization for the Magnetic Data Readout From a Proton Precession Magnetometer With Low-Rank Constraint. *Liu, H., +, TMAG Aug. 2019 9300104*
- Magnetic Anomalies of Submarine Pipeline Based on Theoretical Calculation and Actual Measurement. *Wang, F., +, TMAG April 2019 6500410*
- Geometry**
- Novel Geometrically Defined Mass Matrices for Tetrahedral Meshes. *Passarotto, M., +, TMAG June 2019 7200904*
- Numerical and Experimental Studies of a Novel Converging Stepped Ferrofluid Seal. *Yang, X., +, TMAG March 2019 4600406*
- Physical DC Modes in the Microwave Resonator With Complex Geometric Topology. *Jiang, W., TMAG Nov. 2019 4003907*
- Geophysical equipment**
- Efficient Performance Optimization for the Magnetic Data Readout From a Proton Precession Magnetometer With Low-Rank Constraint. *Liu, H., +, TMAG Aug. 2019 9300104*
- Geophysical techniques**
- Efficient Performance Optimization for the Magnetic Data Readout From a Proton Precession Magnetometer With Low-Rank Constraint. *Liu, H., +, TMAG Aug. 2019 9300104*
- Low Power *In Situ* AI Calibration of a Three-Axial Magnetic Sensor. *Alimi, R., +, TMAG July 2019 4002407*
- Magnetic Anomalies of Submarine Pipeline Based on Theoretical Calculation and Actual Measurement. *Wang, F., +, TMAG April 2019 6500410*
- Geophysics computing**
- Low Power *In Situ* AI Calibration of a Three-Axial Magnetic Sensor. *Alimi, R., +, TMAG July 2019 4002407*
- Germanium alloys**
- A Comparative Study of the Magnetocaloric Effect in MnFePSiGeB Prepared by Traditional Sintering and Spark Plasma Sintering. *Wang, G.F., +, TMAG Feb. 2019 2500705*
- Tuning the Structural Transitions and Magnetocaloric Response in  $Gd_5Si_{1.7}Ge_{2.3}$  Alloys Through Cobalt Addition. *Uthaman, B., +, TMAG Oct. 2019 2501911*
- Giant magneto-resistance**
- Engineering of Magnetic Properties of Fe-Rich Microwires by Stress Annealing. *Zhukov, A.P., +, TMAG Feb. 2019 2000504*
- Enhanced Field Sensitivity by Strong Mutual Coupling and Magnetoinduction in Amorphous Film/Planar Coil Multilayers. *Song, F., +, TMAG Feb. 2019 4001505*
- High GMR Effect and Perfect Microstructure in CoFe/Cu Multilayers. *Milyaev, M., +, TMAG April 2019 2300904*
- High-Field Tunneling Magneto-resistive Angle Sensor. *Deak, J., +, TMAG Oct. 2019 6700104*
- Magnetic Sensors: Taxonomy, Applications, and New Trends. *Hristoforou, E., +, TMAG July 2019 4002814*
- Observation of Static Domain Structures of Thin-Film Magnetoimpedance Elements With DC Bias Current. *Kikuchi, H., +, TMAG Feb. 2019 4001405*
- Offset Reduction in GMI-Based Device by Using Double-Frequency Bias-Current Modulation. *Esper, A., +, TMAG Jan. 2019 4000504*
- Optimization of GMI Effect and Magnetic Properties of Co-Rich Microwires by Joule Heating. *Corte-Leon, P., +, TMAG Feb. 2019 2000404*
- Perpendicular Exchange Bias in  $(Co/Pt)_n$  Multilayers. *Elphick, K., +, TMAG July 2019 4800106*
- Practical Use of the GMI Effect to Make a Current Sensor. *Asfour, A., +, TMAG Jan. 2019 4000410*
- Temperature Dependence of Noise in Giant- and Tunneling Magneto-resistive Vortex Sensors. *Weitsfelder, H., +, TMAG July 2019 4400505*
- The Step-Current Annealing: An Easy Method to Improve the Magnetoimpedance in Co-Rich Ribbons. *Moradi, M., +, TMAG Jan. 2019 2000206*
- Transport Properties Through Multi-Barrier Magnetic System Containing a “Noncoplanar Defect”. *Sahakyan, A., +, TMAG Feb. 2019 4400305*
- Unstable Playback Response of CPP-GMR Read Head Induced by Electromagnetic Interference: Structural Dependence. *Khunkitti, P., +, TMAG Dec. 2019 3001906*
- Glass**
- Magnetic and Optical Study of Nematic Liquid Crystal E7 Mixed  $Fe_3O_4$  Ferrofluid. *Alomari, A., +, TMAG Dec. 2019 4601007*
- Suppression of Spin Glass Behavior in Phase Separated  $La_{0.22}Pr_{0.40}Ca_{0.38}MnO_3$  by Nanostructuring. *Kumari, S., +, TMAG Dec. 2019 1200107*
- Gold**
- Electromagnetic Properties of  $Au/Fe_{53}Ni_{47}$  Hybrid Granular Composite Materials. *Kono, K., +, TMAG Feb. 2019 2800104*
- Hybrid Plasmonic-Superparamagnetic Nanoparticle Clusters: Facile Synthesis and Characterization. *Pourmiri, S., +, TMAG July 2019 5300104*
- Low-Temperature Magnetism of Gold Nano Particles Contained in Electrochemical Sugar Recognition System. *Goto, T., +, TMAG Feb. 2019 2300404*
- Gradient methods**
- Micro-Traveling Wave Magnetic Particle Imaging—Sub-Millimeter Resolution With Optimized Tracer LS-008. *Vogel, P., +, TMAG Oct. 2019 5300207*
- Grain boundaries**
- Extraordinary Ferromagnetic Coupling and Magnetodielectric Phenomena in NiO Nanoparticles. *Roy, S., +, TMAG Feb. 2019 2501304*
- Magnetic Anisotropy and Ferromagnetic Resonance in Nitrogen-Incorporated  $NiFe_2O_4$  Thin Films. *Anoop Baby, K.B., +, TMAG Feb. 2019 2000704*
- Magnetic Domain Structures and Magnetic Properties of Lightly Nd-Doped Sm-Co Magnets With High Squareness and High Heat Resistance. *Machida, H., +, TMAG Feb. 2019 2100604*
- Microstructure Characteristics of 2:17 SmCo Commercial Magnets With Different Coercivities. *Xie, Z.H., +, TMAG July 2019 2101504*
- Optical Analysis of HAMR Media. *Victoria, R.H., +, TMAG March 2019 3000908*
- Permanent Magnets Beyond Nd-Dy-Fe-B. *Hirosawa, S., TMAG Feb. 2019 2100506*
- Proposal of Granular-Type Cap Layer with High- $K_u$  CoPt Grains and Ferromagnetic Oxide Grain Boundaries for Full Granular Media. *Tham, K.K., +, TMAG July 2019 3200305*
- Grain growth**
- Effects of the Sintering Temperature on RF Complex Permeability of NiCu-CoZn Ferrites for Near-Field Communication Applications. *Lathiya, P., +, TMAG Feb. 2019 2800404*
- Grain size**
- Effect of Annealing on Magnetic and Mechanical Behaviors of NANOPERM-Type Alloys. *Hasiak, M., +, TMAG Feb. 2019 2001606*
- Effect of  $Sn^{4+}-Zn^{2+}-Co^{2+}$  Doping on Structural and Magnetic Properties of M-Type Barium Hexaferrites. *Mesdaghi, S., +, TMAG Jan. 2019 2100106*
- Loss Prediction in DC-Biased Magnetic Sheets. *de la Barriere, O., +, TMAG Oct. 2019 2002614*
- Microstructure Characterization and Magnetic Characteristics of Ce-Fe-B Based Spark Plasma Sintered Magnets. *Jiang, Q., +, TMAG Sept. 2019 2101806*
- Optical Analysis of HAMR Media. *Victoria, R.H., +, TMAG March 2019 3000908*
- Optimization of the 3-D-MAMR Media Stack. *Chan, K.S., +, TMAG Sept. 2019 7204905*
- Proposal of Granular-Type Cap Layer with High- $K_u$  CoPt Grains and Ferromagnetic Oxide Grain Boundaries for Full Granular Media. *Tham, K.K., +, TMAG July 2019 3200305*
- Studies of HAMR Recording by Hybrid Monte Carlo Micromagnetics. *Miao, J., +, TMAG July 2019 3001604*
- Tailoring the Microstructure of Soft Magnetic Composites for Electric Motor Applications. *Schuller, D., +, TMAG Feb. 2019 2001204*

The Network-Shaped Upheaval Structure in (002) Textured MgO Layer for L1<sub>0</sub> FePt-Based Granular Media With Columnar Nanostructure. *Shimizu, A.*, +, *TMAG July 2019 3200208*

#### Granular materials

Crystal Structure and Dzyaloshinski–Moriya Micromagnetics. *Ullah, A.*, +, *TMAG July 2019 7100305*

Electromagnetic Properties of Au/Fe<sub>53</sub>Ni<sub>47</sub> Hybrid Granular Composite Materials. *Kono, K.*, +, *TMAG Feb. 2019 2800104*

Proposal of Granular-Type Cap Layer with High- $K_u$  CoPt Grains and Ferromagnetic Oxide Grain Boundaries for Full Granular Media. *Tham, K.K.*, +, *TMAG July 2019 3200305*

The Network-Shaped Upheaval Structure in (002) Textured MgO Layer for L1<sub>0</sub> FePt-Based Granular Media With Columnar Nanostructure. *Shimizu, A.*, +, *TMAG July 2019 3200208*

#### Granular structure

Electromagnetic Properties of Fe<sub>50</sub>Co<sub>50</sub>/Cu Granular Composite Materials Containing Flaky Particles. *Kasagi, T.*, +, *TMAG Feb. 2019 2800204*

#### Graph theory

A New Methodology Based on Multi-Label Graph Cut Theorem for Multi-Phase Topology Optimization. *Xia, M.*, +, *TMAG June 2019 7201004*

#### Graphene

AC Small-Signal Model for Magnetoresistive Lateral Spin Valves. *Hu, J.*, +, *TMAG March 2019 1600108*

Dyadic Green's Function for the Tensor Surface Conductivity Boundary Condition. *Hayati Raad, S.*, +, *TMAG Nov. 2019 2801807*

Dynamically Controllable Terahertz Graphene Y-Circulator. *Dmitriev, V.*, +, *TMAG Feb. 2019 4001712*

#### Graphene devices

Quasi-Free-Standing Bilayer Graphene Hall-Effect Sensor. *Kachniarz, M.*, +, *TMAG Jan. 2019 4000204*

#### Graphics processing units

Erratum to “gpu accelerated atomistic energy barrier calculations of skyrmion annihilations” [nov 18 art. no. 7206105]. *Heistracher, P.*, +, *TMAG March 2019 9700101*

Massively Parallel Computation for 3-D Nonlinear Finite Edge Element Problem With Transmission Line Decoupling Technique. *Li, J.*, +, *TMAG Oct. 2019 7401908*

Parallel Computing of Finite-Element Analysis Coupled With Circuit Equations for 3-D Eddy Current Analysis of Segmented Transformers by Using Combination of Central and Graphical Processing Units. *Utsunomiya, R.*, +, *TMAG June 2019 1300204*

#### Graphite

Investigation of Cast Iron Matrix Constituents by Magnetic Adaptive Testing. *Vertesy, G.*, +, *TMAG March 2019 6200306*

Magnetization Reversal and Domain Nucleation in Ultra-Thin Co/Re(0001) Capped by Graphitic C. *Genuzio, F.*, +, *TMAG Feb. 2019 2300504*

Optomechanical Actuation of Diamagnetically Levitated Pyrolytic Graphite. *Ewall-Wice, M.*, +, *TMAG July 2019 2501506*

#### Graphitization

Magnetization Reversal and Domain Nucleation in Ultra-Thin Co/Re(0001) Capped by Graphitic C. *Genuzio, F.*, +, *TMAG Feb. 2019 2300504*

#### Green's function methods

A Thin-Layer Volume Integral Equation Formulation for Linear and Non-Linear Magnetostatic Problems. *Hendijani, N.*, +, *TMAG Feb. 2019 7000308*

Computation of Leakage Inductance of End Coils in Electrical Machines Considering Core Effects. *Aragon-Verduzco, D.A.*, +, *TMAG Dec. 2019 8107812*

Dyadic Green's Function for the Tensor Surface Conductivity Boundary Condition. *Hayati Raad, S.*, +, *TMAG Nov. 2019 2801807*

Effects of Elastic Dephasing on Scaling of Ultra-Small Magnetic Tunnel Junctions. *Das, D.*, +, *TMAG Feb. 2019 1400404*

Electric Field Computation in Unbounded Domain Using Axial Green Function Method. *Jo, J.*, +, *TMAG June 2019 7202804*

#### Ground penetrating radar

The Localization of Buried Objects in the Soil Using an RFID Tag: Protocol Description and Parameter Estimation With the Model of the Oscillating Magnetic Field in Media. *Khokhlova, V.*, +, *TMAG May 2019 6500616*

#### Ground states

Modulation of Magnetism and Magnetic Anisotropy at the Heavy-Metal/FeRh Interface. *Odkhuu, D.*, +, *TMAG Feb. 2019 7000104*

#### Gyrotrons

Development of Normal Conducting Cavity Magnet for 42 GHz 200 kW Long Pulse Gyrotron. *Singh, K.*, +, *TMAG Nov. 2019 4004006*

## H

#### Hall effect

Anomalous Hall Effect in a Magnetic Topological Insulator (BiMn)<sub>2</sub>Te<sub>3</sub>. *Pilidi, A.*, +, *TMAG July 2019 2400506*

Hall Effect and Resistivity in Epitaxial MnSi Thin Films Under Ambient and High Pressure. *Menzel, D.*, +, *TMAG Feb. 2019 1500204*

Improvement of Large Anomalous Hall Effect in Polycrystalline Antiferromagnetic Mn<sub>3-x</sub>Sn Thin Films. *Ikeda, T.*, +, *TMAG July 2019 2501704*

Interlayer Exchange Coupling Between Fe and GaMnAs Ferromagnetic Semiconductor. *Tivakornsasithorn, K.*, +, *TMAG Feb. 2019 2400104*

Spin–Orbit-Induced Effective Magnetic Field in GaMnAs Ferromagnetic Semiconductor. *Lee, S.*, +, *TMAG Feb. 2019 2400206*

Spin-Orbit Currents, Spin-Transfer Torque and Anomalous Tunneling in III–V Heterostructures Probed by Advanced 30- and 40-Bands  $k \cdot p$  Tunneling Methods. *To, D.Q.*, +, *TMAG July 2019 1400707*

#### Hall effect transducers

DC Drift Error Mitigation Method for Three-Phase Current Reconstruction With Single Hall Current Sensor. *Yan, H.*, +, *TMAG Feb. 2019 8100604*

Impact of Contact Misalignment on Magnetic Cross Sensitivity of Integrated Vertical Hall Sensors. *Beran, P.*, +, *TMAG Jan. 2019 4000904*

Quasi-Free-Standing Bilayer Graphene Hall-Effect Sensor. *Kachniarz, M.*, +, *TMAG Jan. 2019 4000204*

#### Handwritten character recognition

Mimicking Leaky-Integrate-Fire Spiking Neuron Using Automotion of Domain Walls for Energy-Efficient Brain-Inspired Computing. *Agrawal, A.*, +, *TMAG Jan. 2019 1400107*

#### Hard disks

A Detection Scheme With TMR Estimation Based on Multi-Layer Perceptrons for Bit Patterned Media Recording. *Han, S.*, +, *TMAG July 2019 3100704*

A Partially Pole-Embedded Transducer for Heat-Assisted Magnetic Recording. *Eason, K.*, *TMAG March 2019 3000306*

A Study on Iterative Decoding With LLR Modulator by Neural Network Using Adjacent Track Information in SMR System. *Nishikawa, M.*, +, *TMAG Dec. 2019 6701305*

A Study on Iterative Decoding With LLR Modulator Using Neural Network in SMR System. *Nishikawa, M.*, +, *TMAG July 2019 3100604*

Areal Density Comparison Between Conventional, Shingled, and Interlaced Heat-Assisted Magnetic Recording With Multiple Sensor Magnetic Recording. *Granz, S.*, +, *TMAG March 2019 3100203*

ATI Considerations in Helium-Filled Hard Disk Drives. *Brockie, R.M.*, +, *TMAG March 2019 3000209*

Characterizing Curvature in Heat-Assisted Magnetic Recording Using Spin-Stand Imaging. *Gilbert, I.*, +, *TMAG July 2019 3001204*

Deep Neural Network Based Media Noise Predictors for Use in High-Density Magnetic Recording Turbo-Detectors. *Sayyafan, A.*, +, *TMAG Dec. 2019 6701406*

Domain Wall Motion Control for Racetrack Memory Applications. *Kumar, D.*, +, *TMAG March 2019 2300708*

Fretting Wear Simulation of the Dimple/Gimbal Interface. *Tang, Z.*, +, *TMAG March 2019 3300406*

Joint Equalization of Asynchronous Reads in Array-Reader-Based Interlaced Magnetic Recording. *Hwang, E.*, +, *TMAG March 2019 3100107*

Measuring Cross-Track Thermal Gradient in Heat-Assisted Magnetic Recording. *Gilbert, I.*, +, *TMAG Dec. 2019 6701005*

Mitigating the Effects of Track Mis-Registration in Single-Reader/Two-Track Reading BPMR Systems. *Warisarn, C.*, *TMAG July 2019 3001106*

Perpendicular Interlaced Magnetic Recording. *Granz, S.*, +, *TMAG Dec. 2019 6701106*

- Sensing and Modeling Heat Transfer Between a Recording Head and Medium for Clearance Setting in HAMR. *Zuckerman, N.*, +, *TMAG March 2019 3300205*
- Skew-Aware Joint Multi-Track Equalization for Array Reader-Based Interlaced Magnetic Recording. *Hwang, E.*, +, *TMAG July 2019 3100804*
- Spacing Control in Heat-Assisted Magnetic Recording. *Xiong, S.*, +, *TMAG March 2019 3300306*
- Studies of HAMR Recording by Hybrid Monte Carlo Micromagnetics. *Miao, J.*, +, *TMAG July 2019 3001604*
- Thermal Diffusion Phenomena of the Functional Polymer Lubricants for the Heat-Assisted Magnetic Recording. *Chung, P.S.*, +, *TMAG July 2019 3300604*
- Hardness testing**
- Effect of Cut-Edge Residual Stress on Magnetic Properties in Non-Oriented Electrical Steel. *Lee, H.*, +, *TMAG Feb. 2019 2000804*
- Harmonic analysis**
- Design and Analysis of Double-Air-Gap Flux-Modulated Permanent Magnet Motor Considering Leading Working Harmonics. *Xiang, Z.*, +, *TMAG June 2019 8101705*
- Family Phenomenon in Electric Machine Winding MMF Space Harmonics: Attribution and Applications. *Tang, N.*, +, *TMAG May 2019 8101310*
- Flux-Density Harmonics Analysis of Switched-Flux Permanent Magnet Machines. *Zeng, Z.*, +, *TMAG June 2019 8103607*
- Harmonic distortion**
- Analytical Model of Magnetic Field of a Permanent Magnet Synchronous Motor With a Trapezoidal Halbach Permanent Magnet Array. *Zhang, X.*, +, *TMAG July 2019 8105205*
- Optimal Slot Design of IPMSM in Railway With Independently Rotating Wheelsets. *Liu, H.*, +, *TMAG Feb. 2019 8200404*
- Harmonics**
- A Novel Modular Stator Hybrid-Excited Doubly Salient Synchronous Machine With Stator Slot Permanent Magnets. *Zheng, M.*, +, *TMAG July 2019 8104409*
- Harmonics suppression**
- Family Phenomenon in Electric Machine Winding MMF Space Harmonics: Attribution and Applications. *Tang, N.*, +, *TMAG May 2019 8101310*
- Fast and Systematic Design Optimization of Surface-Mounted PM Machines Using Advanced Analytical Models and Subharmonic Elimination Methods. *Min, S.G.*, +, *TMAG Jan. 2019 8100216*
- Heat measurement**
- Sensing and Modeling Heat Transfer Between a Recording Head and Medium for Clearance Setting in HAMR. *Zuckerman, N.*, +, *TMAG March 2019 3300205*
- Heat transfer**
- Characterization of Continuous Wave Laser-Induced Thermal Gradients in Magnetic Tunnel Junctions Integrated Into Microresonators via COMSOL Simulations. *Cansever, H.*, +, *TMAG July 2019 7401505*
- Eddy Current Loss Effect in Foil Winding of Transformer Based on Magneto-Fluid-Thermal Simulation. *Li, Y.*, +, *TMAG July 2019 8401705*
- High-Frequency Output Characteristics of Giant Magnetostrictive Transducer. *Li, Y.*, +, *TMAG June 2019 8202305*
- Investigation of the Influence of Magnetic Field Distribution on the Magnetorheological Absorber With Individually Controllable Coils. *Ouyang, Q.*, +, *TMAG Aug. 2019 4600613*
- Sensing and Modeling Heat Transfer Between a Recording Head and Medium for Clearance Setting in HAMR. *Zuckerman, N.*, +, *TMAG March 2019 3300205*
- The Influence of Unbalance Load on the Electromagnetic and Temperature Field of High-Speed Permanent Magnet Generator. *Hongbo, Q.*, +, *TMAG June 2019 8200804*
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- Heat treatment**
- Aluminum Alloy Sensitization Evaluation by Using Eddy Current Techniques Based on IGMR-Magnetometer Head. *Mareschal, O.*, +, *TMAG Jan. 2019 6200104*
- Effect of Heat Treatment Under High Magnetic Field on Crystallographic Orientation and Magnetic Properties of Non-Oriented Electrical Steel Sheets. *Kinoshita, T.*, +, *TMAG Feb. 2019 2001105*
- Measurements of Iron Loss in PMSM Stator Cores Based on CoFe and SiFe Lamination Sheets and Stemmed From Different Manufacturing Processes. *Boubaker, N.*, +, *TMAG Jan. 2019 8100309*
- Synthesis, Characterization, and Sensing Performance Investigation of Nickel Ferrite Nanoparticles for Ammonia Detection. *Nosohiyani, S.*, +, *TMAG Dec. 2019 1000506*
- Texture Evolution and Magnetostriction of Rolled  $(\text{Co}_{70}\text{Fe}_{30})_{99.8}(\text{NbC})_{0.2}$  Sheets. *Zhao, Y.*, +, *TMAG Oct. 2019 2501805*
- Heating systems**
- Structural Characterization, Magnetic Properties, and Heating Power of Nickel Ferrite Nanoparticles. *Marquez, G.*, +, *TMAG Dec. 2019 5400207*
- Suppression of Spin Glass Behavior in Phase Separated  $\text{La}_{0.22}\text{Pr}_{0.40}\text{Ca}_{0.38}\text{MnO}_3$  by Nanostructuring. *Kumari, S.*, +, *TMAG Dec. 2019 1200107*
- Helium**
- ATI Considerations in Helium-Filled Hard Disk Drives. *Brockie, R.M.*, +, *TMAG March 2019 3000209*
- Helmholtz equations**
- Homogenization of Multiscale Eddy Current Problem by Localized Orthogonal Decomposition Method. *Ren, X.*, +, *TMAG Sept. 2019 7500204*
- Two-Dimensional Fourier-Based Modeling of Electric Machines—An Overview. *Hannon, B.*, +, *TMAG Oct. 2019 8107217*
- Hemodynamics**
- Numerical Simulation of Conductivity Changes in the Human Thorax Caused by Aortic Dissection. *Reinbacher-Kostinger, A.*, +, *TMAG June 2019 5100304*
- Heterodyne detection**
- Optical Detection of Phase-Resolved Ferromagnetic Resonance in Epitaxial FeCo Thin Films. *Li, Y.*, +, *TMAG July 2019 6100605*
- High-k dielectric thin films**
- Area and Energy Efficient Series Multilevel Cell STT-MRAMs for Optimized Read-Write Operations. *Prajapati, S.*, +, *TMAG Jan. 2019 3400110*
- High-pressure effects**
- Hall Effect and Resistivity in Epitaxial MnSi Thin Films Under Ambient and High Pressure. *Menzel, D.*, +, *TMAG Feb. 2019 1500204*
- Synthesis of  $\gamma^3\text{-Fe}_4\text{N}$  Soft Magnetic Material by High-Pressure Nitriding Approach. *Jiang, Y.*, +, *TMAG Feb. 2019 2001504*
- The Loss of Continuity in a Liquid Ring Formed by a Magnetic Fluid. *Szczzech, M.*, *TMAG Sept. 2019 4600808*
- High-temperature effects**
- MnGa (001)-Textured Film Fabricated on Thermally Oxidized Si Substrate for Application to Ion Beam Bit Patterned Media. *Ishikawa, T.*, +, *TMAG July 2019 3200104*
- High-temperature superconductors**
- 3-D Numerical Modeling for the Magnetization of Superconductors Using a Local Discontinuous Galerkin Finite Element Method. *Law, Y.*, +, *TMAG Aug. 2019 9000111*
- Analytical Model for the Magnetic Field Distribution in a Flux Modulation Superconducting Machine. *Colle, A.*, +, *TMAG Dec. 2019 8107309*
- Quasi-3-D Cylindrical Coordinate XFEM Model of HTS Cable. *Duan, N.*, +, *TMAG June 2019 7203304*
- Holmium alloys**
- Effects of Rare-Earth (R = Pr, Gd, Ho, Er) Doping on Magnetostructural Phase Transitions and Magnetocaloric Properties in  $\text{Ni}_{43-x}\text{R}_x\text{Mn}_{46}\text{Sn}_{11}$  Shape Memory Alloys. *Aryal, A.*, +, *TMAG Feb. 2019 2500505*
- Holography**
- Spatial Rotation Operations on Huygens Metasurface Hologram in Microwave Regime. *Ding, X.*, +, *TMAG Oct. 2019 7501204*
- Homopolar machines**
- Design and Analysis of Permanent Magnet Homopolar Machine for Flywheel Energy Storage System. *Liu, Z.Q.*, +, *TMAG July 2019 8105706*
- Honeycomb structures**
- An Application of Eddy Current Effect on the Active Detumble of Uncontrolled Satellite With Tilt Air Gap. *Liu, X.*, +, *TMAG Dec. 2019 6201511*

**Hot rolling**

Texture Evolution and Magnetostriction of Rolled  $(\text{Co}_{70}\text{Fe}_{30})_{99.8}(\text{NbC})_{0.2}$  Sheets. *Zhao, Y.*, +, *T MAG Oct. 2019 2501805*

**HVDC power converters**

An Efficient Modeling Method for Large-Scale Complex Finite-Element Electric Field Numerical Calculation. *Du, Z.*, +, *T MAG June 2019 7401205*

Study of Insulation Material Properties Subjected to Nonlinear AC–DC Composite Electric Field for Converter Transformer. *Wang, Q.*, +, *T MAG Feb. 2019 8400604*

**HVDC power transmission**

Calculation of Accumulated Charge on Surface of Insulated House Near DC Transmission Lines by Method of Characteristics. *Xiao, F.*, +, *T MAG June 2019 7201405*

Calculation of Ion Flow Fields of HVdc Transmission Lines Based on Error Minimization Using Nodal Current Density. *Kim, J.*, +, *T MAG June 2019 7204204*

Calculation of Ion-Flow Field Near the Crossing of HVdc Transmission Lines Using Equivalent Corona Conductors. *Wang, D.*, +, *T MAG Aug. 2019 7401805*

Calculation of the Ionized Field of  $\pm 800$  kV High Voltage DC Power Lines With the Presence of Charged Atmospheric Particles. *Zou, Z.*, +, *T MAG Oct. 2019 7501304*

Research on Fast Opening Process in Electromagnetic Repulsion Mechanism. *Hou, Y.*, +, *T MAG June 2019 8000704*

Study on the Corona Discharge Ionized Field of UHVdc Based on Particle-in-Cell Iterative Method. *Zhu, T.*, +, *T MAG June 2019 7202004*

**Hybrid electric vehicles**

A Consequent-Pole PM Magnetic-Geared Double-Rotor Machine With Flux-Weakening Ability for Hybrid Electric Vehicle Application. *Zhao, H.*, +, *T MAG July 2019 8202507*

High Power Density Electrical Machines for Electric Vehicles—Comprehensive Review Based on Material Technology. *Ramesh, P.*, +, *T MAG Nov. 2019 0900121*

Robust Design of an Outer Rotor Permanent Magnet Motor Through Six-Sigma Methodology Using Response Surface Surrogate Model. *Rafiee, V.*, +, *T MAG Oct. 2019 8107110*

**Hybrid power systems**

Design and Multi-Mode Operation of Double-Stator Toroidal-Winding PM Vernier Machine for Wind-Photovoltaic Hybrid Generation System. *Yu, J.*, +, *T MAG July 2019 8700107*

**Hydraulic actuators**

Three-Phase AC Linear Proportional Solenoid Actuator With Zero Hysteresis in Current–Thrust Force Characteristics. *Tominari, Y.*, +, *T MAG July 2019 8203508*

**Hydrogels**

Influence of pH on Dynamic Magnetic Susceptibility of Iron-Oxide Nanoparticles in a Chitosan Hydrogel Matrix. *Villamin, M.E.*, +, *T MAG Feb. 2019 5000204*

**Hydrogenation**

Electrical Resistivity and Magnetic Performance of Ceramics-Bonded Nd-Fe-B-Type Magnet Consolidated Using Dielectric Oxide Binder. *Kang, M.S.*, +, *T MAG July 2019 2101405*

**Hysteresis**

Interlamination Insulation Design Considerations for Laminated Magnetics Operating at High Frequencies. *Kim, M.*, +, *T MAG Aug. 2019 2801511*

Self-Sensing Estimation of Mechanical Stress in Magnetostrictive Actuators. *Apicella, V.*, +, *T MAG Jan. 2019 2500106*

**I****IIR filters**

Rational Approximation of the Analytical Model of Nonlaminated Cylindrical Magnetic Actuators for Flux Estimation and Control. *Seifert, R.*, +, *T MAG Dec. 2019 8301016*

**Image color analysis**

Topology Optimization Accelerated by Deep Learning. *Sasaki, H.*, +, *T MAG June 2019 7401305*

**Image processing**

Recognizing Coiled Tubing Defect Characteristics Based on Weak Magnetic Detection Technology. *Zhou, Z.*, +, *T MAG Sept. 2019 6201406*

Spatial Rotation Operations on Huygens Metasurface Hologram in Microwave Regime. *Ding, X.*, +, *T MAG Oct. 2019 7501204*

**Image reconstruction**

Fast and Accurate Solution of the Inverse Problem for Image Reconstruction Using Electrical Impedance Tomography. *Martin, S.*, +, *T MAG June 2019 7203004*

**Image resolution**

Micro-Traveling Wave Magnetic Particle Imaging—Sub-Millimeter Resolution With Optimized Tracer LS-008. *Vogel, P.*, +, *T MAG Oct. 2019 5300207*

**Impact (mechanical)**

Magnetostrictive Sensors for Composite Damage Detection and Wireless Structural Health Monitoring. *Leong, Z.*, +, *T MAG July 2019 4003006*

**Impedance matching**

Enhanced Microwave Absorption Properties of Absorbing Materials Induced by Complex Coupling Agents. *Ye, L.*, +, *T MAG Feb. 2019 2800605*

Microwave Absorption Properties of Flake-Like  $\text{Nd}_2\text{Co}_{16.5}\text{Si}_{0.5}$  Powders–Paraffin Composite. *Qiao, G.Y.*, +, *T MAG Feb. 2019 2800504*

**Importance sampling**

Importance Sampling for Thermally Induced Switching and Non-Switching Probabilities in Spin-Torque Magnetic Nanodevices. *Yu, Y.*, +, *T MAG Sept. 2019 7205011*

**Impurities**

The Effect of Interstitial Nitrogen Addition on the Structural Properties of Supercells of  $\text{NdFe}_{12-x}\text{Ti}_x$ . *Skelland, C.*, +, *T MAG Oct. 2019 6700205*

**Inclusions**

Electromagnetic Properties and Absorption Evaluation of Processed Carbonyl Iron and MWCNT at PANI Nanocomposites in the X-Band. *Govahi, M.*, +, *T MAG March 2019 2501409*

Self-Assembled Magnetically Isolated Co Nanoparticles Embedded Inside Carbon Nanotubes. *Prischepa, S.L.*, +, *T MAG Feb. 2019 2300304*

**Induced anisotropy (magnetic)**

Engineering of Magnetic Properties of Fe-Rich Microwires by Stress Annealing. *Zhukov, A.P.*, +, *T MAG Feb. 2019 2000504*

The Step-Current Annealing: An Easy Method to Improve the Magneto-impedance in Co-Rich Ribbons. *Moradi, M.*, +, *T MAG Jan. 2019 2000206*

**Inductance**

Accurate Extraction of Winding Inductances Using Dual Formulations Without Source Field Computation. *Zhao, Y.*, +, *T MAG June 2019 7201504*

Comparative Study of Two Novel Double-Sided Hybrid-Excitation Flux-Reversal Linear Motors With Surface and Interior PM Arrangements. *Zeng, Z.*, +, *T MAG June 2019 8202007*

Computation of Leakage Inductance of End Coils in Electrical Machines Considering Core Effects. *Aragon-Verduzco, D.A.*, +, *T MAG Dec. 2019 8107812*

Enhanced Field Sensitivity by Strong Mutual Coupling and Magnetoinduction in Amorphous Film/Planar Coil Multilayers. *Song, F.*, +, *T MAG Feb. 2019 4001505*

Exploration of the 3-D Printing of Transformer Structures With Embedded Ferrite Cores. *Bowen, D.*, +, *T MAG Feb. 2019 8400705*

Finite-Element Analysis Modeling of High-Frequency Single-Phase Transformers Enabled by Metal Amorphous Nanocomposites and Calculation of Leakage Inductance for Different Winding Topologies. *Nazmunnaahar, M.*, +, *T MAG July 2019 8401511*

$\text{Nd}_x\text{Fe}_{1-x}\text{N}_y$  Magnetic Core Application for Resonance Coil of 13.56 MHz GaN Wireless Power Transmission. *Ide, T.*, +, *T MAG Oct. 2019 2801605*

Ultra-Low Profile Integrated Magnetic Inductors and Transformers for HF Applications. *Michel, J.*, +, *T MAG July 2019 8401207*

**Inductance measurement**

A Novel Gauged Potential Formulation for 3-D Electromagnetic Field Analysis Including Both Inductive and Capacitive Effects. *Zhao, Y.*, +, *T MAG June 2019 7400905*

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Calibration of Numerical Model of Magnetic Induction Brazing. *Panek, D.*, +, *T MAG June 2019 7202104*

Design of Ferrite Core for the Improvement of Power Efficiency in Induction Range. *Im, S.H.*, +, *TMAG June 2019 8001304*

Modeling and Analysis of Transient Performance for Induction Heating System Considering Frequency-Dependent Inductive Load. *Yin, S.*, +, *TMAG June 2019 8001404*

#### Induction motors

Fractional Order PID Control for Reduction of Vibration and Noise on Induction Motor. *Hsu, C.*, *TMAG Nov. 2019 6700507*

Helical Motion Analysis of the 2-Degree-of-Freedom Split-Stator Induction Motor. *Xie, L.*, +, *TMAG June 2019 8103705*

Research on Transposition Method and Loss of Multi-Turn Coil in an Induction Motor. *Wang, D.*, +, *TMAG Oct. 2019 7501604*

Stator Fault Detection on DTC-Driven IM via Magnetic Signatures Aided by 2-D FEA Co-Simulation. *Eldeeb, H.H.*, +, *TMAG June 2019 8101505*

#### Inductive power transmission

A 3-D Topology Optimization of Magnetic Cores for Wireless Power Transfer Device. *Otomo, Y.*, +, *TMAG June 2019 8103005*

A Novel Coil With High Misalignment Tolerance for Wireless Power Transfer. *Li, Y.*, +, *TMAG June 2019 2800904*

AC Resistance Reduction of a Flexible Wireless Power Transmission Coil Using Magnetic Path Control Technology at 13.56 MHz. *Tokudaiji, Y.*, +, *TMAG July 2019 8401407*

Design and Analysis of Quasi-Omnidirectional Dynamic Wireless Power Transfer for Fly-and-Charge. *Han, W.*, +, *TMAG July 2019 8001709*

Double-Solenoid Ferrite Coils for Magnetic-Field Amplification in LF and MF Bands. *Sasaki, A.*, *TMAG Dec. 2019 4004209*

Experiments With a Compact Wireless Power Transfer System Using Strongly Coupled Magnetic Resonance and Metamaterials. *Correa, D.C.*, +, *TMAG Aug. 2019 8401904*

Integral Equation Formulations for Modeling Wireless Power Transfer Systems in Close Proximity to Foreign Objects. *Bingler, A.*, +, *TMAG June 2019 7202904*

Investigation of Structure and Material for Back Yoke at 13.56 MHz Wireless Power Transfer Focused on High Transmission Efficiency. *Miura, D.*, +, *TMAG July 2019 2801105*

Loss Computation Method for Litz Cables With Emphasis on Bundle-Level Skin Effect. *Gyimothy, S.*, +, *TMAG June 2019 6300304*

Multi-Frequency Multi-Power One-to-Many Wireless Power Transfer System. *Liu, W.*, +, *TMAG July 2019 8001609*

$N_d$ ,  $Fe_{1-x}$ ,  $N_y$  Magnetic Core Application for Resonance Coil of 13.56 MHz GaN Wireless Power Transmission. *Ide, T.*, +, *TMAG Oct. 2019 2801605*

Power Allocation for Dynamic Dual-Pickup Wireless Charging System of Electric Vehicle. *Huang, Y.*, +, *TMAG July 2019 8600106*

TMR-Sensor-Array-Based Misalignment-Tolerant Wireless Charging Technique for Roadway Electric Vehicles. *Liu, X.*, +, *TMAG July 2019 4003107*

#### Inductive sensors

A Novel Gauged Potential Formulation for 3-D Electromagnetic Field Analysis Including Both Inductive and Capacitive Effects. *Zhao, Y.*, +, *TMAG June 2019 7400905*

#### Inductors

A Scalable, Broadband, and Physics-Based Model for On-Chip Rectangular Spiral Inductors. *Jayaraman, S.S.*, +, *TMAG Sept. 2019 8402006*

Design, Fabrication, and Characterization of Package Embedded Solenoidal Magnetic Core Inductors for High-Efficiency System-In-Package Integrated Voltage Regulators. *Bellaredj, M.L.F.*, +, *TMAG July 2019 8401607*

Exploration of the 3-D Printing of Transformer Structures With Embedded Ferrite Cores. *Bowen, D.*, +, *TMAG Feb. 2019 8400705*

High- $Q$  On-Chip C-Band Inductor With a Nanocrystalline MnZn-Ferrite Film Core. *Sai, R.*, +, *TMAG July 2019 2801304*

Massively Parallel Computation for 3-D Nonlinear Finite Edge Element Problem With Transmission Line Decoupling Technique. *Li, J.*, +, *TMAG Oct. 2019 7401908*

Ultra-Low Profile Integrated Magnetic Inductors and Transformers for HF Applications. *Michel, J.*, +, *TMAG July 2019 8401207*

#### Infrared imaging

A Model-Assisted Probability of Detection Study on Induction Thermography Technique. *Azzabi Zouraq, B.*, +, *TMAG June 2019 6200904*

Detection and Imaging of Magnetic Field in the Microwave Regime With a Combination of Magnetic Losses Material and Thermofluorescent Molecules. *Ragazzo, H.*, +, *TMAG Feb. 2019 6500104*

Eddy Current Loss Effect in Foil Winding of Transformer Based on Magneto-Fluid-Thermal Simulation. *Li, Y.*, +, *TMAG July 2019 8401705*

#### Ink jet printers

1-D and 2-D Magnetostrictive Actuators. *Park, Y.*, +, *TMAG July 2019 8204105*

#### Inspection

A Model-Assisted Probability of Detection Study on Induction Thermography Technique. *Azzabi Zouraq, B.*, +, *TMAG June 2019 6200904*

Characterization of Defects on Ferromagnetic Tubes Using Magnetic Flux Leakage. *Suresh, V.*, +, *TMAG May 2019 6200510*

Optimal Frequency of Low-Frequency Eddy-Current Testing for Detecting Defects on the Backside of Thick Steel Plates. *Yoshimura, W.*, +, *TMAG July 2019 6201205*

Recognizing Coiled Tubing Defect Characteristics Based on Weak Magnetic Detection Technology. *Zhou, Z.*, +, *TMAG Sept. 2019 6201406*

#### Insulating materials

Interlamination Insulation Design Considerations for Laminated Magnetics Operating at High Frequencies. *Kim, M.*, +, *TMAG Aug. 2019 2801511*

#### Insulators

Fake Conductivity or Cohomology: Which to Use When Solving Eddy Current Problems With  $h$ -Formulations?. *Dlotko, P.*, +, *TMAG June 2019 7204104*

#### Integral equations

A Thin-Layer Volume Integral Equation Formulation for Linear and Non-Linear Magnetostatic Problems. *Hendijani, N.*, +, *TMAG Feb. 2019 7000308*

An Extension of Unstructured-PEEC Method to Magnetic Media. *Torchio, R.*, +, *TMAG June 2019 7200404*

An Integral Equation Hybrid Method for the Impedance Calculation of the Grid Power Distribution Network With an Arbitrary Shape. *Zou, G.*, +, *TMAG June 2019 7203804*

An Integral Face Formulation for Thin Non-Conductive Magnetic Regions. *Chavin-Collin, G.*, +, *TMAG June 2019 7000504*

High-Performance PEEC Analysis of Electromagnetic Scatterers. *Voltolina, D.*, +, *TMAG June 2019 7201204*

Integral Equation Formulations for Modeling Wireless Power Transfer Systems in Close Proximity to Foreign Objects. *Bingler, A.*, +, *TMAG June 2019 7202904*

Integral Formulation for Magnetic and Conductive Wire Loops in an External Time-Harmonic Magnetoquasi-Static Field. *Giussani, L.*, +, *TMAG Nov. 2019 7502304*

Locally Corrected Nyström to Moment Method Conversion for Volume Integral Equations. *Pfeiffer, R.A.*, +, *TMAG April 2019 7200207*

Magnetic Susceptibility Estimation for Magnetostatics. *Vijn, A.*, +, *TMAG March 2019 7400309*

#### Integrated circuit design

Non-Volatile Spintronic Flip-Flop Design for Energy-Efficient SEU and DNU Resilience. *Alghareb, F.S.*, +, *TMAG March 2019 3400611*

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Broadband Circuit Model of a Ferrite Core, Including Dimensional Resonance, Saturation, and Hysteresis. *Wunsch, B.*, +, *TMAG July 2019 7300605*

#### Integrated circuit packaging

Proper Generalized Decomposition of Parameterized Electrothermal Problems Discretized by the Finite Integration Technique. *Krimm, A.*, +, *TMAG June 2019 7204404*

Quasi-Free-Standing Bilayer Graphene Hall-Effect Sensor. *Kachniarz, M.*, +, *TMAG Jan. 2019 4000204*

#### Integration

A New Multi-Objective Optimization Method of Magnetic Levitation Planar Motor. *Zheng, T.*, +, *TMAG Aug. 2019 8204408*

CAE v1.1—A Code for the Magnetic Field Due to Arbitrary Electromagnets. *Prajapati, D.R.*, +, *TMAG Nov. 2019 8002408*

Frequency-Dependent Resistances and Inductances in Time-Domain Transient Simulations of Power Transformers. *Bucher, M.K.*, +, *T MAG Sept. 2019 7500105*

Proper Generalized Decomposition of Parameterized Electrothermal Problems Discretized by the Finite Integration Technique. *Krimm, A.*, +, *T MAG June 2019 7204404*

Semi-Analytical Solution of Magnetic Force and Torque for a Novel Magnetically Levitated Actuator in Rotary Table. *Lu, X.*, +, *T MAG Dec. 2019 8108008*

#### Intelligent materials

A Supervised Artificial Neural Network-Assisted Modeling of Magnetorheological Elastomers in Tension-Compression Mode. *Vatandoost, H.*, +, *T MAG Dec. 2019 2502008*

Magnetostrictive Tactile Sensor Array for Object Recognition. *Zhang, B.*, +, *T MAG July 2019 4002207*

#### Intelligent sensors

Magnetostrictive Tactile Sensor Array for Object Recognition. *Zhang, B.*, +, *T MAG July 2019 4002207*

Overview of Spintronic Sensors With Internet of Things for Smart Living. *Liu, X.*, +, *T MAG Nov. 2019 0800222*

#### Digital transducers

Thermally Induced Magnetic Anisotropy in Nickel Films on Surface Acoustic Wave Devices. *Mathews, S.A.*, +, *T MAG Feb. 2019 4001304*

#### Interface magnetism

A Comprehensive Study of Sign Change in Electric Field Control Perpendicular Magnetic Anisotropy Energy at Fe/MgO Interface: First Principles Calculation. *Pardede, I.*, +, *T MAG Feb. 2019 1700104*

Annealing Temperature Effects on Spin Hall Magnetoresistance in Perpendicularly Magnetized W/CoFeB Bilayers. *Peterson, T.J.*, +, *T MAG Feb. 2019 4100204*

Characterization of Continuous Wave Laser-Induced Thermal Gradients in Magnetic Tunnel Junctions Integrated Into Microresonators via COMSOL Simulations. *Cansever, H.*, +, *T MAG July 2019 7401505*

Critical Role of W Insertion Layer Sputtering Condition for Reference Layer on Magnetic and Transport Properties of Perpendicular-Anisotropy Magnetic Tunnel Junction. *Honjo, H.*, +, *T MAG July 2019 3400904*

Current-Driven Skyrmion Dynamics Along Curved Tracks. *Luis, R.F.*, +, *T MAG July 2019 1500408*

Electric Field Tuning of Anisotropic Magnetoresistance in Ni-Co/PMN-PT Multiferroic Heterostructure. *Wang, C.*, +, *T MAG Feb. 2019 2501103*

Insertion Layer Thickness Dependence of Magnetic and Electrical Properties for Double-CoFeB/MgO-Interface Magnetic Tunnel Junctions. *Miura, S.*, +, *T MAG July 2019 3401004*

Modulation of Magnetism and Magnetic Anisotropy at the Heavy-Metal/FeRh Interface. *Odkhuu, D.*, *T MAG Feb. 2019 7000104*

Perpendicular Exchange Bias in (Co/Pt)<sub>n</sub> Multilayers. *Elphick, K.*, +, *T MAG July 2019 4800106*

Simulation of Strain-Assisted Switching in Synthetic Antiferromagnetic Free Layer-Based Magnetic Tunnel Junction. *Noh, S.*, +, *T MAG April 2019 3400705*

Skyrmion-Based Racetrack Memory With Continuous Loop Built From Ferromagnetic Metal and Insulator. *Honda, S.*, +, *T MAG Feb. 2019 1500304*

The Study on Magnetization Reversal of Stripe-Domain Structure in Ni Wires Fabricated on a LiNbO<sub>3</sub> Substrate. *Yamaguchi, A.*, +, *T MAG Feb. 2019 2500404*

#### Interface structure

Insertion Layer Thickness Dependence of Magnetic and Electrical Properties for Double-CoFeB/MgO-Interface Magnetic Tunnel Junctions. *Miura, S.*, +, *T MAG July 2019 3401004*

#### Interference (signal)

Adjacent Track Interference in Heat-Assisted Magnetic Recording: Impact and Implications. *Kalarickal, S.*, +, *T MAG July 2019 3001804*

An Iterative Two-Head Two-Track Detection Method for Staggered Bit-Patterned Magnetic Recording Systems. *Koonkarnkhai, S.*, +, *T MAG July 2019 3001707*

High Track Pitch Density for HAMR Recording: 1M TPI. *Rea, C.*, +, *T MAG March 2019 3000708*

Magnetic Calibration System With Interference Compensation. *Janosek, M.*, +, *T MAG Jan. 2019 6000104*

#### Interference suppression

A Study on Block-Based Neural Network Equalization in TDMR System With LDPC Coding. *Luo, K.*, +, *T MAG Nov. 2019 6700605*

Maximum Likelihood Detection for 3-D-MAMR. *Chan, K.S.*, +, *T MAG Dec. 2019 3002609*

#### Interleaved codes

Performance of Interleaved Block Codes With Burst Errors. *Cideciyan, R.D.*, +, *T MAG March 2019 3100305*

#### Internal stresses

Effect of Cut-Edge Residual Stress on Magnetic Properties in Non-Oriented Electrical Steel. *Lee, H.*, +, *T MAG Feb. 2019 2000804*

Engineering of Magnetic Properties of Fe-Rich Microwires by Stress Annealing. *Zhukov, A.P.*, +, *T MAG Feb. 2019 2000504*

Local Measurement of Peening-Induced Residual Stresses on Iron Nickel Material Using Needle Probes Technique. *Tene Deffo, Y.A.*, +, *T MAG July 2019 7100208*

Optimization of GMI Effect and Magnetic Properties of Co-Rich Microwires by Joule Heating. *Corte-Leon, P.*, +, *T MAG Feb. 2019 2000404*

#### Internet of Things

MEMS-Based Vibrational Energy Harvesting and Conversion Employing Micro-/Nano-Magnetics. *Roy, S.*, +, *T MAG July 2019 4700315*

Overview of Spintronic Sensors With Internet of Things for Smart Living. *Liu, X.*, +, *T MAG Nov. 2019 0800222*

#### Interpolation

Locally Corrected Nyström to Moment Method Conversion for Volume Integral Equations. *Pfeiffer, R.A.*, +, *T MAG April 2019 7200207*

Material Interpolation in Multi-Material Topology Optimization for Magnetic Device Design. *Jung, Y.*, +, *T MAG Nov. 2019 7502404*

Mesh Deformation Based on Radial Basis Function Interpolation Applied to Low-Frequency Electromagnetic Problem. *Henneron, T.*, +, *T MAG June 2019 7201704*

Modified Improved Interpolating Moving Least Squares Method for Meshless Approaches. *Fujita, Y.*, +, *T MAG June 2019 7203204*

Moving Least Square-Based Hybrid Genetic Algorithm for Optimal Design of W-Band Dual-Reflector Antenna. *Lee, K.*, +, *T MAG June 2019 9400404*

Scalar Magnetic Potential Interpolation for Non-Conformal Meshing in Mesh-Based Generated Reluctance Networks. *Asfirane, S.*, +, *T MAG July 2019 7204808*

#### Interstitials

The Effect of Interstitial Nitrogen Addition on the Structural Properties of Supercells of NdFe<sub>12-x</sub>Ti<sub>x</sub>. *Skelland, C.*, +, *T MAG Oct. 2019 6700205*

#### Inter-symbol interference

Data Recovery for Multilayer Magnetic Recording. *Chan, K.S.*, +, *T MAG Dec. 2019 6701216*

Deep Neural Network Based Media Noise Predictors for Use in High-Density Magnetic Recording Turbo-Detectors. *Sayyafan, A.*, +, *T MAG Dec. 2019 6701406*

ISI/ITI Turbo Equalizer for TDMR Using Trained Local Area Influence Probabilistic Model. *Sun, X.*, +, *T MAG April 2019 3100515*

Joint Four-Reader Array Equalization and Detection for a Single Track in TDMR. *Wang, S.*, +, *T MAG Dec. 2019 3002006*

#### Inverse problems

Arbitrary Crack Depth Profiling Through ACFM Data Using Type-2 Fuzzy Logic and PSO Algorithm. *Ahmadkhal, S.M.*, +, *T MAG Feb. 2019 6200210*

Block Inverse Preconditioner for Implicit Time Integration in Finite Element Micromagnetic Solvers. *Fu, S.*, +, *T MAG Dec. 2019 7205111*

Calibration of Numerical Model of Magnetic Induction Brazing. *Panek, D.*, +, *T MAG June 2019 7202104*

Fast and Accurate Solution of the Inverse Problem for Image Reconstruction Using Electrical Impedance Tomography. *Martin, S.*, +, *T MAG June 2019 7203004*

Fault Identification on a Fuel Cell by 3-D Current Density Reconstruction From External Magnetic Field Measurements. *Ifrek, L.*, +, *T MAG June 2019 6200705*

Magnetostrictive Tactile Sensor Array for Object Recognition. *Zhang, B.*, +, *T MAG July 2019 4002207*

**Inverse transforms**

Frequency-Dependent Resistances and Inductances in Time-Domain Transient Simulations of Power Transformers. *Bucher, M.K.*, +, *TMAG Sept. 2019 7500105*

**Inverters**

Brushless Operation of a Wound-Field Synchronous Machine Using a Novel Winding Scheme. *Ayub, M.*, +, *TMAG June 2019 8201104*

Design of Ferrite Core for the Improvement of Power Efficiency in Induction Range. *Im, S.H.*, +, *TMAG June 2019 8001304*

Influence of Output Voltage Harmonic of Inverter on Loss and Temperature Field of Permanent Magnet Synchronous Motor. *Yang, C.*, +, *TMAG June 2019 8201605*

Investigation of Systematic Efficiency in a High-Speed Single-Phase Brushless DC Motor Using Multi-Physics Analysis for a Vacuum Cleaner. *Choo, Y.*, +, *TMAG July 2019 8203606*

Multi-Frequency Multi-Power One-to-Many Wireless Power Transfer System. *Liu, W.*, +, *TMAG July 2019 8001609*

Performance Comparison Between an Amorphous Metal PMSM and a Silicon Steel PMSM. *Tong, W.*, +, *TMAG June 2019 8102705*

Power Capability of Hybrid Excited Synchronous Motors in Variable Speed Drives Applications. *Amara, Y.*, +, *TMAG Aug. 2019 8204312*

**Ion beam effects**

MnGa (001)-Textured Film Fabricated on Thermally Oxidized Si Substrate for Application to Ion Beam Bit Patterned Media. *Ishikawa, T.*, +, *TMAG July 2019 3200104*

**Ion implantation**

Ion-Implantation-Induced Disorder in FePt-C Thin Films. *Kumar, D.*, +, *TMAG March 2019 2300805*

**Iron**

A Comprehensive Study of Sign Change in Electric Field Control Perpendicular Magnetic Anisotropy Energy at Fe/MgO Interface: First Principles Calculation. *Pardede, I.*, +, *TMAG Feb. 2019 1700104*

Design of Bicomponent Magnonic Waveguide With High Group Velocity for Signal Transmission Devices. *Vivek, T.*, +, *TMAG Dec. 2019 7205207*

Direct Tunneling and Related TMR Anomalies in Magnetic Tunnel Junctions With Embedded Nanoparticles. *Turenne, D.*, +, *TMAG Dec. 2019 4400804*

Fe/C Nanocapsule-Decorated Fe<sub>2</sub>B/C Nanocapsule Hybrids With Improved Gigahertz Electromagnetic Absorption Properties. *Liu, X.*, +, *TMAG Feb. 2019 2501205*

Improvement of Reproducibility of Magnetic Moment Detected by a SQUID Magnetometer Through Radial Offset Measurement on a YIG Sphere. *Matsumoto, N.*, +, *TMAG Feb. 2019 9400305*

Interlayer Exchange Coupling Between Fe and GaMnAs Ferromagnetic Semiconductor. *Tivakornsasithorn, K.*, +, *TMAG Feb. 2019 2400104*

Magnetic Properties of Pure Iron for the Upgrade of the LHC Superconducting Dipole and Quadrupole Magnets. *Parrella, A.*, +, *TMAG Feb. 2019 2001004*

Magnetic Properties of Reactive Co-Sputtered NiFe-Oxide Samples. *Binod, D.C.*, +, *TMAG Feb. 2019 2900205*

Microstructure and Magnetic Properties of Fe/ZrSiO<sub>4</sub> Composites Prepared by Mechanical Milling and Spark Plasma Sintering. *Hu, W.*, +, *TMAG Dec. 2019 2002707*

Modified Hard-Template Synthesis of Superparamagnetic Hollow Spinel Ferrite Spheres and Their Characterization. *Lakic, M.*, +, *TMAG Dec. 2019 2301211*

New Hybrid Stator Design for High-Speed PMSMS Based on Selective Laser Melting of 3-D Printing. *Huang, P.*, +, *TMAG July 2019 8203404*

Research of Harmonic Effects on Core Loss in Soft Magnetic Composite Materials. *Yu, X.*, +, *TMAG Feb. 2019 6100305*

Shape Magnetic Anisotropy From Spin Density in Nanoscale Slab Systems. *Oda, T.*, +, *TMAG Feb. 2019 1300104*

Silica-Coated Iron Microflakes (Fe/SiO<sub>2</sub>)-Based Elastomeric Composites as Thin Microwave Absorber. *Janu, Y.*, +, *TMAG March 2019 2800707*

Temperature-Dependent Magnetic Properties of Bi-Doped Fe<sub>16</sub>N<sub>2</sub>: First Principles and Atomistic Study. *Khan, I.*, +, *TMAG Dec. 2019 2102005*

**Iron alloys**

A Comparative Study of the Magnetocaloric Effect in MnFePSiGeB Prepared by Traditional Sintering and Spark Plasma Sintering. *Wang, G.F.*, +, *TMAG Feb. 2019 2500705*

Annealing Temperature Effects on Spin Hall Magnetoresistance in Perpendicularly Magnetized W/CoFeB Bilayers. *Peterson, T.J.*, +, *TMAG Feb. 2019 4100204*

Bio-Inspired Magnetostrictive Tactile Sensor for Surface Material Recognition. *Zheng, W.*, +, *TMAG July 2019 4002307*

Changes in Microstructure and Magnetic Properties of Fe-B-Cu Ribbons According to Annealing Conditions. *Lee, K.*, +, *TMAG Feb. 2019 2000904*

Characterization of Continuous Wave Laser-Induced Thermal Gradients in Magnetic Tunnel Junctions Integrated Into Microresonators via COMSOL Simulations. *Cansever, H.*, +, *TMAG July 2019 7401505*

Critical Role of W Insertion Layer Sputtering Condition for Reference Layer on Magnetic and Transport Properties of Perpendicular-Anisotropy Magnetic Tunnel Junction. *Honjo, H.*, +, *TMAG July 2019 3400904*

Curie Temperature of Sm<sub>2</sub>Fe<sub>17</sub> and Nd<sub>2</sub>Fe<sub>14</sub>B: A First-Principles Study. *Fukazawa, T.*, +, *TMAG July 2019 2101305*

Different Magnetic Field Effects on the  $\epsilon$ - $\tau$  Phase Transformation Between (Mn,Zn)-Al and Mn-Al-C. *Mitsui, Y.*, +, *TMAG Feb. 2019 2100704*

Effect of Annealing on Magnetic and Mechanical Behaviors of NANOPERM-Type Alloys. *Hasiak, M.*, +, *TMAG Feb. 2019 2001606*

Effect of Pt and FePt Layer Thickness on Microstructure and Magnetic Properties of L1<sub>0</sub> FePt Films With Perpendicular Anisotropy. *Bae, J.*, +, *TMAG Aug. 2019 3200506*

Effects of Thickness and Thermal Annealing of FeCoB Thin Films on Ferromagnetic Resonance and Microwave Propagation Properties. *Arteaga-Duran, A.*, +, *TMAG Feb. 2019 2800303*

Elastic and Magnetoelastic Properties of Fe-Rich Tetragonal Y-Fe Compounds: Phenomenology and Electron Theory. *Inoue, J.*, +, *TMAG Feb. 2019 2100304*

Electrical Resistivity and Magnetic Performance of Ceramics-Bonded Nd-Fe-B-Type Magnet Consolidated Using Dielectric Oxide Binder. *Kang, M.S.*, +, *TMAG July 2019 2101405*

Electromagnetic Properties of Fe<sub>50</sub>Co<sub>50</sub>/Cu Granular Composite Materials Containing Flaky Particles. *Kasagi, T.*, +, *TMAG Feb. 2019 2800204*

Engineering of Magnetic Properties of Fe-Rich Microwires by Stress Annealing. *Zhukov, A.P.*, +, *TMAG Feb. 2019 2000504*

Fabrication of Ferrite-Coated Magnetic Fe-Mn-Si-Cr-Ni Alloy Utilizing Selective Oxidation of Mn Element. *Peng, H.*, +, *TMAG May 2019 2900307*

High GMR Effect and Perfect Microstructure in CoFe/Cu Multilayers. *Milyaev, M.*, +, *TMAG April 2019 2300904*

Insertion Layer Thickness Dependence of Magnetic and Electrical Properties for Double-CoFeB/MgO-Interface Magnetic Tunnel Junctions. *Miura, S.*, +, *TMAG July 2019 3401004*

Ion-Implantation-Induced Disorder in FePt-C Thin Films. *Kumar, D.*, +, *TMAG March 2019 2300805*

Local Measurement of Peening-Induced Residual Stresses on Iron Nickel Material Using Needle Probes Technique. *Tene Deffo, Y.A.*, +, *TMAG July 2019 7100208*

Loss Prediction in DC-Biased Magnetic Sheets. *de la Barriere, O.*, +, *TMAG Oct. 2019 2002614*

Low-Temperature Performance of Nanoscale Perpendicular Magnetic Tunnel Junctions With Double MgO-Interface Free Layer. *Cao, K.*, +, *TMAG March 2019 3400304*

Magnetic and Thermoelectric Properties of Fe-Ti-Sn Alloys. *Saito, T.*, +, *TMAG Feb. 2019 2900104*

Magnetic Damping Constant of CoFeB/Pt Thin Films With Varying the Thicknesses of Pt and Insertion Layer of Al. *Wu, K.*, +, *TMAG July 2019 4100305*

Magnetic Optical FBG Sensors Using Optical Frequency-Domain Reflectometry. *Kaplan, N.*, +, *TMAG Jan. 2019 4000704*

Magnetic Tunnel Junctions: Laser Annealing Versus Oven Annealing. *Sharma, A.*, +, *TMAG Jan. 2019 4400104*

- Magnetic-Polymer Composites for Bonding and 3D Printing of Permanent Magnets. *Palmero, E.M.*, +, *TMAG Feb. 2019 2101004*
- Magnetization Studies on Tb-Fe and Tb-Fe-Co Thin Films. *Rajasekhar, P.*, +, *TMAG Feb. 2019 2500804*
- Magnetostrictive Tactile Sensor Array for Object Recognition. *Zhang, B.*, +, *TMAG July 2019 4002207*
- Measurements of Iron Loss in PMSM Stator Cores Based on CoFe and SiFe Lamination Sheets and Stemmed From Different Manufacturing Processes. *Boubaker, N.*, +, *TMAG Jan. 2019 8100309*
- Micromagnetic Study of Edge-Damage Effects in Perpendicular CoFeB/MgO Magnetic Tunnel Junction. *Yoshida, C.*, +, *TMAG July 2019 3401105*
- Microstructure Characteristics of 2:17 SmCo Commercial Magnets With Different Coercivities. *Xie, Z.H.*, +, *TMAG July 2019 2101504*
- Microstructure Characterization and Magnetic Characteristics of Ce-Fe-B Based Spark Plasma Sintered Magnets. *Jiang, Q.*, +, *TMAG Sept. 2019 2101806*
- Modulation of Magnetism and Magnetic Anisotropy at the Heavy-Metal/FeRh Interface. *Odkhuu, D.*, *TMAG Feb. 2019 7000104*
- Nanostructure Evolution of Co-Evaporated FeNi-SiO<sub>2</sub> Magnetic Nanoparticle Film Prepared Under High Magnetic Field. *Li, G.*, +, *TMAG Feb. 2019 2000604*
- Nd<sub>x</sub>Fe<sub>1-x</sub>N<sub>y</sub> Magnetic Core Application for Resonance Coil of 13.56 MHz GaN Wireless Power Transmission. *Ide, T.*, +, *TMAG Oct. 2019 2801605*
- Offset Reduction in GMI-Based Device by Using Double-Frequency Bias-Current Modulation. *Esper, A.*, +, *TMAG Jan. 2019 4000504*
- Optical Analysis of HAMR Media. *Victoria, R.H.*, +, *TMAG March 2019 3000908*
- Optical Detection of Phase-Resolved Ferromagnetic Resonance in Epitaxial FeCo Thin Films. *Li, Y.*, +, *TMAG July 2019 6100605*
- Permanent Magnets Beyond Nd-Dy-Fe-B. *Hirosawa, S.*, *TMAG Feb. 2019 2100506*
- Realization of Energy Harvesting Based on Stress-Induced Modification of Magnetic Domain Structures in Microwires. *Bhatti, S.*, +, *TMAG July 2019 2301107*
- Reduction of Magnet Eddy Current Loss in PMSM by Using Partial Magnet Segment Method. *Wang, Y.*, +, *TMAG July 2019 8105105*
- Rotational Single Sheet Tester for Multiaxial Magneto-Mechanical Effects in Steel Sheets. *Aydin, U.*, +, *TMAG March 2019 2001810*
- Simple Numerical Calculation Method of Rotational Iron Loss in Silicon Steel Sheets. *Gao, Y.*, +, *TMAG June 2019 6300404*
- Spin-Orbit Torque-Driven Magnetic Switching of Co/Pt-CoFeB Exchange Spring Ferromagnets. *Song, M.*, +, *TMAG Aug. 2019 1401004*
- Studies of Exchange Coupling in FeCo/L<sub>10</sub>-FePt Bilayer Thin Films. *Vashishth, G.*, +, *TMAG March 2019 2101205*
- Studies of HAMR Recording by Hybrid Monte Carlo Micromagnetics. *Miao, J.*, +, *TMAG July 2019 3001604*
- Studying of the Interlayer Interaction in Magnetic Multilayers (FM/I/FM) Measuring the FMR Peak Asymmetry. *Vdovichev, S.N.*, +, *TMAG Aug. 2019 6100906*
- Surface Texturing and Enhanced Microwave Absorption of Fe-B Alloy Flakes Through a Dealloying Process. *Tian, N.*, +, *TMAG July 2019 4002105*
- The Correlation Between Magnetic Dead Layer and Perpendicular Magnetic Anisotropy in MgO/CoFeB/Ta Top Structure. *Shen, S.*, +, *TMAG Feb. 2019 3400205*
- The Effect of Interstitial Nitrogen Addition on the Structural Properties of Supercells of NdFe<sub>12-x</sub>Ti<sub>x</sub>. *Skelland, C.*, +, *TMAG Oct. 2019 6700205*
- The Step-Current Annealing: An Easy Method to Improve the Magneto-impedance in Co-Rich Ribbons. *Moradi, M.*, +, *TMAG Jan. 2019 2000206*
- Theoretical Study of Gilbert Damping in Rare-Earth Permanent Magnets. *Saito, F.*, +, *TMAG July 2019 2101604*
- Iron compounds**
- A Hybrid Interior Permanent Magnet Variable Flux Memory Machine Using Two-Part Rotor. *Zheng, Y.*, +, *TMAG July 2019 8106008*
- Fe/C Nanocapsule-Decorated Fe<sub>2</sub>B/C Nanocapsule Hybrids With Improved Gigahertz Electromagnetic Absorption Properties. *Liu, X.*, +, *TMAG Feb. 2019 2501205*
- Hybrid Plasmonic-Superparamagnetic Nanoparticle Clusters: Facile Synthesis and Characterization. *Pourmiri, S.*, +, *TMAG July 2019 5300104*
- Influence of pH on Dynamic Magnetic Susceptibility of Iron-Oxide Nanoparticles in a Chitosan Hydrogel Matrix. *Villamin, M.E.*, +, *TMAG Feb. 2019 5000204*
- Magnetic and Transport Properties of Co<sub>1-x</sub>FeV<sub>1-x</sub>Si Epitaxial Films Grown by Molecular Beam Epitaxy. *Yamada, S.*, +, *TMAG Feb. 2019 2400304*
- Magnetic PolyHIPE Composites With Activated Carbon and Iron Oxide Nanoparticles. *Seeharaj, P.*, +, *TMAG Feb. 2019 9400104*
- Synthesis of  $\gamma^3$ -Fe<sub>4</sub>N Soft Magnetic Material by High-Pressure Nitriding Approach. *Jiang, Y.*, +, *TMAG Feb. 2019 2001504*
- Texture Evolution and Magnetostriction of Rolled (Co<sub>70</sub>Fe<sub>30</sub>)<sub>99.8</sub>(NbC)<sub>0.2</sub> Sheets. *Zhao, Y.*, +, *TMAG Oct. 2019 2501805*
- The Effect of the Superlattice on the Magnetic and Transport Properties of Epitaxial Magnetite Thin Films. *Alraddadi, S.*, +, *TMAG March 2019 2700205*
- Tuning the Magnetic Anisotropy of Fe<sub>3</sub>O<sub>4</sub>/Pt Heterostructures Fabricated by Atomic Layer Deposition With *In Situ* Magnetic Field. *Zhang, L.*, +, *TMAG March 2019 2001707*
- Ising model**
- Magnetic Properties and Critical and Compensation Temperatures in Mixed Spin-1/2-Spin-1 Ferrimagnetic-Centered Rectangular Structure Using Monte Carlo Simulation. *Obeidat, A.A.*, +, *TMAG Sept. 2019 1000305*
- Iterative decoding**
- A Study on Iterative Decoding With LLR Modulator by Neural Network Using Adjacent Track Information in SMR System. *Nishikawa, M.*, +, *TMAG Dec. 2019 6701305*
- A Study on Iterative Decoding With LLR Modulator Using Neural Network in SMR System. *Nishikawa, M.*, +, *TMAG July 2019 3100604*
- An Improved Symbol-Flipping Algorithm for Nonbinary LDPC Codes and its Application to NAND Flash Memory. *Oh, J.*, +, *TMAG Sept. 2019 3500113*
- An Iterative Two-Head Two-Track Detection Method for Staggered Bit-Patterned Magnetic Recording Systems. *Koonkarnkhai, S.*, +, *TMAG July 2019 3001707*
- Performance Evaluation of LDPC Coding and Iterative Decoding System for 3-D Magnetic Recording With Dot Position Fluctuation. *Masuda, K.*, +, *TMAG July 2019 3001404*
- Iterative methods**
- A 3-D Hybrid Cell Boundary Element Method for Time-Harmonic Eddy Current Problems on Multiply Connected Domains. *Moro, F.*, +, *TMAG March 2019 9200111*
- A Generalized Parallel Transmission Line Iteration for Finite Element Analysis of Permanent Magnet Axisymmetrical Actuator. *Yang, W.*, +, *TMAG March 2019 7400410*
- Acceleration of Transient Non-Linear Electromagnetic Field Analyses Using an Automated Subspace Correction Method. *Iwashita, T.*, +, *TMAG June 2019 7203704*
- Auto-Gauging of Vector Potential by Parallel Sparse Direct Solvers—Numerical Observations. *Tang, Z.*, +, *TMAG June 2019 7200705*
- Block Inverse Preconditioner for Implicit Time Integration in Finite Element Micromagnetic Solvers. *Fu, S.*, +, *TMAG Dec. 2019 7205111*
- Calculation of Accumulated Charge on Surface of Insulated House Near DC Transmission Lines by Method of Characteristics. *Xiao, F.*, +, *TMAG June 2019 7201405*
- Calculation of Ion Flow Fields of HVdc Transmission Lines Based on Error Minimization Using Nodal Current Density. *Kim, J.*, +, *TMAG June 2019 7204204*
- Computation of Leakage Inductance of End Coils in Electrical Machines Considering Core Effects. *Aragon-Verduzco, D.A.*, +, *TMAG Dec. 2019 8107812*
- Deep Neural Network Based Media Noise Predictors for Use in High-Density Magnetic Recording Turbo-Detectors. *Sayyafan, A.*, +, *TMAG Dec. 2019 6701406*
- Finite-Element Gaussian Belief Propagation Solver for Multi-Physics Modeling of Radiofrequency Tumor Ablation. *Akbari, A.*, +, *TMAG June 2019 7201604*



Genetic Optimization With Mixed-Order Prism Macroelements for 3-D Metamaterial Multilayered Structures. *Karatzidis, D.I., +, TMAG June 2019 7203904*

Massively Parallel Computation for 3-D Nonlinear Finite Edge Element Problem With Transmission Line Decoupling Technique. *Li, J., +, TMAG Oct. 2019 7401908*

Matrix-Free Nonlinear Finite-Element Solver Using Transmission-Line Modeling on GPU. *Liu, P., +, TMAG July 2019 7401605*

Open-Circuit Field Prediction of Interior Permanent-Magnet Motor Using Hybrid Field Model Accounting for Saturation. *Li, Z., +, TMAG July 2019 8104707*

Study on the Corona Discharge Ionized Field of UHVdc Based on Particle-in-Cell Iterative Method. *Zhu, T., +, TMAG June 2019 7202004*

The ARMM System: An Optimized Mobile Electromagnetic Coil for Non-Linear Actuation of Flexible Surgical Instruments. *Sikorski, J., +, TMAG Sept. 2019 5600109*

## J

### Jahn-Teller effect

Size Effects on Magnetic Property and Crystal Structure of Mn<sub>3</sub>O<sub>4</sub> Nanoparticles in Mesoporous Silica. *Tajiri, T., +, TMAG Feb. 2019 2300204*

### Jitter

Improving Our Understanding of Measured Jitter (in HAMR). *Hohlfeld, J., +, TMAG March 2019 3000511*

### Junctions

Direct Tunneling and Related TMR Anomalies in Magnetic Tunnel Junctions With Embedded Nanoparticles. *Turenne, D., +, TMAG Dec. 2019 4400804*

## K

### Kerr magneto-optical effect

Imaging Domains in a Zero-Moment Half Metal. *Siewierska, K.E., +, TMAG Feb. 2019 2600104*

Magnetic Domain Structures and Magnetic Properties of Lightly Nd-Doped Sm-Co Magnets With High Squareness and High Heat Resistance. *Machida, H., +, TMAG Feb. 2019 2100604*

Vector-Resolved Magneto-optic Kerr Effect Measurements of Spin-Orbit Torque. *Celik, H., +, TMAG Jan. 2019 4100105*

## L

### Ladder networks

A Scalable, Broadband, and Physics-Based Model for On-Chip Rectangular Spiral Inductors. *Jayaraman, S.S., +, TMAG Sept. 2019 8402006*

Cauer Ladder Network With Multiple Expansion Points for Efficient Model Order Reduction of Eddy-Current Field. *Kuriyama, K., +, TMAG June 2019 7203404*

### Laminates

3-D Finite Element Analysis of Magnetolectric Composites Accounting for Material Nonlinearity and Eddy Currents. *Do, T.A., +, TMAG Oct. 2019 7402008*

Improved Tunability in Metglas/Ferrite/PZT Magnetolectric Tunable Inductors. *Zhang, J., +, TMAG July 2019 2501604*

Measurements of Iron Loss in PMSM Stator Cores Based on CoFe and SiFe Lamination Sheets and Stemmed From Different Manufacturing Processes. *Boubaker, N., +, TMAG Jan. 2019 8100309*

Reluctance Network Model of Three-Phase-Laminated-Core Variable Inductor Considering Magnetic Hysteresis Behavior. *Hane, Y., +, TMAG July 2019 8401306*

### Laminations

High Power Density Electrical Machines for Electric Vehicles—Comprehensive Review Based on Material Technology. *Ramesh, P., +, TMAG Nov. 2019 0900121*

Interlamination Insulation Design Considerations for Laminated Magnetics Operating at High Frequencies. *Kim, M., +, TMAG Aug. 2019 2801511*

Investigation of Systematic Efficiency in a High-Speed Single-Phase Brushless DC Motor Using Multi-Physics Analysis for a Vacuum Cleaner. *Choo, Y., +, TMAG July 2019 8203606*

Measurements of Iron Loss in PMSM Stator Cores Based on CoFe and SiFe Lamination Sheets and Stemmed From Different Manufacturing Processes. *Boubaker, N., +, TMAG Jan. 2019 8100309*

New Hybrid Stator Design for High-Speed PMSMS Based on Selective Laser Melting of 3-D Printing. *Huang, P., +, TMAG July 2019 8203404*

On-Load Field Prediction of Surface-Mounted PM Machines Considering Nonlinearity Based on Hybrid Field Model. *Wu, L.J., +, TMAG March 2019 8100911*

Torque Analysis of Concentric Magnetic Gear With Interconnected Flux Modulators. *Zhan, Y., +, TMAG June 2019 8103904*

Vector Magnetic Properties Measurement of Silicon Steel Under Biased Magnetic Excitation Along Laminated Direction. *Zhang, C., +, TMAG Feb. 2019 8000204*

### Lanthanum compounds

Magnetoimpedance Response of a Double-Exchange Metallic Ferromagnet La<sub>0.80</sub>Sm<sub>0.20</sub>MnO<sub>3</sub>. *Chaudhuri, U., +, TMAG July 2019 2801205*

### Laplace equations

Finite-Element Gaussian Belief Propagation Solver for Multi-Physics Modeling of Radiofrequency Tumor Ablation. *Akbari, A., +, TMAG June 2019 7201604*

Two-Dimensional Fourier-Based Modeling of Electric Machines—An Overview. *Hannon, B., +, TMAG Oct. 2019 8107217*

### Laser beam annealing

Magnetic Tunnel Junctions: Laser Annealing Versus Oven Annealing. *Sharma, A., +, TMAG Jan. 2019 4400104*

### Laser beam cutting

Measurements of Iron Loss in PMSM Stator Cores Based on CoFe and SiFe Lamination Sheets and Stemmed From Different Manufacturing Processes. *Boubaker, N., +, TMAG Jan. 2019 8100309*

### Laser beam effects

Novel Ionic-Liquid-Type Lubricant for Heat-Assisted Magnetic Recording System. *Hatsuda, K., +, TMAG Sept. 2019 3300707*

### Lattice constants

Effect of Sn<sup>4+</sup>-Zn<sup>2+</sup>-Co<sup>2+</sup> Doping on Structural and Magnetic Properties of M-Type Barium Hexaferrites. *Mesdaghi, S., +, TMAG Jan. 2019 2100106*

Elastic and Magnetoelastic Properties of Fe-Rich Tetragonal Y-Fe Compounds: Phenomenology and Electron Theory. *Inoue, J., +, TMAG Feb. 2019 2100304*

Size Effects on Magnetic Property and Crystal Structure of Mn<sub>3</sub>O<sub>4</sub> Nanoparticles in Mesoporous Silica. *Tajiri, T., +, TMAG Feb. 2019 2300204*

The Effect of Interstitial Nitrogen Addition on the Structural Properties of Supercells of NdFe<sub>12-x</sub>Ti<sub>x</sub>. *Skelland, C., +, TMAG Oct. 2019 6700205*

### Layout

Perpendicular Interlaced Magnetic Recording. *Granz, S., +, TMAG Dec. 2019 6701106*

### Lead compounds

Electric Field Tuning of Anisotropic Magnetoresistance in Ni-Co/PMN-PT Multiferroic Heterostructure. *Wang, C., +, TMAG Feb. 2019 2501103*

Improved Tunability in Metglas/Ferrite/PZT Magnetolectric Tunable Inductors. *Zhang, J., +, TMAG July 2019 2501604*

Magnetically Actuated Piezoelectric-Based Rotational Energy Harvester With Enhanced Output in Wide Range of Rotating Speeds. *Rashidi, R., +, TMAG Sept. 2019 8700208*

Simulation of Strain-Assisted Switching in Synthetic Antiferromagnetic Free Layer-Based Magnetic Tunnel Junction. *Noh, S., +, TMAG April 2019 3400705*

### Learning (artificial intelligence)

Deep Learning for Magnetic Field Estimation. *Khan, A., +, TMAG June 2019 7202304*

Electromagnetic Signature Reduction of Ferromagnetic Vessels Using Machine Learning Approach. *Modi, A., +, TMAG Aug. 2019 6000606*

Multi-Objective Topology Optimization of Rotating Machines Using Deep Learning. *Doi, S., +, TMAG June 2019 7202605*

Topology Optimization Accelerated by Deep Learning. *Sasaki, H., +, TMAG June 2019 7401305*

### Least squares approximations

Data Recovery for Multilayer Magnetic Recording. *Chan, K.S., +, TMAG Dec. 2019 6701216*

Modified Improved Interpolating Moving Least Squares Method for Mesh-less Approaches. *Fujita, Y., +, TMAG June 2019 7203204*

Moving Least Square-Based Hybrid Genetic Algorithm for Optimal Design of W-Band Dual-Reflector Antenna. *Lee, K., +, TMAG June 2019 9400404*

Multi-Objective Optimization of Contactor's Characteristics Based on RBF Neural Networks and Hybrid Method. *Yang, W., +, TMAG June 2019 8001104*

#### LED lamps

Cableless Magnetic Actuator Capable of High-Speed Transport in a Curved Pipe. *Yaguchi, H., +, TMAG July 2019 8202608*

#### Lenses

Generation of High-Efficiency Vortex Beam Carrying OAM Mode Based on Miniaturized Element Frequency Selective Surfaces. *Wang, Y., +, TMAG Oct. 2019 7501104*

#### Light emitting diodes

Detection and Imaging of Magnetic Field in the Microwave Regime With a Combination of Magnetic Losses Material and Thermofluorescent Molecules. *Ragazzo, H., +, TMAG Feb. 2019 6500104*

Spin Injection From EuS/Co Multilayers Into GaAs Detected by Polarized Electroluminescence. *Goschew, A., +, TMAG July 2019 1400804*

#### Light propagation

Magnetic Gradient Measurement Using Micro-Fabricated Shaped Rubidium Vapor Cell. *Ji, Y., +, TMAG Sept. 2019 4700405*

#### Light reflection

3-D Magnetic Orientation Control of Ferromagnetic Film/Guanine Crystal Hybrid Plate. *Sogame, T., +, TMAG July 2019 5000604*

Magnetically Induced Flickering Change in the Light-Reflecting Cuticulae of the Common Bluebottle Butterfly *Graphium Sarpedon*. *Iwasaka, M., +, TMAG July 2019 5200204*

#### Light scattering

3-D Magnetic Orientation Control of Ferromagnetic Film/Guanine Crystal Hybrid Plate. *Sogame, T., +, TMAG July 2019 5000604*

#### Lightning

Lightning-Generated Transients in Buildings With an Efficient PEEC Method. *Qi, R., +, TMAG Nov. 2019 7502605*

#### Linear accelerators

Numerical Investigation on Superconducting Linear Acceleration System for Pellet Injection by Using Equivalent-Circuit Model. *Yamaguchi, T., +, TMAG June 2019 7204305*

#### Linear induction motors

Performance Calculation of a Dual Stator Solid Rotor Axial Flux Induction Motor Using the Multi-Slice and Multi-Layer Method. *Hong, C., +, TMAG Feb. 2019 8100709*

#### Linear machines

A Novel Hybrid-Excitation Switched-Flux Linear Machine With Partitioned-Excitations. *Zeng, Z., +, TMAG Dec. 2019 7502204*

A Novel Tubular Partitioned Stator Flux-Reversal Permanent Magnet Linear Machine for Direct-Drive Wave Energy Generation. *Zhao, L., +, TMAG Nov. 2019 7502707*

A Planar Generator for a Wave Energy Converter. *Trapanese, M., +, TMAG Dec. 2019 6700307*

Comparison of Electromagnetic and Dynamic Characteristics of Linear Oscillating Actuators With Rare-Earth and Ferrite Magnets. *Kim, C., +, TMAG July 2019 8203204*

Investigation of a Modular Linear Doubly Salient Machine With Dual-PM in Primary Yoke and Slot Openings. *Shen, Y., +, TMAG June 2019 8102606*

Leakage Flux of the Trans-Rotary Magnetic Gear. *Jenney, K.N., +, TMAG July 2019 8202908*

Modeling and Analyzing a Novel Dual-Flux-Modulation Consequent-Pole Linear Permanent-Magnet Machine. *Zhou, Y., +, TMAG July 2019 8203906*

#### Linear matrix inequalities

Robust Air-Gap Control of Superconducting-Hybrid MagLev Intelligent Conveyor System in Smart Factory. *Kim, C., TMAG June 2019 8300705*

#### Linear motors

A Permanent Magnet Linear Motor With Complementary Flux and Its Optimization. *Liu, Y., +, TMAG June 2019 8201005*

Comparative Study of Two Novel Double-Sided Hybrid-Excitation Flux-Reversal Linear Motors With Surface and Interior PM Arrangements. *Zeng, Z., +, TMAG June 2019 8202007*

Overview of 2-Degree-of-Freedom Rotary-Linear Motors Focusing on Coupling Effect. *Xie, L., +, TMAG April 2019 8200611*

Rotary-Linear Switched Reluctance Motor: Analytical and Finite-Element Modeling. *Safdarzadeh, O., +, TMAG May 2019 8200710*

#### Linear synchronous motors

A New Asymmetric Planar V-Shaped Magnet Arrangement for A Linear PM Synchronous Motor. *Boduroglu, A., +, TMAG July 2019 8105905*

Detent Force Minimizing for Moving-Magnet-Type Linear Synchronous Motor. *Chi, S., +, TMAG June 2019 8102005*

Research on Improved Permanent Magnet Linear Synchronous Motor for Direct-Drive Application. *Wen, C., +, TMAG Oct. 2019 8107007*

#### Liquid metals

Numerical Model for the Detection of Single Particle in Two-Phase Lorentz Force Velocimetry. *Hang, N.T.T., +, TMAG Feb. 2019 4300204*

#### Liquid mixtures

Hybrid Plasmonic-Superparamagnetic Nanoparticle Clusters: Facile Synthesis and Characterization. *Pourmiri, S., +, TMAG July 2019 5300104*

#### Liquid structure

Microstructural Stability of Magnetorheological Fluids Based on Magnetic Energy Analysis. *Zheng, J., +, TMAG Oct. 2019 4600910*

#### Lithium compounds

The Study on Magnetization Reversal of Stripe-Domain Structure in Ni Wires Fabricated on a LiNbO<sub>3</sub> Substrate. *Yamaguchi, A., +, TMAG Feb. 2019 2500404*

#### Load (electric)

Power Allocation for Dynamic Dual-Pickup Wireless Charging System of Electric Vehicle. *Huang, Y., +, TMAG July 2019 8600106*

#### Load flow control

A Novel Multi-Function Saturated-Core Fault Current Limiter. *Zhong, Y., +, TMAG June 2019 8401105*

#### Logic design

Exploration of Non-Volatile MTJ/CMOS Circuits for DPA-Resistant Embedded Hardware. *Kumar, S.D., +, TMAG Dec. 2019 3401308*

Non-Volatile Spintronic Flip-Flop Design for Energy-Efficient SEU and DNU Resilience. *Alghareb, F.S., +, TMAG March 2019 3400611*

#### Lorentz covariance

Lorentz Force Surface Integration Method: Calculation of Lorentz Force by Means of Surface Integrals. *Petkovic, B., +, TMAG Dec. 2019 7205307*

#### Loss measurement

Research of Harmonic Effects on Core Loss in Soft Magnetic Composite Materials. *Yu, X., +, TMAG Feb. 2019 6100305*

#### Losses

Analytical Prediction of Iron-Core Losses in Flux-Modulated Permanent-Magnet Synchronous Machines. *Djelloul-Khedda, Z., +, TMAG Jan. 2019 6300112*

High-Reliable Temperature Prediction Considering Stray Load Loss for Large Induction Machine. *Moon, S., +, TMAG June 2019 8201905*

Numerical Simulations of Temperature Stability Limits in High-Voltage Direct Current Cable Insulations. *Jorgens, C., +, TMAG June 2019 8000904*

#### Low noise amplifiers

Power-Efficient Spin-Torque Nano-Oscillator-Based Wireless Communication With CMOS High-Gain Low-Noise Transmitter and Receiver. *Lee, H.S., +, TMAG May 2019 4001910*

#### Low-power electronics

Area and Energy Efficient Series Multilevel Cell STT-MRAMs for Optimized Read-Write Operations. *Prajapati, S., +, TMAG Jan. 2019 3400110*

Differential Spin Hall Effect-Based Nonvolatile Static Random Access Memory for Energy-Efficient and Fast Data Restoration Application. *Shreya, S., +, TMAG Sept. 2019 3401211*

Exploration of Non-Volatile MTJ/CMOS Circuits for DPA-Resistant Embedded Hardware. *Kumar, S.D., +, TMAG Dec. 2019 3401308*

Non-Volatile Spintronic Flip-Flop Design for Energy-Efficient SEU and DNU Resilience. *Alghareb, F.S., +, TMAG March 2019 3400611*

Power-Efficient Spin-Torque Nano-Oscillator-Based Wireless Communication With CMOS High-Gain Low-Noise Transmitter and Receiver. *Lee, H.S.*, +, *TMAG May 2019 4001910*

#### Low-temperature techniques

Performance Analysis and Optimization of Liquid-Cooled and Fly-wheel-Type Eddy Current Retarder. *Ye, L.*, +, *TMAG June 2019 8001005*

#### Lubricants

Thermal Diffusion Phenomena of the Functional Polymer Lubricants for the Heat-Assisted Magnetic Recording. *Chung, P.S.*, +, *TMAG July 2019 3300604*

Viscoelastic Lubricant Deformation and Disk-to-Head Transfer During Heat-Assisted Magnetic Recording. *Sakhalkar, S.V.*, +, *TMAG July 2019 3300506*

#### Lubricating oils

Damping of Magnetoelastic Resonance for Oil Viscosity Sensing. *Bravo, I.*, +, *TMAG Jan. 2019 4001105*

#### Lubrication

Novel Ionic-Liquid-Type Lubricant for Heat-Assisted Magnetic Recording System. *Hatsuda, K.*, +, *TMAG Sept. 2019 3300707*

Thermal Diffusion Phenomena of the Functional Polymer Lubricants for the Heat-Assisted Magnetic Recording. *Chung, P.S.*, +, *TMAG July 2019 3300604*

Viscoelastic Lubricant Deformation and Disk-to-Head Transfer During Heat-Assisted Magnetic Recording. *Sakhalkar, S.V.*, +, *TMAG July 2019 3300506*

#### Lumped parameter networks

Thermal Analysis of Modular-Spoke-Type Permanent-Magnet Machines Based on Thermal Network and FEA Method. *Qi, J.*, +, *TMAG July 2019 8104105*

## M

#### Machine bearings

Analysis of Multi-Physics Coupling Field of Multi-Degree-of-Freedom Permanent Magnet Spherical Motor. *Li, Z.*, +, *TMAG June 2019 8201505*

Analysis of Zero Stiffness Permanent Magnet Bearing Including Reluctance Effect. *Zeng, L.*, +, *TMAG Oct. 2019 8204908*

Viscoelastic Lubricant Deformation and Disk-to-Head Transfer During Heat-Assisted Magnetic Recording. *Sakhalkar, S.V.*, +, *TMAG July 2019 3300506*

#### Machine control

A Novel Modular Stator Hybrid-Excited Doubly Salient Synchronous Machine With Stator Slot Permanent Magnets. *Zheng, M.*, +, *TMAG July 2019 8104409*

A Novel Vernier Reluctance Machine Excited by Slot PMs and Zero-Sequence Current for Electric Vehicle. *Zhao, X.*, +, *TMAG June 2019 8102405*

Analytical Analysis of an Adjustable-Speed Permanent Magnet Eddy-Current Coupling With a Non-Rotary Mechanical Flux Adjuster. *Li, Y.*, +, *TMAG June 2019 8000805*

DC Drift Error Mitigation Method for Three-Phase Current Reconstruction With Single Hall Current Sensor. *Yan, H.*, +, *TMAG Feb. 2019 8100604*

Flux-Density Harmonics Analysis of Switched-Flux Permanent Magnet Machines. *Zeng, Z.*, +, *TMAG June 2019 8103607*

Influence of Exciting Field on Electromagnetic Torque of Novel Switched Reluctance Motor. *Liu, A.*, +, *TMAG July 2019 8202807*

Influence of Output Voltage Harmonic of Inverter on Loss and Temperature Field of Permanent Magnet Synchronous Motor. *Yang, C.*, +, *TMAG June 2019 8201605*

Investigation on Contribution of Inductance Harmonics to Torque Production in Multiphase Doubly Salient Synchronous Reluctance Machines. *Zhang, K.*, +, *TMAG April 2019 8101110*

Method-Specific Significance of Field Components in Three Methods of Torque Estimation. *Naveen Kumar, E.*, +, *TMAG Dec. 2019 8107909*

Power Capability of Hybrid Excited Synchronous Motors in Variable Speed Drives Applications. *Amara, Y.*, +, *TMAG Aug. 2019 8204312*

Reducing the Maximum Temperature Rise of Coil Array Based on Current Proportion Commutation Algorithm for Magnetic Levitation Planar Motor. *Sun, H.*, +, *TMAG Sept. 2019 8600207*

Stator Fault Detection on DTC-Driven IM via Magnetic Signatures Aided by 2-D FEA Co-Simulation. *Eldeeb, H.H.*, +, *TMAG June 2019 8101505*

#### Machine protection

Novel Modular Fractional Slot Permanent Magnet Machines With Redundant Teeth. *Li, Y.X.*, +, *TMAG Sept. 2019 8204810*

#### Machine testing

High-Reliable Temperature Prediction Considering Stray Load Loss for Large Induction Machine. *Moon, S.*, +, *TMAG June 2019 8201905*

#### Machine theory

A New Double-Sided Flux Reversal Arc Permanent Magnet Machine With Enhanced Torque Density Capability. *Pan, Z.*, +, *TMAG June 2019 8102506*

A New Modular Relieving-DC-Saturation Vernier Reluctance Machine Excited by Zero-Sequence Current for Electric Vehicle. *Zhao, X.*, +, *TMAG July 2019 8104605*

A New Reluctance Network-Based Method With Complementary Distributed Magnetomotive Forces. *Xie, H.*, +, *TMAG June 2019 8103805*

A Planar Generator for a Wave Energy Converter. *Trapanese, M.*, +, *TMAG Dec. 2019 6700307*

A Subdomain Model for Open-Circuit Field Prediction in Dual-Stator Consequent-Pole Permanent Magnet Machines. *Wu, L.*, +, *TMAG Aug. 2019 8204212*

Analytical Model of Magnetic Field of a Permanent Magnet Synchronous Motor With a Trapezoidal Halbach Permanent Magnet Array. *Zhang, X.*, +, *TMAG July 2019 8105205*

Comparative Study of Two Novel Double-Sided Hybrid-Excitation Flux-Reversal Linear Motors With Surface and Interior PM Arrangements. *Zeng, Z.*, +, *TMAG June 2019 8202007*

Complex Performance Analysis and Comparative Study of Very High-Speed Switched Reluctance Motors. *Korkosz, M.*, +, *TMAG Aug. 2019 8204714*

Consequent-Pole Hybrid Excitation Brushless Wound Field Synchronous Machine With Fractional Slot Concentrated Winding. *Ayub, M.*, +, *TMAG July 2019 8203805*

Design and Analysis of Permanent Magnet Homopolar Machine for Fly-wheel Energy Storage System. *Liu, Z.Q.*, +, *TMAG July 2019 8105706*

General Analytical Magnetic Model for Partitioned-Stator Flux-Reversal Machines With Four Types of Magnetization Patterns. *Vahaj, A.A.*, +, *TMAG Nov. 2019 8107621*

Improved Fuzzy-Based Taguchi Method for Multi-Objective Optimization of Direct-Drive Permanent Magnet Synchronous Motors. *Guo, Y.*, +, *TMAG June 2019 8102204*

Method-Specific Significance of Field Components in Three Methods of Torque Estimation. *Naveen Kumar, E.*, +, *TMAG Dec. 2019 8107909*

Novel Modular Fractional Slot Permanent Magnet Machines With Redundant Teeth. *Li, Y.X.*, +, *TMAG Sept. 2019 8204810*

Performance Calculation of a Dual Stator Solid Rotor Axial Flux Induction Motor Using the Multi-Slice and Multi-Layer Method. *Hong, C.*, +, *TMAG Feb. 2019 8100709*

#### Machine vector control

A Torque Compensation Control Scheme of PMSM Considering Wide Variation of Permanent Magnet Temperature. *Cho, S.*, +, *TMAG Feb. 2019 8200105*

Analysis of Magnetic Properties of AlNiCo and Magnetization State Estimation in Variable-Flux PMSMs. *Qiao, G.*, +, *TMAG July 2019 8105006*

Fractional Order PID Control for Reduction of Vibration and Noise on Induction Motor. *Hsu, C.*, *TMAG Nov. 2019 6700507*

MPTC for PMSMs of EVs With Multi-Motor Driven System Considering Optimal Energy Allocation. *Sun, X.*, +, *TMAG July 2019 8104306*

#### Machine windings

A Magnetic Bearing Switched Reluctance Motor With Simultaneous Excitation by a Modified Half-Bridge Converter. *Liu, Z.*, +, *TMAG Oct. 2019 7500905*

A Novel Hybrid-Excitation Switched-Flux Linear Machine With Partitioned-Excitations. *Zeng, Z.*, +, *TMAG Dec. 2019 7502204*

A Planar Generator for a Wave Energy Converter. *Trapanese, M.*, +, *TMAG Dec. 2019 6700307*

Comparative Study of Two Novel Double-Sided Hybrid-Excitation Flux-Reversal Linear Motors With Surface and Interior PM Arrangements. *Zeng, Z.*, +, *TMAG June 2019 8202007*

Family Phenomenon in Electric Machine Winding MMF Space Harmonics: Attribution and Applications. *Tang, N.*, +, *TMAG May 2019 8101310*

Frozen Permeability Method for Magnetic Field Analysis of Permanent Magnet Motors Considering Hysteretic Property. *Shuto, D.*, +, *TMAG June 2019 8201304*

High-Reliable Temperature Prediction Considering Stray Load Loss for Large Induction Machine. *Moon, S.*, +, *TMAG June 2019 8201905*

Novel Modular Fractional Slot Permanent Magnet Machines With Redundant Teeth. *Li, Y.X.*, +, *TMAG Sept. 2019 8204810*

Reduction of Eddy Current Loss in Rectangular Coils Using Magnetic Shield: Analysis With Homogenization Method. *Fujita, S.*, +, *TMAG June 2019 7000604*

Research on Transposition Method and Loss of Multi-Turn Coil in an Induction Motor. *Wang, D.*, +, *TMAG Oct. 2019 7501604*

#### Magnesium alloys

Aluminum Alloy Sensitization Evaluation by Using Eddy Current Techniques Based on IGMR-Magnetometer Head. *Mareschal, O.*, +, *TMAG Jan. 2019 6200104*

#### Magnesium compounds

A Comprehensive Study of Sign Change in Electric Field Control Perpendicular Magnetic Anisotropy Energy at Fe/MgO Interface: First Principles Calculation. *Pardede, I.*, +, *TMAG Feb. 2019 1700104*

Characterization of Continuous Wave Laser-Induced Thermal Gradients in Magnetic Tunnel Junctions Integrated Into Microresonators via COMSOL Simulations. *Cansever, H.*, +, *TMAG July 2019 7401505*

Exploring Fully Superconducting Air-Core Machine Topology for Off-Shore Wind Turbine Applications. *Lee, D.*, +, *TMAG July 2019 8106506*

Insertion Layer Thickness Dependence of Magnetic and Electrical Properties for Double-CoFeB/MgO-Interface Magnetic Tunnel Junctions. *Miura, S.*, +, *TMAG July 2019 3401004*

Low-Temperature Performance of Nanoscale Perpendicular Magnetic Tunnel Junctions With Double MgO-Interface Free Layer. *Cao, K.*, +, *TMAG March 2019 3400304*

Magnetic Tunnel Junctions: Laser Annealing Versus Oven Annealing. *Sharma, A.*, +, *TMAG Jan. 2019 4400104*

Micromagnetic Study of Edge-Damage Effects in Perpendicular CoFeB/MgO Magnetic Tunnel Junction. *Yoshida, C.*, +, *TMAG July 2019 3401105*

Power-Efficient Spin-Torque Nano-Oscillator-Based Wireless Communication With CMOS High-Gain Low-Noise Transmitter and Receiver. *Lee, H.S.*, +, *TMAG May 2019 4001910*

Shape Magnetic Anisotropy From Spin Density in Nanoscale Slab Systems. *Oda, T.*, +, *TMAG Feb. 2019 1300104*

Spin-Orbit Torque-Driven Magnetic Switching of Co/Pt-CoFeB Exchange Spring Ferromagnets. *Song, M.*, +, *TMAG Aug. 2019 1401004*

The Correlation Between Magnetic Dead Layer and Perpendicular Magnetic Anisotropy in MgO/CoFeB/Ta Top Structure. *Shen, S.*, +, *TMAG Feb. 2019 3400205*

The Effect of the Superlattice on the Magnetic and Transport Properties of Epitaxial Magnetite Thin Films. *Alraddadi, S.*, +, *TMAG March 2019 2700205*

The Network-Shaped Upheaval Structure in (002) Textured MgO Layer for L1<sub>0</sub> FePt-Based Granular Media With Columnar Nanostructure. *Shimizu, A.*, +, *TMAG July 2019 3200208*

#### Magnetic actuators

1-D and 2-D Magnetostrictive Actuators. *Park, Y.*, +, *TMAG July 2019 8204105*

Cableless Magnetic Actuator Capable of High-Speed Transport in a Curved Pipe. *Yaguchi, H.*, +, *TMAG July 2019 8202608*

Magnetically Actuated Piezoelectric-Based Rotational Energy Harvester With Enhanced Output in Wide Range of Rotating Speeds. *Rashidi, R.*, +, *TMAG Sept. 2019 8700208*

Modeling and Analysis of a Biaxial Noncontact Lorentz Force Actuator. *Li, J.*, +, *TMAG April 2019 4900209*

Modeling of a Halbach Array Voice Coil Actuator via Fourier Analysis Based on Equivalent Structure. *Huang, X.*, +, *TMAG Aug. 2019 8204606*

Multi-Objective Topology Optimization of a Magnetic Actuator Using an Adaptive Weight and Tunneling Method. *Ryu, N.*, +, *TMAG June 2019 7202504*

Study of Dynamic Behavior of Magnetostrictively Patterned Flexible Micro-Wings. *Cho, C.*, +, *TMAG Feb. 2019 4001604*

#### Magnetic anisotropy

3-D Magnetic Orientation Control of Ferromagnetic Film/Guanine Crystal Hybrid Plate. *Sogame, T.*, +, *TMAG July 2019 5000604*

An Improved Anisotropic Vector Preisach Hysteresis Model Taking Account of Rotating Magnetic Fields. *Zhu, L.*, +, *TMAG June 2019 7300404*

Compact Macrospin-Based Model of Three-Terminal Spin-Hall Nano Oscillators. *Albertsson, D.I.*, +, *TMAG Oct. 2019 4003808*

Comprehensive Investigation of Magnetic Properties for Fe-Si Steel Under Alternating and Rotational Magnetizations Up to Kilohertz Range. *Yue, S.*, +, *TMAG July 2019 6100705*

Crystal Structure and Dzyaloshinski-Moriya Micromagnetics. *Ullah, A.*, +, *TMAG July 2019 7100305*

Demagnetizing Effects and Correction in Permeameter Measurements of Soft Magnetic Cylinders. *Chen, D.*, *TMAG May 2019 6000410*

Design and Implementation of a Magnetic Press System for Creating Magnetically Oriented Barium Hexaferrite Pucks. *Johnson, S.D.*, +, *TMAG July 2019 2801406*

Effect of Heat Treatment Under High Magnetic Field on Crystallographic Orientation and Magnetic Properties of Non-Oriented Electrical Steel Sheets. *Kinoshita, T.*, +, *TMAG Feb. 2019 2001105*

Efficient Magnetic Domain Nucleation and Domain Wall Motion With Voltage Control Magnetic Anisotropy Effect and Antiferromagnetic/Ferromagnetic Coupling. *Nan, J.*, +, *TMAG July 2019 9100204*

Elastic and Magnetoelastic Properties of Fe-Rich Tetragonal Y-Fe Compounds: Phenomenology and Electron Theory. *Inoue, J.*, +, *TMAG Feb. 2019 2100304*

Electric Field Tuning of Anisotropic Magnetoresistance in Ni-Co/PMN-PT Multiferroic Heterostructure. *Wang, C.*, +, *TMAG Feb. 2019 2501103*

Electrical Resistivity and Magnetic Performance of Ceramics-Bonded Nd-Fe-B-Type Magnet Consolidated Using Dielectric Oxide Binder. *Kang, M.S.*, +, *TMAG July 2019 2101405*

Enhanced Low-Temperature Interfacial Gilbert Damping in Pt/YIG/Pt Trilayer Structures. *Pati, S.P.*, +, *TMAG Feb. 2019 6100104*

Erratum to "gpu accelerated atomistic energy barrier calculations of skyrmion annihilations" [nov 18 art. no. 7206105]. *Heistracher, P.*, +, *TMAG March 2019 9700101*

Imaging Domains in a Zero-Moment Half Metal. *Siewierska, K.E.*, +, *TMAG Feb. 2019 2600104*

Impact of Spin Torque Oscillator Frequency in Microwave-Assisted Magnetic Recording. *Zhu, J.*, *TMAG Dec. 2019 6700808*

Magnetic Field Strength Measurements in Heat-Assisted Magnetic Recording. *Saunders, D.A.*, +, *TMAG Dec. 2019 6700905*

Magnetic Properties and Critical and Compensation Temperatures in Mixed Spin-1/2-Spin-1 Ferrimagnetic-Centered Rectangular Structure Using Monte Carlo Simulation. *Obeidat, A.A.*, +, *TMAG Sept. 2019 1000305*

Microstructure and Magnetic Properties of Anisotropic Strontium Hexaferrite Powders. *Dilipan, A.R.*, +, *TMAG Aug. 2019 2101705*

Microstructure Characterization and Magnetic Characteristics of Ce-Fe-B Based Spark Plasma Sintered Magnets. *Jiang, Q.*, +, *TMAG Sept. 2019 2101806*

Modulation of Magnetism and Magnetic Anisotropy at the Heavy-Metal/FeRh Interface. *Odkhuu, D.*, *TMAG Feb. 2019 7000104*

Multiple-*Q* Magnetic States in Spin-Orbit Coupled Metals. *Hayami, S.*, +, *TMAG Feb. 2019 1500107*

Nanostructure Evolution of Co-Evaporated FeNi-SiO<sub>2</sub> Magnetic Nanoparticle Film Prepared Under High Magnetic Field. *Li, G.*, +, *TMAG Feb. 2019 2000604*

Optical Detection of Phase-Resolved Ferromagnetic Resonance in Epitaxial FeCo Thin Films. *Li, Y.*, +, *TMAG July 2019 6100605*

- Optimization of GMI Effect and Magnetic Properties of Co-Rich Microwires by Joule Heating. *Corte-Leon, P.*, +, *T MAG Feb. 2019 2000404*
- Proposal of Granular-Type Cap Layer with High- $K_u$  CoPt Grains and Ferromagnetic Oxide Grain Boundaries for Full Granular Media. *Tham, K.K.*, +, *T MAG July 2019 3200305*
- Realization of Energy Harvesting Based on Stress-Induced Modification of Magnetic Domain Structures in Microwires. *Bhatti, S.*, +, *T MAG July 2019 2301107*
- Remanence State and Coercivity in 1-D Chain of Polycrystalline Hollow Cobalt Nanospheres. *Guerra, Y.*, +, *T MAG April 2019 7200305*
- Self-Assembled Magnetically Isolated Co Nanoparticles Embedded Inside Carbon Nanotubes. *Prischepa, S.L.*, +, *T MAG Feb. 2019 2300304*
- Shape Magnetic Anisotropy From Spin Density in Nanoscale Slab Systems. *Oda, T.*, +, *T MAG Feb. 2019 1300104*
- Spin-Orbit-Induced Effective Magnetic Field in GaMnAs Ferromagnetic Semiconductor. *Lee, S.*, +, *T MAG Feb. 2019 2400206*
- The Comparison of Magnetic Properties at Room Temperature in  $RCO_5$  (R = Y, Sm, and Gd) Nanoflakes Synthesized via Time-Staged HEBM. *Bajorek, A.*, +, *T MAG Feb. 2019 2100904*
- The Study on Magnetization Reversal of Stripe-Domain Structure in Ni Wires Fabricated on a  $LiNbO_3$  Substrate. *Yamaguchi, A.*, +, *T MAG Feb. 2019 2500404*
- Theoretical Study of Gilbert Damping in Rare-Earth Permanent Magnets. *Saito, F.*, +, *T MAG July 2019 2101604*
- Thermally Induced Magnetic Anisotropy in Nickel Films on Surface Acoustic Wave Devices. *Mathews, S.A.*, +, *T MAG Feb. 2019 4001304*
- Tuning the Magnetic Anisotropy of  $Fe_3O_4/Pt$  Heterostructures Fabricated by Atomic Layer Deposition With *In Situ* Magnetic Field. *Zhang, L.*, +, *T MAG March 2019 2001707*
- Tuning the Magnetic Anisotropy of NiPtMnGa by Substitution and Epitaxial Strain. *Herper, H.C.*, +, *T MAG Feb. 2019 2100804*
- Vector Magnetic Properties Measurement of Silicon Steel Under Biased Magnetic Excitation Along Laminated Direction. *Zhang, C.*, +, *T MAG Feb. 2019 8000204*
- Magnetic annealing**
- Different Magnetic Field Effects on the  $\epsilon$ - $\tau$  Phase Transformation Between (Mn,Zn)-Al and Mn-Al-C. *Mitsui, Y.*, +, *T MAG Feb. 2019 2100704*
- Magnetic bearings**
- A Magnetic Bearing Switched Reluctance Motor With Simultaneous Excitation by a Modified Half-Bridge Converter. *Liu, Z.*, +, *T MAG Oct. 2019 7500905*
- Exact Analytical Method for Active Magnetic Bearings With Rotor Eccentricity. *Du, T.*, +, *T MAG Dec. 2019 8301112*
- Modeling and Design of a 3-DOF Magnetic Bearing With Toroidal Radial Control Coils. *Zhong, Y.*, +, *T MAG July 2019 8300907*
- Novel Lorentz Force-Type Magnetic Bearing With Flux Congregating Rings for Magnetically Suspended Gyrowheel. *Zhao, Y.*, +, *T MAG Dec. 2019 8002208*
- Rational Approximation of the Analytical Model of Nonlaminated Cylindrical Magnetic Actuators for Flux Estimation and Control. *Seifert, R.*, +, *T MAG Dec. 2019 8301016*
- Three-Phase AC Linear Proportional Solenoid Actuator With Zero Hysteresis in Current-Thrust Force Characteristics. *Tominari, Y.*, +, *T MAG July 2019 8203508*
- Magnetic circuits**
- A Consequent-Pole PM Magnetic-Geared Double-Rotor Machine With Flux-Weakening Ability for Hybrid Electric Vehicle Application. *Zhao, H.*, +, *T MAG July 2019 8202507*
- A New Reluctance Network-Based Method With Complementary Distributed Magnetomotive Forces. *Xie, H.*, +, *T MAG June 2019 8103805*
- Analysis of a Novel Hybrid-PM Variable-Flux Machine Using New Magnet Material CeFeB. *Wang, M.*, +, *T MAG July 2019 8106207*
- Analysis of Axial Field Flux-Switching Memory Machine Based on 3-D Magnetic Equivalent Circuit Network Considering Magnetic Hysteresis. *Li, N.*, +, *T MAG June 2019 7203104*
- Analysis of the Magnetization Effect of Permanent Magnets on the Non-linear Magnetic Characteristic Distributions of a Balanced Armature Receiver. *Xu, D.*, +, *T MAG Feb. 2019 8200305*
- Analytical Analysis of an Adjustable-Speed Permanent Magnet Eddy-Current Coupling With a Non-Rotary Mechanical Flux Adjuster. *Li, Y.*, +, *T MAG June 2019 8000805*
- Calculation of the Remnant Magnetization and Magnetic Saturation Characteristics for Sintered NdFeB Permanent Magnets Utilizing Finite Element Transient Simulations. *Magdaleno-Adame, S.*, +, *T MAG Dec. 2019 2101909*
- Circuit-Field Coupling and Magnetic-Thermal Coupling Analysis of RRF Converter Designed With Magnetic Integration. *Wang, S.*, +, *T MAG May 2019 8000608*
- Comparative Study of Partitioned Stator Memory Machines With Series and Parallel Hybrid PM Configurations. *Yang, H.*, +, *T MAG July 2019 8106708*
- Complex Performance Analysis and Comparative Study of Very High-Speed Switched Reluctance Motors. *Korkosz, M.*, +, *T MAG Aug. 2019 8204714*
- Design and Analysis of a New Five-Phase Dual-Stator Consequent-Pole Brushless Hybrid Excitation Machine. *Fan, Y.*, +, *T MAG Jan. 2019 8100410*
- Design and Analysis of a New Hybrid-Excited Permanent Magnet Machine With Unequal Teeth. *Qu, G.*, +, *T MAG July 2019 8105805*
- Development of a Radial-Flux Slotted Limited-Angle Torque Motor With Asymmetrical Teeth for Torque Performance Improvement. *Yu, G.*, +, *T MAG July 2019 8203305*
- Electromagnetic Analysis on Novel Rotor-Segmented Axial-Field SRM Based on Dynamic Magnetic Equivalent Circuit. *Sun, W.*, +, *T MAG June 2019 8103105*
- Establishment of a New Dual Rotor Flux Switching Motor Magnetic Circuit Model and Optimization of No-Load Back EMF. *Liu, Y.*, +, *T MAG Dec. 2019 7503005*
- External Loading Effects on Guided Wave Magnetostrictive Sensor Using a Surface-Bonded Nickel Patch. *Yoo, B.*, +, *T MAG Feb. 2019 2500905*
- Fast Electromagnetic Analysis of a 3-D Magnetic Circuit in a Balanced Armature Receiver. *Xu, D.*, +, *T MAG Feb. 2019 8200204*
- Magnetic Equivalent Circuit Model Considering the Overhang Structure of an Interior Permanent-Magnet Machine. *Yeo, H.*, +, *T MAG June 2019 8201404*
- Modeling and Analysis of a Biaxial Noncontact Lorentz Force Actuator. *Li, J.*, +, *T MAG April 2019 4900209*
- Modeling and Design of a 3-DOF Magnetic Bearing With Toroidal Radial Control Coils. *Zhong, Y.*, +, *T MAG July 2019 8300907*
- Novel Lorentz Force-Type Magnetic Bearing With Flux Congregating Rings for Magnetically Suspended Gyrowheel. *Zhao, Y.*, +, *T MAG Dec. 2019 8002208*
- On-Load Field Prediction of Surface-Mounted PM Machines Considering Nonlinearity Based on Hybrid Field Model. *Wu, L.J.*, +, *T MAG March 2019 8100911*
- Quantitative Comparison of Distinct Dual-Stator Permanent Magnet Vernier Machines for Direct-Drive Applications. *Song, Z.*, +, *T MAG July 2019 8104806*
- Reluctance Network Model of Three-Phase-Laminated-Core Variable Inductor Considering Magnetic Hysteresis Behavior. *Hane, Y.*, +, *T MAG July 2019 8401306*
- The Influence of Winding Location in Flux-Switching Permanent-Magnet Machines. *Zhang, H.*, +, *T MAG July 2019 8104205*
- Magnetic circular dichroism**
- Magnetization Reversal and Domain Nucleation in Ultra-Thin Co/Re(0001) Capped by Graphitic C. *Genuzio, F.*, +, *T MAG Feb. 2019 2300504*
- Magnetic cooling**
- A Comparative Study of the Magnetocaloric Effect in MnFePSiGeB Prepared by Traditional Sintering and Spark Plasma Sintering. *Wang, G.F.*, +, *T MAG Feb. 2019 2500705*
- Adiabatic Temperature Changes at Structural and Magnetic Phase Transitions in  $Ni_{45}Mn_{43}CoSn_{11}$  at High Magnetic Fields. *Pandey, S.*, +, *T MAG Feb. 2019 2500604*

Effects of Rare-Earth (R = Pr, Gd, Ho, Er) Doping on Magnetostructural Phase Transitions and Magnetocaloric Properties in  $\text{Ni}_{43-x}\text{R}_x\text{Mn}_{46}\text{Sn}_{11}$  Shape Memory Alloys. *Aryal, A.*, +, *TMAG Feb. 2019 2500505*

Magnetic Phase Transition and Magnetocaloric Effect in Ternary  $\text{Er}_2\text{Ni}_2\text{Ga}$  Compound. *Guo, D.*, +, *TMAG Jan. 2019 2500204*

#### Magnetic cores

A 3-D Topology Optimization of Magnetic Cores for Wireless Power Transfer Device. *Otomo, Y.*, +, *TMAG June 2019 8103005*

Broadband Circuit Model of a Ferrite Core, Including Dimensional Resonance, Saturation, and Hysteresis. *Wunsch, B.*, +, *TMAG July 2019 7300605*

Calculation Method of Magnetic Material Losses Under DC Bias Using Statistical Loss Theory and Energetic Hysteresis Model. *Liu, R.*, +, *TMAG Oct. 2019 7501404*

Comprehensive Investigation of Magnetic Properties for Fe–Si Steel Under Alternating and Rotational Magnetizations Up to Kilohertz Range. *Yue, S.*, +, *TMAG July 2019 6100705*

Design and Implementation of a New 6-DoF Magnetic Levitation Positioning System. *Lahdo, M.*, +, *TMAG Dec. 2019 8107407*

Design of a Novel Electromagnetic Energy Harvester With Dual Core for Deicing Device of Transmission Lines. *Paul, S.*, +, *TMAG Feb. 2019 8000104*

Design, Fabrication, and Characterization of Package Embedded Solenoidal Magnetic Core Inductors for High-Efficiency System-In-Package Integrated Voltage Regulators. *Bellaredj, M.L.F.*, +, *TMAG July 2019 8401607*

Development of a High-Performance Axial Flux PM Machine With SMC Cores for Electric Vehicle Application. *Wang, Y.*, +, *TMAG July 2019 8105304*

Estimation of the Core Losses of Induction Machines Based on the Corrected Epstein Test Method. *Su, W.*, +, *TMAG March 2019 6300208*

Exploring Fully Superconducting Air-Core Machine Topology for Off-Shore Wind Turbine Applications. *Lee, D.*, +, *TMAG July 2019 8106506*

Interlamination Insulation Design Considerations for Laminated Magnetics Operating at High Frequencies. *Kim, M.*, +, *TMAG Aug. 2019 2801511*

Loss Characteristics and Model Verification of Soft Magnetic Composites Under Non-Sinusoidal Excitation. *Yu, X.*, +, *TMAG Feb. 2019 6100204*

Loss Prediction in DC-Biased Magnetic Sheets. *de la Barriere, O.*, +, *TMAG Oct. 2019 2002614*

$\text{Nd}_x\text{Fe}_{1-x}\text{N}_y$  Magnetic Core Application for Resonance Coil of 13.56 MHz GaN Wireless Power Transmission. *Ide, T.*, +, *TMAG Oct. 2019 2801605*

Reluctance Network Model of Three-Phase-Laminated-Core Variable Inductor Considering Magnetic Hysteresis Behavior. *Hane, Y.*, +, *TMAG July 2019 8401306*

Vector Magnetic Properties Measurement of Silicon Steel Under Biased Magnetic Excitation Along Laminated Direction. *Zhang, C.*, +, *TMAG Feb. 2019 8000204*

#### Magnetic devices

Leakage Flux of the Trans-Rotary Magnetic Gear. *Jenney, K.N.*, +, *TMAG July 2019 8202908*

Material Interpolation in Multi-Material Topology Optimization for Magnetic Device Design. *Jung, Y.*, +, *TMAG Nov. 2019 7502404*

Torque Characteristic Analysis and Measurement of Magnetic Rack–Pinion Gear Based on Analytical Method. *Jang, G.*, +, *TMAG July 2019 8001805*

#### Magnetic domain walls

Coercivity Mechanism of Ga-Doped Nd-Fe-B Sintered Magnets. *Matsuura, Y.*, +, *TMAG Dec. 2019 5100606*

Controlled Current-Driven Bi-Directional Motion of Trains of Domain Walls Along a Ferromagnetic Strip. *Sanchez-Tejerina, L.*, +, *TMAG Feb. 2019 7100104*

Current-Induced Modulation of Coercive Field in the Ferromagnetic Oxide  $\text{SrRuO}_3$ . *Yamanouchi, M.*, +, *TMAG July 2019 1400604*

Domain Wall Motion Control for Racetrack Memory Applications. *Kumar, D.*, +, *TMAG March 2019 2300708*

Effect of Cut-Edge Residual Stress on Magnetic Properties in Non-Oriented Electrical Steel. *Lee, H.*, +, *TMAG Feb. 2019 2000804*

Efficient Magnetic Domain Nucleation and Domain Wall Motion With Voltage Control Magnetic Anisotropy Effect and Antiferromagnetic/Ferromagnetic Coupling. *Nan, J.*, +, *TMAG July 2019 9100204*

Imaging Domains in a Zero-Moment Half Metal. *Siewierska, K.E.*, +, *TMAG Feb. 2019 2600104*

Loss Prediction in DC-Biased Magnetic Sheets. *de la Barriere, O.*, +, *TMAG Oct. 2019 2002614*

Magnetic Anisotropy and Ferromagnetic Resonance in Nitrogen-Incorporated  $\text{NiFe}_2\text{O}_4$  Thin Films. *Anoop Baby, K.B.*, +, *TMAG Feb. 2019 2000704*

Magnetic Domain Observation of Ferrite Sintered Magnets Using MFM Images Observed from Multiple Distances and Image Processing. *Obara, G.*, +, *TMAG April 2019 6500504*

Magnetization Reversal and Domain Nucleation in Ultra-Thin Co/Re(0001) Capped by Graphitic C. *Genuzio, F.*, +, *TMAG Feb. 2019 2300504*

Mimicking Leaky-Integrate-Fire Spiking Neuron Using Automation of Domain Walls for Energy-Efficient Brain-Inspired Computing. *Agrawal, A.*, +, *TMAG Jan. 2019 1400107*

Phase Diagram of  $360^\circ$  Domain Walls in Magnetic Rings. *Bickel, J.E.*, +, *TMAG July 2019 2301006*

Realization of Energy Harvesting Based on Stress-Induced Modification of Magnetic Domain Structures in Microwires. *Bhatti, S.*, +, *TMAG July 2019 2301107*

The Study of Closure Domain Structure Dynamics in Bistable Microwires Using the Technique of Three-Level Field Pulses. *Onufer, J.*, +, *TMAG Jan. 2019 2000106*

The Study on Magnetization Reversal of Stripe-Domain Structure in Ni Wires Fabricated on a  $\text{LiNbO}_3$  Substrate. *Yamaguchi, A.*, +, *TMAG Feb. 2019 2500404*

#### Magnetic domains

Coercivity Mechanism of Ga-Doped Nd-Fe-B Sintered Magnets. *Matsuura, Y.*, +, *TMAG Dec. 2019 5100606*

Engineering of Magnetic Properties of Fe-Rich Microwires by Stress Annealing. *Zhukov, A.P.*, +, *TMAG Feb. 2019 2000504*

Magnetic Domain Structures and Magnetic Properties of Lightly Nd-Doped Sm–Co Magnets With High Squareness and High Heat Resistance. *Machida, H.*, +, *TMAG Feb. 2019 2100604*

Skyrmion-Based Racetrack Memory With Continuous Loop Built From Ferromagnetic Metal and Insulator. *Honda, S.*, +, *TMAG Feb. 2019 1500304*

Structural Characterization, Magnetic Properties, and Heating Power of Nickel Ferrite Nanoparticles. *Marquez, G.*, +, *TMAG Dec. 2019 5400207*

Transport Properties Through Multi-Barrier Magnetic System Containing a “Noncoplanar Defect”. *Sahakyan, A.*, +, *TMAG Feb. 2019 4400305*

#### Magnetic epitaxial layers

Hall Effect and Resistivity in Epitaxial MnSi Thin Films Under Ambient and High Pressure. *Menzel, D.*, +, *TMAG Feb. 2019 1500204*

Magnetic and Transport Properties of  $\text{Co}_{1-x}\text{FeV}_{1-x}\text{Si}$  Epitaxial Films Grown by Molecular Beam Epitaxy. *Yamada, S.*, +, *TMAG Feb. 2019 2400304*

MnGa (001)-Textured Film Fabricated on Thermally Oxidized Si Substrate for Application to Ion Beam Bit Patterned Media. *Ishikawa, T.*, +, *TMAG July 2019 3200104*

Optical Detection of Phase-Resolved Ferromagnetic Resonance in Epitaxial FeCo Thin Films. *Li, Y.*, +, *TMAG July 2019 6100605*

The Effect of the Superlattice on the Magnetic and Transport Properties of Epitaxial Magnetite Thin Films. *Alraddadi, S.*, +, *TMAG March 2019 2700205*

#### Magnetic field effects

3-D Magnetic Orientation Control of Ferromagnetic Film/Guanine Crystal Hybrid Plate. *Sogame, T.*, +, *TMAG July 2019 5000604*

Different Magnetic Field Effects on the  $\varepsilon$ – $\tau$  Phase Transformation Between (Mn,Zn)–Al and Mn–Al–C. *Mitsui, Y.*, +, *TMAG Feb. 2019 2100704*

In-Field Annealing and Quenching for Ferromagnetic MnBi Under 19 T. *Kobayashi, R.*, +, *TMAG Feb. 2019 1000204*

Integral Formulation for Magnetic and Conductive Wire Loops in an External Time-Harmonic Magnetoquasi-Static Field. *Giussani, L.*, +, *TMAG Nov. 2019 7502304*

Magnetic Field Effects in X-Ray Damaged NPB and MADN OLEDs. *Monflier, R.*, +, *TMAG Feb. 2019 9100104*

Numerical and Experimental Validation to the Ability of Magnetoconvection to Cool Vegetable-Based Transformer Oil With Magnetic Nanoparticles. *Lee, S.*, +, *TMAG July 2019 4600505*

Some Actual Problems of Magnetic Filters With Magnetized Packed Beds and Comparative Analysis of Filter Performances. *Abbasov, T.*, *TMAG Dec. 2019 8002512*

#### Magnetic field induced strain

Measurement of Static and Dynamic Magneto-Viscoelasticity in Facile Varying pH Synthesized CoFe<sub>2</sub>O<sub>4</sub>-Based Magnetic Fluid. *Mishra, A.*, +, *TMAG Dec. 2019 4601107*

#### Magnetic field measurement

A Novel Gauged Potential Formulation for 3-D Electromagnetic Field Analysis Including Both Inductive and Capacitive Effects. *Zhao, Y.*, +, *TMAG June 2019 7400905*

A Perspective on Magnetic Field Sensors Operating Under Extreme High-Temperature Conditions. *Okeil, H.*, +, *TMAG Jan. 2019 4001004*

A Real-Time Magnetic Dipole Localization Method Based on Cube Magnetometer Array. *Liu, J.*, +, *TMAG Aug. 2019 4003609*

Absolute Long-Range Linear Position System With a Single 3-D Magnetic Field Sensor. *Ortner, M.*, +, *TMAG Jan. 2019 4000104*

An Ultrasensitive Differential Capacitive Dilatometer. *Martien, D.*, +, *TMAG Feb. 2019 6500204*

Bio-Inspired Magnetostrictive Tactile Sensor for Surface Material Recognition. *Zheng, W.*, +, *TMAG July 2019 4002307*

Calibration of Room Temperature Magnetic Sensor Array for Biomagnetic Measurement. *Adachi, Y.*, +, *TMAG July 2019 5000506*

Curved Trapezoidal Magnetic Flux Concentrator Design for Current Measurement of Multi-Core Power Cable With Magnetic Sensing. *Zhu, K.*, +, *TMAG April 2019 4001809*

Design and Demonstration of Novel Magnetoencephalogram Detectors. *Uchiyama, T.*, +, *TMAG July 2019 4400408*

Design and Development of a New Magnetometer Calibration Device. *Angelopoulos, S.*, +, *TMAG Jan. 2019 4000604*

Design and Implementation of an New 6-DoF Magnetic Levitation Positioning System. *Lahdo, M.*, +, *TMAG Dec. 2019 8107407*

Evaluation of Static Magnetic Fields Produced by Magnetic Floors Composed of Strontium Ferrite Powder Utilized in the Construction Industry. *Magdaleno-Adame, S.*, +, *TMAG April 2019 2001907*

Fault Identification on a Fuel Cell by 3-D Current Density Reconstruction From External Magnetic Field Measurements. *Ifrek, L.*, +, *TMAG June 2019 6200705*

High Track Pitch Density for HAMR Recording: 1M TPI. *Rea, C.*, +, *TMAG March 2019 3000708*

High-Field Tunneling Magnetoresistive Angle Sensor. *Deak, J.*, +, *TMAG Oct. 2019 6700104*

Highly Sensitive Magnetic Field Sensing Using Magnetization Dynamics in Yttrium Iron Garnet Single-Crystal Thin Films. *Koda, T.*, +, *TMAG July 2019 4002604*

Impact of Contact Misalignment on Magnetic Cross Sensitivity of Integrated Vertical Hall Sensors. *Beran, P.*, +, *TMAG Jan. 2019 4000904*

Low Power *In Situ* AI Calibration of a Three-Axial Magnetic Sensor. *Alimi, R.*, +, *TMAG July 2019 4002407*

Magnetic Calibration System With Interference Compensation. *Janosek, M.*, +, *TMAG Jan. 2019 6000104*

Magnetic Field Sensor Based on PT-Symmetry Structure With Magnetic Resonators. *Fang, Y.*, +, *TMAG Aug. 2019 6000508*

Magnetic Field Strength Measurements in Heat-Assisted Magnetic Recording. *Saunders, D.A.*, +, *TMAG Dec. 2019 6700905*

Magnetic Gradient Measurement Using Micro-Fabricated Shaped Rubidium Vapor Cell. *Ji, Y.*, +, *TMAG Sept. 2019 4700405*

Magnetic Optical FBG Sensors Using Optical Frequency-Domain Reflectometry. *Kaplan, N.*, +, *TMAG Jan. 2019 4000704*

Magnetic Sensors: Taxonomy, Applications, and New Trends. *Hristoforou, E.*, +, *TMAG July 2019 4002814*

Magnetic Susceptibility Estimation for Magnetostatics. *Vijn, A.*, +, *TMAG March 2019 7400309*

Magnetic-Field-Sensing-Based Approach for Current Reconstruction, Sag Detection, and Inclination Detection for Overhead Transmission System. *Xu, Q.*, +, *TMAG July 2019 4003307*

Optimal Halbach Magnet Array Design for Portable NMR Targeting Multiphase Flow Metering Applications. *Meribout, M.*, +, *TMAG Jan. 2019 4001207*

Overview of Spintronic Sensors With Internet of Things for Smart Living. *Liu, X.*, +, *TMAG Nov. 2019 0800222*

Practical Use of the GMI Effect to Make a Current Sensor. *Asfour, A.*, +, *TMAG Jan. 2019 4000410*

Quasi-Free-Standing Bilayer Graphene Hall-Effect Sensor. *Kachniarz, M.*, +, *TMAG Jan. 2019 4000204*

Rotational Eddy Current Speed Sensor. *Mirzaei, M.*, +, *TMAG Sept. 2019 4003710*

Sensing and Modeling Heat Transfer Between a Recording Head and Medium for Clearance Setting in HAMR. *Zuckerman, N.*, +, *TMAG March 2019 3300205*

Three-Axis Microfluxgate With a Fluxguide. *Jeng, J.*, +, *TMAG July 2019 2002304*

Using the Standard Linear Ramps of the CMS Superconducting Magnet for Measuring the Magnetic Flux Density in the Steel Flux-Return Yoke. *Klyukhin, V.*, +, *TMAG Feb. 2019 8300504*

#### Magnetic fields

A Generalized Parallel Transmission Line Iteration for Finite Element Analysis of Permanent Magnet Axisymmetrical Actuator. *Yang, W.*, +, *TMAG March 2019 7400410*

A Magnetic Bearing Switched Reluctance Motor With Simultaneous Excitation by a Modified Half-Bridge Converter. *Liu, Z.*, +, *TMAG Oct. 2019 7500905*

A Partially Pole-Embedded Transducer for Heat-Assisted Magnetic Recording. *Eason, K.*, *TMAG March 2019 3000306*

An Analytical Subdomain Model for Dual-Rotor Permanent Magnet Motor With Halbach Array. *Golovanov, D.*, +, *TMAG Dec. 2019 8205216*

An Improved Brushless Doubly Fed Generator With Interior PM Rotor for Wind Power Applications. *Zhang, J.*, +, *TMAG July 2019 8105506*

An Improved Method for Measuring the Magnetic Properties of Silicon Steel With Double Sheets at High Frequency. *Chen, R.*, +, *TMAG Feb. 2019 6100404*

Analytical Analysis of an Adjustable-Speed Permanent Magnet Eddy-Current Coupling With a Non-Rotary Mechanical Flux Adjuster. *Li, Y.*, +, *TMAG June 2019 8000805*

Analytical Model of Magnetic Field of a Permanent Magnet Synchronous Motor With a Trapezoidal Halbach Permanent Magnet Array. *Zhang, X.*, +, *TMAG July 2019 8105205*

Analytical Prediction of Iron-Core Losses in Flux-Modulated Permanent-Magnet Synchronous Machines. *Djelloul-Khedda, Z.*, +, *TMAG Jan. 2019 6300112*

CAE v1.1—A Code for the Magnetic Field Due to Arbitrary Electromagnets. *Prajapati, D.R.*, +, *TMAG Nov. 2019 8002408*

Calculation and Analysis of Mechanical Characteristics of Transformer Windings Under Short-Circuit Condition. *Wang, S.*, +, *TMAG July 2019 8401804*

Calculation of the Iron losses in a Spoke-Type Permanent Magnet Synchronous In-Wheel Motor for Electric Vehicles by Utilizing the Bertotti Model. *Liang, P.*, +, *TMAG July 2019 8202407*

Comparative Study of Two Novel Double-Sided Hybrid-Excitation Flux-Reversal Linear Motors With Surface and Interior PM Arrangements. *Zeng, Z.*, +, *TMAG June 2019 8202007*

Deep Learning for Magnetic Field Estimation. *Khan, A.*, +, *TMAG June 2019 7202304*

Design and Analysis of Permanent Magnet Homopolar Machine for Flywheel Energy Storage System. *Liu, Z.Q.*, +, *TMAG July 2019 8105706*

Double-Solenoid Ferrite Coils for Magnetic-Field Amplification in LF and MF Bands. *Sasaki, A.*, *TMAG Dec. 2019 4004209*

Eddy Current Calculation of a High-Speed Slotted Machine With Halbach Magnetization at No-Load Condition. *Xue, L.*, +, *TMAG Nov. 2019 8107710*

Evaluation of Static Magnetic Fields Produced by Magnetic Floors Composed of Strontium Ferrite Powder Utilized in the Construction Industry. *Magdalena-Adame, S.*, +, *TMAG April 2019 2001907*

Exact Analytical Method for Active Magnetic Bearings With Rotor Eccentricity. *Du, T.*, +, *TMAG Dec. 2019 8301112*

Fast and Systematic Design Optimization of Surface-Mounted PM Machines Using Advanced Analytical Models and Subharmonic Elimination Methods. *Min, S.G.*, +, *TMAG Jan. 2019 8100216*

Fast Ignitron-Based Magnetic Field Pulser for Biological Applications. *Staigvila, G.*, +, *TMAG May 2019 5900105*

Frozen Permeability Method for Magnetic Field Analysis of Permanent Magnet Motors Considering Hysteretic Property. *Shuto, D.*, +, *TMAG June 2019 8201304*

Influence of Exciting Field on Electromagnetic Torque of Novel Switched Reluctance Motor. *Liu, A.*, +, *TMAG July 2019 8202807*

Influence of Magnetic Interactions on the Demagnetization Scheme of Multiple Ferromagnetic Materials by Using Preisach Model. *Im, S.H.*, +, *TMAG Nov. 2019 7502504*

Iron Loss Analysis of Permanent Magnet Motors by Considering Minor Hysteresis Loops Caused by Inverters. *Yamazaki, K.*, +, *TMAG June 2019 1300304*

Leakage Flux of the Trans-Rotary Magnetic Gear. *Jemney, K.N.*, +, *TMAG July 2019 8202908*

Method-Specific Significance of Field Components in Three Methods of Torque Estimation. *Naveen Kumar, E.*, +, *TMAG Dec. 2019 8107909*

Mixed Numerical Methodology for Evaluation of Low-Frequency Electric and Magnetic Fields Near Power Facilities. *Diamantis, A.*, +, *TMAG June 2019 7000704*

Modeling and Analysis of a Biaxial Noncontact Lorentz Force Actuator. *Li, J.*, +, *TMAG April 2019 4900209*

Modeling of a Halbach Array Voice Coil Actuator via Fourier Analysis Based on Equivalent Structure. *Huang, X.*, +, *TMAG Aug. 2019 8204606*

Novel Lorentz Force-Type Magnetic Bearing With Flux Congregating Rings for Magnetically Suspended Gyrowheel. *Zhao, Y.*, +, *TMAG Dec. 2019 8002208*

On-Load Field Prediction of Surface-Mounted PM Machines Considering Nonlinearity Based on Hybrid Field Model. *Wu, L.J.*, +, *TMAG March 2019 8100911*

Overview of 2-Degree-of-Freedom Rotary-Linear Motors Focusing on Coupling Effect. *Xie, L.*, +, *TMAG April 2019 8200611*

Parallel Finite-Element Method Based on Space-Time Domain Decomposition for Magnetic Field Analysis of Electric Machines. *Takahashi, Y.*, +, *TMAG June 2019 7000404*

Quantitative Comparison of Distinct Dual-Stator Permanent Magnet Vernier Machines for Direct-Drive Applications. *Song, Z.*, +, *TMAG July 2019 8104806*

Recognizing Coiled Tubing Defect Characteristics Based on Weak Magnetic Detection Technology. *Zhou, Z.*, +, *TMAG Sept. 2019 6201406*

Research on Improved Permanent Magnet Linear Synchronous Motor for Direct-Drive Application. *Wen, C.*, +, *TMAG Oct. 2019 8107007*

The ARMM System: An Optimized Mobile Electromagnetic Coil for Non-Linear Actuation of Flexible Surgical Instruments. *Sikorski, J.*, +, *TMAG Sept. 2019 5600109*

#### Magnetic fluids

Experimental Validation and Numerical Simulation of Static Pressure in Multi-Stage Ferrofluid Seals. *Zhang, Y.*, +, *TMAG March 2019 4600308*

Numerical Analysis and Experimental Study on Magnetic Fluid Reciprocating Seals. *Chen, Y.*, +, *TMAG Jan. 2019 4600106*

Numerical Analysis on Boundary and Flow Regime of Magnetic Fluid in the Sealing Clearance With a Rotation Shaft. *Chen, Y.*, +, *TMAG Feb. 2019 4600207*

Numerical and Experimental Studies of a Novel Converging Stepped Ferrofluid Seal. *Yang, X.*, +, *TMAG March 2019 4600406*

Numerical and Experimental Validation to the Ability of Magnetoconvection to Cool Vegetable-Based Transformer Oil With Magnetic Nanoparticles. *Lee, S.*, +, *TMAG July 2019 4600505*

The Loss of Continuity in a Liquid Ring Formed by a Magnetic Fluid. *Szczepczak, M.*, *TMAG Sept. 2019 4600808*

#### Magnetic flux

A Comparative Study on the Performance of Marine Magneto-hydrodynamic Motors With Helical and Linear Channels. *Haghparsat, M.*, +, *TMAG Nov. 2019 8205008*

A Double-Stator Flux Switching PM Machine With Multi-PM MMF Harmonics. *Gao, Y.*, +, *TMAG June 2019 8202206*

A Ferrite-Filled Cavity Resonator for Electronic Article Surveillance on Metallic Packaging. *Keatley, P.S.*, +, *TMAG Dec. 2019 4004110*

A Hybrid Interior Permanent Magnet Variable Flux Memory Machine Using Two-Part Rotor. *Zheng, Y.*, +, *TMAG July 2019 8106008*

A New Hybrid-Excited Flux Reversal Arc Permanent Magnet Machine Having Partitioned Stators for Large Telescope Application. *Pan, Z.*, +, *TMAG July 2019 8105610*

A Novel Coil With High Misalignment Tolerance for Wireless Power Transfer. *Li, Y.*, +, *TMAG June 2019 2800904*

A Novel Electromagnetic Testing Method Based on the Magnetic Field Interaction. *Sun, Y.*, +, *TMAG Aug. 2019 6201312*

A Novel Hybrid-Excitation Switched-Flux Linear Machine With Partitioned-Excitations. *Zeng, Z.*, +, *TMAG Dec. 2019 7502204*

A Novel Structure of Doubly Salient Permanent Magnet Machine in Square Envelope. *Zhang, L.*, +, *TMAG June 2019 8103505*

A Novel Tubular Partitioned Stator Flux-Reversal Permanent Magnet Linear Machine for Direct-Drive Wave Energy Generation. *Zhao, L.*, +, *TMAG Nov. 2019 7502707*

A Novel Vernier Reluctance Machine Excited by Slot PMs and Zero-Sequence Current for Electric Vehicle. *Zhao, X.*, +, *TMAG June 2019 8102405*

A Parallel Hybrid Excited Machine Using Consequent Pole Rotor and AC Field Winding. *Li, J.*, +, *TMAG June 2019 8101605*

A Permanent Magnet Linear Motor With Complementary Flux and Its Optimization. *Liu, Y.*, +, *TMAG June 2019 8201005*

A Study on Analysis of Synchronous Reluctance Motor Considering Axial Flux Leakage Through End Plate. *Lee, J.*, +, *TMAG June 2019 8201704*

Advanced Multi-Media Element for Simulating Distribution of Magnetic Flux Density Influenced by Narrow Crack. *Jomdecha, C.*, +, *TMAG June 2019 6200804*

An Analytical Subdomain Model for Dual-Rotor Permanent Magnet Motor With Halbach Array. *Golovanov, D.*, +, *TMAG Dec. 2019 8205216*

An Improved Anisotropic Vector Preisach Hysteresis Model Taking Account of Rotating Magnetic Fields. *Zhu, L.*, +, *TMAG June 2019 7300404*

An Improved Method for Measuring the Magnetic Properties of Silicon Steel With Double Sheets at High Frequency. *Chen, R.*, +, *TMAG Feb. 2019 6100404*

Analysis of a Novel Hybrid-PM Variable-Flux Machine Using New Magnet Material CeFeB. *Wang, M.*, +, *TMAG July 2019 8106207*

Analysis of Magnetic Properties of AlNiCo and Magnetization State Estimation in Variable-Flux PMSMs. *Qiao, G.*, +, *TMAG July 2019 8105006*

Analytical Analysis of an Adjustable-Speed Permanent Magnet Eddy-Current Coupling With a Non-Rotary Mechanical Flux Adjuster. *Li, Y.*, +, *TMAG June 2019 8000805*

Analytical Model for the Magnetic Field Distribution in a Flux Modulation Superconducting Machine. *Colle, A.*, +, *TMAG Dec. 2019 8107309*

Analytical Model of Magnetic Field of a Permanent Magnet Synchronous Motor With a Trapezoidal Halbach Permanent Magnet Array. *Zhang, X.*, +, *TMAG July 2019 8105205*

Analytical Prediction of Iron-Core Losses in Flux-Modulated Permanent-Magnet Synchronous Machines. *Djelloul-Khedda, Z.*, +, *TMAG Jan. 2019 6300112*

Calculation of PM Vernier Motors Using an Improved Air-Gap Permeance Function. *Choi, M.*, +, *TMAG June 2019 8201805*

Changes in Microstructure and Magnetic Properties of Fe-B-Cu Ribbons According to Annealing Conditions. *Lee, K.*, +, *TMAG Feb. 2019 2000904*

Characterization of Defects on Ferromagnetic Tubes Using Magnetic Flux Leakage. *Suresh, V.*, +, *TMAG May 2019 6200510*



- Circuit-Field Coupling and Magnetic-Thermal Coupling Analysis of RRF Converter Designed With Magnetic Integration. Wang, S., +, *TMAG May 2019 8000608*
- Comment on the Paper "Effect of Magnetic Flux Density and Other Properties on Temperature and Velocity Distribution in Magnetohydrodynamic (MHD) Pump". Pantokratoras, A., *TMAG Sept. 2019 9300201*
- Comparative Study Between a Novel Multi-Tooth and a V-Shaped Flux-Switching Permanent Magnet Machines. Zhao, G., +, *TMAG July 2019 8104908*
- Comparative Study of Partitioned Stator Memory Machines With Series and Parallel Hybrid PM Configurations. Yang, H., +, *TMAG July 2019 8106708*
- Comparative Study of Two Novel Double-Sided Hybrid-Excitation Flux-Reversal Linear Motors With Surface and Interior PM Arrangements. Zeng, Z., +, *TMAG June 2019 8202007*
- Comparison of Numerical Techniques for the Evaluation of Human Exposure From Measurement Data. Conchin Gubernati, A., +, *TMAG June 2019 5000404*
- Coupled Electromagnetic-Thermal Optimization of a Separate-Stator Modular Machine With Biased Flux. Liu, Y., +, *TMAG June 2019 8103405*
- Curved Trapezoidal Magnetic Flux Concentrator Design for Current Measurement of Multi-Core Power Cable With Magnetic Sensing. Zhu, K., +, *TMAG April 2019 4001809*
- DC Bias Treatment of Hybrid Type Transformer Based on Magnetic Flux Modulation Mechanism. Chen, Z., +, *TMAG June 2019 1700204*
- Design and Analysis of a New Five-Phase Dual-Stator Consequent-Pole Brushless Hybrid Excitation Machine. Fan, Y., +, *TMAG Jan. 2019 8100410*
- Design and Analysis of a New Hybrid-Excited Permanent Magnet Machine With Unequal Teeth. Qu, G., +, *TMAG July 2019 8105805*
- Design and Analysis of Double-Air-Gap Flux-Modulated Permanent Magnet Motor Considering Leading Working Harmonics. Xiang, Z., +, *TMAG June 2019 8101705*
- Design and Analysis of Permanent Magnet Homopolar Machine for Flywheel Energy Storage System. Liu, Z.Q., +, *TMAG July 2019 8105706*
- Design and Analysis of Quasi-Omnidirectional Dynamic Wireless Power Transfer for Fly-and-Charge. Han, W., +, *TMAG July 2019 8001709*
- Design and Optimization Procedure of a Mechanical-Offset Complementary-Stator Flux-Reversal Permanent-Magnet Machine. Yu, J., +, *TMAG July 2019 8204007*
- Development of a High-Performance Axial Flux PM Machine With SMC Cores for Electric Vehicle Application. Wang, Y., +, *TMAG July 2019 8105304*
- Development of a Radial-Flux Slotted Limited-Angle Torque Motor With Asymmetrical Teeth for Torque Performance Improvement. Yu, G., +, *TMAG July 2019 8203305*
- Diagnosis Method of Magnetization Distribution in Permanent Magnet Using Approximate Function Based on 1-D Fourier Series Expansion. Okamoto, Y., +, *TMAG June 2019 7204704*
- Eddy Current Calculation of a High-Speed Slotted Machine With Halbach Magnetization at No-Load Condition. Xue, L., +, *TMAG Nov. 2019 8107710*
- Electromagnetic Analysis on Novel Rotor-Segmented Axial-Field SRM Based on Dynamic Magnetic Equivalent Circuit. Sun, W., +, *TMAG June 2019 8103105*
- Electromagnetic Performance Analysis of Consequent-Pole PM Machine With Asymmetric Magnetic Pole. Li, F., +, *TMAG June 2019 8103205*
- Establishment of a New Dual Rotor Flux Switching Motor Magnetic Circuit Model and Optimization of No-Load Back EMF. Liu, Y., +, *TMAG Dec. 2019 7503005*
- Evaluation of a Magnetic Dipole Model in a DC Magnetic Flux Leakage System. Hosseingholizadeh, S., +, *TMAG April 2019 6200407*
- Exploring Fully Superconducting Air-Core Machine Topology for Off-Shore Wind Turbine Applications. Lee, D., +, *TMAG July 2019 8106506*
- External Loading Effects on Guided Wave Magnetostrictive Sensor Using a Surface-Bonded Nickel Patch. Yoo, B., +, *TMAG Feb. 2019 2500905*
- Fast Electromagnetic Analysis of a 3-D Magnetic Circuit in a Balanced Armature Receiver. Xu, D., +, *TMAG Feb. 2019 8200204*
- Finite-Element Modeling and Experimental Verification of Stray-Loss Reduction in Power Transformer Tank With Wall Shunt. Park, K., +, *TMAG Dec. 2019 7502104*
- Flux-Density Harmonics Analysis of Switched-Flux Permanent Magnet Machines. Zeng, Z., +, *TMAG June 2019 8103607*
- General Analytical Magnetic Model for Partitioned-Stator Flux-Reversal Machines With Four Types of Magnetization Patterns. Vahaj, A.A., +, *TMAG Nov. 2019 8107621*
- Generalized Dynamic Hysteresis Model for Improved Iron Loss Estimation of Complex Flux Waveforms. Chang, L., +, *TMAG July 2019 7300713*
- High-Performance Ferrite Permanent Magnet Brushless Machines. Shanshal, A., +, *TMAG July 2019 8104504*
- Influence of DC-Biased Magnetic Induction on Magnetic Property of Silicon Steel. Chen, J., +, *TMAG May 2019 2002007*
- Influence of Design Parameters on On-Load Demagnetization Characteristics of Switched Flux Hybrid Magnet Memory Machine. Lyu, S., +, *TMAG July 2019 8106405*
- Influence of Exciting Field on Electromagnetic Torque of Novel Switched Reluctance Motor. Liu, A., +, *TMAG July 2019 8202807*
- Influences of Stator Teeth Number on PM Coupling Levels of Co-Axial Dual-Mechanical-Port Flux-Switching PM Machines. Zhou, L., +, *TMAG July 2019 8104007*
- Investigation of a Modular Linear Doubly Salient Machine With Dual-PM in Primary Yoke and Slot Openings. Shen, Y., +, *TMAG June 2019 8102606*
- Iron Loss Estimation Method for Silicon Steel Sheet Taking Account of DC-Biased Conditions. Yoshioka, T., +, *TMAG June 2019 6300504*
- Irreversible Demagnetization Analysis for Multilayer Magnets of Permanent Magnet-Assisted Synchronous Reluctance Machines Considering Current Phase Angle. Huynh, T.A., +, *TMAG July 2019 8106609*
- Leakage Flux of the Trans-Rotary Magnetic Gear. Jenney, K.N., +, *TMAG July 2019 8202908*
- Magnetic Calibration System With Interference Compensation. Janosek, M., +, *TMAG Jan. 2019 6000104*
- Magnetic Domain Structures and Magnetic Properties of Lightly Nd-Doped Sm-Co Magnets With High Squareness and High Heat Resistance. Machida, H., +, *TMAG Feb. 2019 2100604*
- Magnetic Equivalent Circuit Model Considering the Overhang Structure of an Interior Permanent-Magnet Machine. Yeo, H., +, *TMAG June 2019 8201404*
- Magnetic-Field-Sensing-Based Approach for Current Reconstruction, Sag Detection, and Inclination Detection for Overhead Transmission System. Xu, Q., +, *TMAG July 2019 4003307*
- Method-Specific Significance of Field Components in Three Methods of Torque Estimation. Naveen Kumar, E., +, *TMAG Dec. 2019 8107909*
- Modeling and Analysis of a Biaxial Noncontact Lorentz Force Actuator. Li, J., +, *TMAG April 2019 4900209*
- Modeling of a Halbach Array Voice Coil Actuator via Fourier Analysis Based on Equivalent Structure. Huang, X., +, *TMAG Aug. 2019 8204606*
- Modeling of Magnetostrictive Property of Electrical Steel Sheet Under Vectorial Excitation. Wang, Z., +, *TMAG June 2019 7300304*
- Modeling of Rotating Magnetic Properties of Electrical Steel Sheet Under DC-Biased Field. Shi, M., +, *TMAG Nov. 2019 7300905*
- Novel Lorentz Force-Type Magnetic Bearing With Flux Congregating Rings for Magnetically Suspended Gyrowheel. Zhao, Y., +, *TMAG Dec. 2019 8002208*
- Numerical and Experimental Determination of Local Building Factors of a Three-Phase Transformer Core Package. Kanto, Y., +, *TMAG Feb. 2019 8400808*
- Optimization of the Gap Size of Flux Concentrators: Pushing Further on Low Noise Levels and High Sensitivities in Spin-Valve Sensors. Silva, M., +, *TMAG July 2019 4400605*
- Performance Calculation of a Dual Stator Solid Rotor Axial Flux Induction Motor Using the Multi-Slice and Multi-Layer Method. Hong, C., +, *TMAG Feb. 2019 8100709*
- Rational Approximation of the Analytical Model of Nonlaminated Cylindrical Magnetic Actuators for Flux Estimation and Control. Seifert, R., +, *TMAG Dec. 2019 8301016*

- Recognizing Coiled Tubing Defect Characteristics Based on Weak Magnetic Detection Technology. Zhou, Z., +, *T MAG Sept. 2019 6201406*
- Remote Sensing of Ciliary Beating Using a SQUID Gradiometer. Maki-batake, R., +, *T MAG March 2019 5200105*
- Research on Improved Permanent Magnet Linear Synchronous Motor for Direct-Drive Application. Wen, C., +, *T MAG Oct. 2019 8107007*
- Rotational Single Sheet Tester for Multiaxial Magneto-Mechanical Effects in Steel Sheets. Aydin, U., +, *T MAG March 2019 2001810*
- Scalar Magnetic Potential Interpolation for Non-Conformal Meshing in Mesh-Based Generated Reluctance Networks. Asfirane, S., +, *T MAG July 2019 7204808*
- Semi-Analytical Solution of Magnetic Force and Torque for a Novel Magnetically Levitated Actuator in Rotary Table. Lu, X., +, *T MAG Dec. 2019 8108008*
- Simple Numerical Calculation Method of Rotational Iron Loss in Silicon Steel Sheets. Gao, Y., +, *T MAG June 2019 6300404*
- Simplified Magnetic Induction Field of Magnetite Particles With Irregular Shape. Ku, J., +, *T MAG Jan. 2019 7400105*
- The Influence of Winding Location in Flux-Switching Permanent-Magnet Machines. Zhang, H., +, *T MAG July 2019 8104205*
- Three-Phase AC Linear Proportional Solenoid Actuator With Zero Hysteresis in Current–Thrust Force Characteristics. Tominari, Y., +, *T MAG July 2019 8203508*
- Torque Analysis in Coaxial Magnetic Gears Considering Nonlinear Magnetic Properties and Spatial Harmonics. Deng, Z., +, *T MAG Feb. 2019 8200511*
- Torque Analysis of Concentric Magnetic Gear With Interconnected Flux Modulators. Zhan, Y., +, *T MAG June 2019 8103904*
- Torque Enhancement for a Novel Flux Intensifying PMa-SynRM Using Surface-Inset Permanent Magnet. Ngo, D., +, *T MAG July 2019 8106108*
- Using the Standard Linear Ramps of the CMS Superconducting Magnet for Measuring the Magnetic Flux Density in the Steel Flux-Return Yoke. Klyukhin, V., +, *T MAG Feb. 2019 8300504*
- Vector Magnetic Properties Measurement of Silicon Steel Under Biased Magnetic Excitation Along Laminated Direction. Zhang, C., +, *T MAG Feb. 2019 8000204*

#### Magnetic force microscopy

- Ion-Implantation-Induced Disorder in FePt-C Thin Films. Kumar, D., +, *T MAG March 2019 2300805*
- Magnetic Domain Observation of Ferrite Sintered Magnets Using MFM Images Observed from Multiple Distances and Image Processing. Obara, G., +, *T MAG April 2019 6500504*

#### Magnetic forces

- Effect of Magnetic Forces and Magnetostriction on the Stator Vibrations of a Bearingless Synchronous Reluctance Motor. Mukherjee, V., +, *T MAG June 2019 8101804*
- Exact Analytical Method for Active Magnetic Bearings With Rotor Eccentricity. Du, T., +, *T MAG Dec. 2019 8301112*
- Fast and Systematic Design Optimization of Surface-Mounted PM Machines Using Advanced Analytical Models and Subharmonic Elimination Methods. Min, S.G., +, *T MAG Jan. 2019 8100216*
- Modeling and Analysis of a Biaxial Noncontact Lorentz Force Actuator. Li, J., +, *T MAG April 2019 4900209*
- Multi-Objective Topology Optimization of a Magnetic Actuator Using an Adaptive Weight and Tunneling Method. Ryu, N., +, *T MAG June 2019 7202504*
- Novel Modular Fractional Slot Permanent Magnet Machines With Redundant Teeth. Li, Y.X., +, *T MAG Sept. 2019 8204810*
- Semi-Analytical Solution of Magnetic Force and Torque for a Novel Magnetically Levitated Actuator in Rotary Table. Lu, X., +, *T MAG Dec. 2019 8108008*

#### Magnetic gears

- A Study on the Reduction of Cogging Torque for the Skew of a Magnetic Geared Synchronous Motor. Jo, I., +, *T MAG Feb. 2019 8100505*
- Multi-Objective Robust Optimization for a Dual-Flux-Modulator Coaxial Magnetic Gear. Liu, X., +, *T MAG July 2019 8002008*

- Torque Analysis in Coaxial Magnetic Gears Considering Nonlinear Magnetic Properties and Spatial Harmonics. Deng, Z., +, *T MAG Feb. 2019 8200511*

- Torque Analysis of Concentric Magnetic Gear With Interconnected Flux Modulators. Zhan, Y., +, *T MAG June 2019 8103904*

#### Magnetic heads

- A Model for Predicting Transition Curvature in Heat-Assisted Magnetic Recording. Greaves, S.J., +, *T MAG July 2019 3001506*
- A Partially Pole-Embedded Transducer for Heat-Assisted Magnetic Recording. Eason, K., *T MAG March 2019 3000306*
- A Study of TDMR for Magnetic Tape Systems. Musha, A., *T MAG March 2019 3100405*
- An Iterative Two-Head Two-Track Detection Method for Staggered Bit-Patterned Magnetic Recording Systems. Koonkarnkhai, S., +, *T MAG July 2019 3001707*
- Areal Density Capability of Dual-Structure Media for Microwave-Assisted Magnetic Recording. Greaves, S.J., +, *T MAG Dec. 2019 6701509*
- Areal Density Comparison Between Conventional, Shingled, and Interlaced Heat-Assisted Magnetic Recording With Multiple Sensor Magnetic Recording. Granz, S., +, *T MAG March 2019 3100203*
- Characterization of Slider Heating Due to Write Signal. Xing, X., +, *T MAG Dec. 2019 6701606*
- Curvature and Skew in Heat-Assisted Magnetic Recording. Liu, Z., +, *T MAG March 2019 3000808*
- Domain Wall Motion Control for Racetrack Memory Applications. Kumar, D., +, *T MAG March 2019 2300708*
- Effect of Spin-Torque Oscillator Tilt Angle in Microwave-Assisted Magnetic Recording. Greaves, S.J., +, *T MAG March 2019 3000404*
- HAMR Versus PMR: A Comparative Study of Signal-Noise Performance. Ahmed, R., +, *T MAG Dec. 2019 6700707*
- Impact of Spin Torque Oscillator Frequency in Microwave-Assisted Magnetic Recording. Zhu, J., *T MAG Dec. 2019 6700808*
- Improving Our Understanding of Measured Jitter (in HAMR). Hohlfeld, J., +, *T MAG March 2019 3000511*
- Joint Equalization of Asynchronous Reads in Array-Reader-Based Interlaced Magnetic Recording. Hwang, E., +, *T MAG March 2019 3100107*
- Joint Four-Reader Array Equalization and Detection for a Single Track in TDMR. Wang, S., +, *T MAG Dec. 2019 3002006*
- Magnetic Field Strength Measurements in Heat-Assisted Magnetic Recording. Saunders, D.A., +, *T MAG Dec. 2019 6700905*
- Measuring Thermal Gradient in HAMR Using Pseudorandom Bit Sequences. Gilbert, I., +, *T MAG March 2019 3001006*
- Micromagnetic Model Simulations Considering Write Head, Spin-Torque Oscillator, and Double-Layered Medium Altogether. Kanai, Y., +, *T MAG March 2019 3000613*
- Optical Analysis of HAMR Media. Victoria, R.H., +, *T MAG March 2019 3000908*
- Perpendicular Interlaced Magnetic Recording. Granz, S., +, *T MAG Dec. 2019 6701106*
- Skew-Aware Joint Multi-Track Equalization for Array Reader-Based Interlaced Magnetic Recording. Hwang, E., +, *T MAG July 2019 3100804*
- Spacing Control in Heat-Assisted Magnetic Recording. Xiong, S., +, *T MAG March 2019 3300306*
- Thermal Diffusion Phenomena of the Functional Polymer Lubricants for the Heat-Assisted Magnetic Recording. Chung, P.S., +, *T MAG July 2019 3300604*
- Unstable Playback Response of CPP-GMR Read Head Induced by Electromagnetic Interference: Structural Dependence. Khunkitti, P., +, *T MAG Dec. 2019 3001906*

#### Magnetic hysteresis

- An Improved Anisotropic Vector Preisach Hysteresis Model Taking Account of Rotating Magnetic Fields. Zhu, L., +, *T MAG June 2019 7300404*
- Analysis of Axial Field Flux-Switching Memory Machine Based on 3-D Magnetic Equivalent Circuit Network Considering Magnetic Hysteresis. Li, N., +, *T MAG June 2019 7203104*

- Analytical Prediction of Iron-Core Losses in Flux-Modulated Permanent-Magnet Synchronous Machines. *Djelloul-Khedda, Z.*, +, *TMAG Jan. 2019 6300112*
- Calculation Method of Magnetic Material Losses Under DC Bias Using Statistical Loss Theory and Energetic Hysteresis Model. *Liu, R.*, +, *TMAG Oct. 2019 7501404*
- Closed-Circuit Versus Open-Circuit Characterization of Hard Magnets. *Fliegans, J.*, +, *TMAG Feb. 2019 2101105*
- Comprehensive Investigation of Magnetic Properties for Fe–Si Steel Under Alternating and Rotational Magnetizations Up to Kilohertz Range. *Yue, S.*, +, *TMAG July 2019 6100705*
- Crystal Structure and Dzyaloshinski–Moriya Micromagnetics. *Ullah, A.*, +, *TMAG July 2019 7100305*
- Demagnetizing Effects and Correction in Permeameter Measurements of Soft Magnetic Cylinders. *Chen, D.*, *TMAG May 2019 6000410*
- Design and Implementation of a Magnetic Press System for Creating Magnetically Oriented Barium Hexaferrite Pucks. *Johnson, S.D.*, +, *TMAG July 2019 2801406*
- Effect of  $\text{Sn}^{4+}$ – $\text{Zn}^{2+}$ – $\text{Co}^{2+}$  Doping on Structural and Magnetic Properties of M-Type Barium Hexaferrites. *Mesdaghi, S.*, +, *TMAG Jan. 2019 2100106*
- Effect of the Silicon Content on the Hysteresis Loss of Non-Oriented Steels. *Almeida, A.A.*, +, *TMAG Aug. 2019 2002404*
- Engineering of Magnetic Properties of Fe-Rich Microwires by Stress Annealing. *Zhukov, A.P.*, +, *TMAG Feb. 2019 2000504*
- Enhanced Microwave Absorption Properties of Absorbing Materials Induced by Complex Coupling Agents. *Ye, L.*, +, *TMAG Feb. 2019 2800605*
- Experimentally Validated Method to Measure the  $\lambda - i$  Characteristics of Asymmetric Three-Phase Transformers. *Wu, Q.*, +, *TMAG April 2019 8101009*
- Extraordinary Ferromagnetic Coupling and Magnetodielectric Phenomena in NiO Nanoparticles. *Roy, S.*, +, *TMAG Feb. 2019 2501304*
- Ferromagnetism and Giant Paramagnetism of Copper Nanoparticles in Carbon Matrix. *Kocharian, A.*, +, *TMAG Feb. 2019 2300604*
- Field Dependence of the Magnetization at Increasing Size: An Empirical Approach for Cobalt Ferrite Nanoparticles. *Stein, C.R.*, +, *TMAG Feb. 2019 6000203*
- Formation and Perpendicular Magnetic Coupling of A1 and L1<sub>0</sub> CoPt in CoPt/TiN Films on Glass Substrate. *An, H.*, +, *TMAG Feb. 2019 2100204*
- Formation of Samarium Ferrites With Controllable Morphology by Changing the Addition of KOH. *Shen, W.*, +, *TMAG Feb. 2019 2000305*
- Frozen Permeability Method for Magnetic Field Analysis of Permanent Magnet Motors Considering Hysteretic Property. *Shuto, D.*, +, *TMAG June 2019 8201304*
- Generalized Dynamic Hysteresis Model for Improved Iron Loss Estimation of Complex Flux Waveforms. *Chang, L.*, +, *TMAG July 2019 7300713*
- High-Frequency Output Characteristics of Giant Magnetostrictive Transducer. *Li, Y.*, +, *TMAG June 2019 8202305*
- Hybrid Plasmonic-Superparamagnetic Nanoparticle Clusters: Facile Synthesis and Characterization. *Pourmiri, S.*, +, *TMAG July 2019 5300104*
- Identification of Magnetization Characteristics of Material From Measured Inductance Data. *Maruo, A.*, +, *TMAG June 2019 7300205*
- Imaging Domains in a Zero-Moment Half Metal. *Siewierska, K.E.*, +, *TMAG Feb. 2019 2600104*
- Incorporation of a Vector Preisach–Mayergoyz Hysteresis Model in 3-D Finite Element Analysis. *Tousignant, M.*, +, *TMAG June 2019 7300504*
- Influence of DC-Biased Magnetic Induction on Magnetic Property of Silicon Steel. *Chen, J.*, +, *TMAG May 2019 2002007*
- Investigation of Cast Iron Matrix Constituents by Magnetic Adaptive Testing. *Vertesy, G.*, +, *TMAG March 2019 6200306*
- Iron Loss Analysis of Interior Permanent Magnet Synchronous Motors Using Dynamic Hysteresis Model Represented by Cauer Circuit. *Minowa, N.*, +, *TMAG June 2019 7401404*
- Iron Loss Analysis of Permanent Magnet Motors by Considering Minor Hysteresis Loops Caused by Inverters. *Yamazaki, K.*, +, *TMAG June 2019 1300304*
- Iron Loss Estimation Method for Silicon Steel Sheet Taking Account of DC-Biased Conditions. *Yoshioka, T.*, +, *TMAG June 2019 6300504*
- Local Measurement of Peening-Induced Residual Stresses on Iron Nickel Material Using Needle Probes Technique. *Tene Deffo, Y.A.*, +, *TMAG July 2019 7100208*
- Loss Prediction in DC-Biased Magnetic Sheets. *de la Barriere, O.*, +, *TMAG Oct. 2019 2002614*
- Magnetic Domain Structures and Magnetic Properties of Lightly Nd-Doped Sm–Co Magnets With High Squareness and High Heat Resistance. *Machida, H.*, +, *TMAG Feb. 2019 2100604*
- Magnetization Reversal and Domain Nucleation in Ultra-Thin Co/Re(0001) Capped by Graphitic C. *Genuzio, F.*, +, *TMAG Feb. 2019 2300504*
- Microstructure and Magnetic Properties of Anisotropic Strontium Hexaferrite Powders. *Dilipan, A.R.*, +, *TMAG Aug. 2019 2101705*
- Modeling of Magnetostrictive Property of Electrical Steel Sheet Under Vectorial Excitation. *Wang, Z.*, +, *TMAG June 2019 7300304*
- Modeling of Rotating Magnetic Properties of Electrical Steel Sheet Under DC-Biased Field. *Shi, M.*, +, *TMAG Nov. 2019 7300905*
- MSFEM for the Eddy Current Problem in a Laminated Core Including Hysteresis. *Schobinger, M.*, +, *TMAG Aug. 2019 7300809*
- Observation of Longitudinal Spin Seebeck Voltage in YIG Films Chemically Prepared by Co-Precipitation and Spin Coating. *Yamada, K.*, +, *TMAG Feb. 2019 4500104*
- Perpendicular Exchange Bias in  $(\text{Co/Pt})_n$  Multilayers. *Elphick, K.*, +, *TMAG July 2019 4800106*
- Reluctance Network Model of Three-Phase-Laminated-Core Variable Inductor Considering Magnetic Hysteresis Behavior. *Hane, Y.*, +, *TMAG July 2019 8401306*
- Simple Numerical Calculation Method of Rotational Iron Loss in Silicon Steel Sheets. *Gao, Y.*, +, *TMAG June 2019 6300404*
- Study of Magnetostriction Influence of Electrical Sheet Steel Under Different DC Biases. *Chen, D.*, +, *TMAG Feb. 2019 2001305*
- Suppression of Spin Glass Behavior in Phase Separated  $\text{La}_{0.22}\text{Pr}_{0.40}\text{Ca}_{0.38}\text{MnO}_3$  by Nanostructuring. *Kumari, S.*, +, *TMAG Dec. 2019 1200107*
- Surface Texturing and Enhanced Microwave Absorption of Fe–B Alloy Flakes Through a Dealloying Process. *Tian, N.*, +, *TMAG July 2019 4002105*
- Tailoring the Microstructure of Soft Magnetic Composites for Electric Motor Applications. *Schuller, D.*, +, *TMAG Feb. 2019 2001204*
- Thermomagnetic Behavior of a Ferrimagnet of High Spins: Monte Carlo Analysis. *De La Espriella, N.*, +, *TMAG Dec. 2019 6000807*
- Three-Phase AC Linear Proportional Solenoid Actuator With Zero Hysteresis in Current–Thrust Force Characteristics. *Tominari, Y.*, +, *TMAG July 2019 8203508*
- Torque Analysis in Coaxial Magnetic Gears Considering Nonlinear Magnetic Properties and Spatial Harmonics. *Deng, Z.*, +, *TMAG Feb. 2019 8200511*
- Vector Magnetic Properties Measurement of Silicon Steel Under Biased Magnetic Excitation Along Laminated Direction. *Zhang, C.*, +, *TMAG Feb. 2019 8000204*
- Magnetic leakage**
- A Permanent Magnet Linear Motor With Complementary Flux and Its Optimization. *Liu, Y.*, +, *TMAG June 2019 8201005*
- A Study on Analysis of Synchronous Reluctance Motor Considering Axial Flux Leakage Through End Plate. *Lee, J.*, +, *TMAG June 2019 8201704*
- Calculation and Analysis of Mechanical Characteristics of Transformer Windings Under Short-Circuit Condition. *Wang, S.*, +, *TMAG July 2019 8401804*
- Calculation Method of Magnetic Material Losses Under DC Bias Using Statistical Loss Theory and Energetic Hysteresis Model. *Liu, R.*, +, *TMAG Oct. 2019 7501404*
- Characterization of Defects on Ferromagnetic Tubes Using Magnetic Flux Leakage. *Suresh, V.*, +, *TMAG May 2019 6200510*
- Computation of Leakage Inductance of End Coils in Electrical Machines Considering Core Effects. *Aragon-Verduzco, D.A.*, +, *TMAG Dec. 2019 8107812*
- Design and Analysis of Quasi-Omnidirectional Dynamic Wireless Power Transfer for Fly-and-Charge. *Han, W.*, +, *TMAG July 2019 8001709*

- Eddy Current Loss Effect in Foil Winding of Transformer Based on Magneto-Fluid-Thermal Simulation. *Li, Y.*, +, *TMAG July 2019 8401705*
- Effect of the Silicon Content on the Hysteresis Loss of Non-Oriented Steels. *Almeida, A.A.*, +, *TMAG Aug. 2019 2002404*
- Effects of the Sintering Temperature on RF Complex Permeability of NiCu-CoZn Ferrites for Near-Field Communication Applications. *Lathiya, P.*, +, *TMAG Feb. 2019 2800404*
- Electromagnetic Performance Analysis of Consequent-Pole PM Machine With Asymmetric Magnetic Pole. *Li, F.*, +, *TMAG June 2019 8103205*
- Enhanced Microwave Absorption Properties of Absorbing Materials Induced by Complex Coupling Agents. *Ye, L.*, +, *TMAG Feb. 2019 2800605*
- Evaluation of a Magnetic Dipole Model in a DC Magnetic Flux Leakage System. *Hosseingholizadeh, S.*, +, *TMAG April 2019 6200407*
- Fe/C Nanocapsule-Decorated Fe<sub>2</sub>B/C Nanocapsule Hybrids With Improved Gigahertz Electromagnetic Absorption Properties. *Liu, X.*, +, *TMAG Feb. 2019 2501205*
- Finite-Element Analysis Modeling of High-Frequency Single-Phase Transformers Enabled by Metal Amorphous Nanocomposites and Calculation of Leakage Inductance for Different Winding Topologies. *Nazmunahar, M.*, +, *TMAG July 2019 8401511*
- Generalized Dynamic Hysteresis Model for Improved Iron Loss Estimation of Complex Flux Waveforms. *Chang, L.*, +, *TMAG July 2019 7300713*
- Influence of DC-Biased Magnetic Induction on Magnetic Property of Silicon Steel. *Chen, J.*, +, *TMAG May 2019 2002007*
- Leakage Flux of the Trans-Rotary Magnetic Gear. *Jenney, K.N.*, +, *TMAG July 2019 8202908*
- Loss Characteristics and Model Verification of Soft Magnetic Composites Under Non-Sinusoidal Excitation. *Yu, X.*, +, *TMAG Feb. 2019 6100204*
- Loss Prediction in DC-Biased Magnetic Sheets. *de la Barriere, O.*, +, *TMAG Oct. 2019 2002614*
- Measurements of Iron Loss in PMSM Stator Cores Based on CoFe and SiFe Lamination Sheets and Stemmed From Different Manufacturing Processes. *Boubaker, N.*, +, *TMAG Jan. 2019 8100309*
- Recognizing Coiled Tubing Defect Characteristics Based on Weak Magnetic Detection Technology. *Zhou, Z.*, +, *TMAG Sept. 2019 6201406*
- Rotational Single Sheet Tester for Multiaxial Magneto-Mechanical Effects in Steel Sheets. *Aydin, U.*, +, *TMAG March 2019 2001810*
- Torque Analysis in Coaxial Magnetic Gears Considering Nonlinear Magnetic Properties and Spatial Harmonics. *Deng, Z.*, +, *TMAG Feb. 2019 8200511*
- Vector Magnetic Properties Measurement of Silicon Steel Under Biased Magnetic Excitation Along Laminated Direction. *Zhang, C.*, +, *TMAG Feb. 2019 8000204*

#### Magnetic levitation

- A New Multi-Objective Optimization Method of Magnetic Levitation Planar Motor. *Zheng, T.*, +, *TMAG Aug. 2019 8204408*
- Comparison of Magnetic Levitation Systems Using Ring-Shaped Permanent Magnets. *Kim, K.B.*, +, *TMAG July 2019 8300804*
- Design and Implementation of a New 6-DoF Magnetic Levitation Positioning System. *Lahdo, M.*, +, *TMAG Dec. 2019 8107407*
- Development and Validation of Numerical Magnetic Force and Torque Model for Magnetically Levitated Actuator. *Xu, F.*, +, *TMAG Jan. 2019 4900109*
- Generalization of Maxwell Stress Tensor Method for Magnetically Anisotropic Regions. *Spalek, D.*, +, *TMAG Dec. 2019 1000406*
- Levitation of Conductive and Magnetically Anisotropic Ball. *Spalek, D.*, +, *TMAG March 2019 8000507*
- Measurement of Static and Dynamic Magneto-Viscoelasticity in Facile Varying pH Synthesized CoFe<sub>2</sub>O<sub>4</sub>-Based Magnetic Fluid. *Mishra, A.*, +, *TMAG Dec. 2019 4601107*
- Multi-Objective Optimal Design of High-Speed Surface-Mounted Permanent Magnet Synchronous Motor for Magnetically Levitated Flywheel Energy Storage System. *Li, Y.*, +, *TMAG July 2019 8202708*
- Optomechanical Actuation of Diamagnetically Levitated Pyrolytic Graphite. *Ewall-Wice, M.*, +, *TMAG July 2019 2501506*

- Reducing the Maximum Temperature Rise of Coil Array Based on Current Proportion Commutation Algorithm for Magnetic Levitation Planar Motor. *Sun, H.*, +, *TMAG Sept. 2019 8600207*

- Robust Air-Gap Control of Superconducting-Hybrid MagLev Intelligent Conveyor System in Smart Factory. *Kim, C.*, +, *TMAG June 2019 8300705*

- Semi-Analytical Solution of Magnetic Force and Torque for a Novel Magnetically Levitated Actuator in Rotary Table. *Lu, X.*, +, *TMAG Dec. 2019 8108008*

#### Magnetic materials

- A Surface-Mounted Permanent-Magnet Motor With Sinusoidal Pulse-width-Modulation-Shaped Magnets. *Yang, Y.*, +, *TMAG Jan. 2019 8100108*
- AC Resistance Reduction of a Flexible Wireless Power Transmission Coil Using Magnetic Path Control Technology at 13.56 MHz. *Tokudaiji, Y.*, +, *TMAG July 2019 8401407*

- An Analytical Loss Model of Litz-Wire Windings for Transformers Excited by Converters With Winding Configurations Considered. *Li, H.*, +, *TMAG Sept. 2019 7500405*

- Bio-Inspired Magnetostrictive Tactile Sensor for Surface Material Recognition. *Zheng, W.*, +, *TMAG July 2019 4002307*

- Calculation Method of Magnetic Material Losses Under DC Bias Using Statistical Loss Theory and Energetic Hysteresis Model. *Liu, R.*, +, *TMAG Oct. 2019 7501404*

- Complex Performance Analysis and Comparative Study of Very High-Speed Switched Reluctance Motors. *Korkosz, M.*, +, *TMAG Aug. 2019 8204714*

- Design of Bicomponent Magnonic Waveguide With High Group Velocity for Signal Transmission Devices. *Vivek, T.*, +, *TMAG Dec. 2019 7205207*

- Evaluating the Suitability of Partial Recrystallization as a Strengthening Method for Thin-Gauge, High-Strength Non-Orientated Electrical Steel. *O'Reilly, M.*, +, *TMAG Feb. 2019 2001405*

- High Power Density Electrical Machines for Electric Vehicles—Comprehensive Review Based on Material Technology. *Ramesh, P.*, +, *TMAG Nov. 2019 0900121*

- Interlamination Insulation Design Considerations for Laminated Magnetics Operating at High Frequencies. *Kim, M.*, +, *TMAG Aug. 2019 2801511*

- Miniaturization Techniques Using Magnetic Materials for Broadband Antenna Applications. *Durbha, R.*, +, *TMAG July 2019 2801007*

- MSFEM for the Eddy Current Problem in a Laminated Core Including Hysteresis. *Schobinger, M.*, +, *TMAG Aug. 2019 7300809*

#### Magnetic microwave devices

- Effect of Spin-Torque Oscillator Tilt Angle in Microwave-Assisted Magnetic Recording. *Greaves, S.J.*, +, *TMAG March 2019 3000404*

- Maximum Likelihood Detection for 3-D-MAMR. *Chan, K.S.*, +, *TMAG Dec. 2019 3002609*

- Microwave Monolithic Devices Using Magnetic Hard-Soft Nanocomposite. *Sharma, V.*, +, *TMAG July 2019 4002004*

#### Magnetic moments

- A Real-Time Magnetic Dipole Localization Method Based on Cube Magnetometer Array. *Liu, J.*, +, *TMAG Aug. 2019 4003609*

- Critical Role of W Insertion Layer Sputtering Condition for Reference Layer on Magnetic and Transport Properties of Perpendicular-Anisotropy Magnetic Tunnel Junction. *Honjo, H.*, +, *TMAG July 2019 3400904*

- Electronic and Magnetic Properties of Transition-Metal-Doped WS<sub>2</sub> Monolayer; First-Principles Investigations. *Hyun, J.*, +, *TMAG Feb. 2019 7000204*

- Imaging Domains in a Zero-Moment Half Metal. *Siewierska, K.E.*, +, *TMAG Feb. 2019 2600104*

- Improvement of Reproducibility of Magnetic Moment Detected by a SQUID Magnetometer Through Radial Offset Measurement on a YIG Sphere. *Matsumoto, N.*, +, *TMAG Feb. 2019 9400305*

- Insertion Layer Thickness Dependence of Magnetic and Electrical Properties for Double-CoFeB/MgO-Interface Magnetic Tunnel Junctions. *Miura, S.*, +, *TMAG July 2019 3401004*

- Magnetic and Transport Properties of Co<sub>1+x</sub>FeV<sub>1-x</sub>Si Epitaxial Films Grown by Molecular Beam Epitaxy. *Yamada, S.*, +, *TMAG Feb. 2019 2400304*

- Magnetic Properties of Reactive Co-Sputtered NiFe-Oxide Samples. *Binod, D.C.*, +, *TMAG Feb. 2019 2900205*

- Magnetic States and Bandgaps of B-Site Substituted Double-Perovskite  $\text{Ba}_2\text{Pr}(\text{Bi}, \text{Sb})\text{O}_6$ . *Taniguchi, H.*, +, *TMAG Feb. 2019 2400404*
- Shape Magnetic Anisotropy From Spin Density in Nanoscale Slab Systems. *Oda, T.*, +, *TMAG Feb. 2019 1300104*
- Temperature-Dependent Magnetic Properties of Bi-Doped  $\text{Fe}_{16}\text{N}_2$ : First Principles and Atomistic Study. *Khan, I.*, +, *TMAG Dec. 2019 2102005*
- Theoretical Study of Gilbert Damping in Rare-Earth Permanent Magnets. *Saito, F.*, +, *TMAG July 2019 2101604*
- Transport Properties Through Multi-Barrier Magnetic System Containing a "Noncoplanar Defect". *Sahakyan, A.*, +, *TMAG Feb. 2019 4400305*

#### Magnetic multilayers

- Critical Role of W Insertion Layer Sputtering Condition for Reference Layer on Magnetic and Transport Properties of Perpendicular-Anisotropy Magnetic Tunnel Junction. *Honjo, H.*, +, *TMAG July 2019 3400904*
- Data Recovery for Multilayer Magnetic Recording. *Chan, K.S.*, +, *TMAG Dec. 2019 6701216*
- Effect of Pt and FePt Layer Thickness on Microstructure and Magnetic Properties of  $\text{L}_{10}$  FePt Films With Perpendicular Anisotropy. *Bae, J.*, +, *TMAG Aug. 2019 3200506*
- Effects of Elastic Dephasing on Scaling of Ultra-Small Magnetic Tunnel Junctions. *Das, D.*, +, *TMAG Feb. 2019 1400404*
- Enhanced Field Sensitivity by Strong Mutual Coupling and Magnetoinduction in Amorphous Film/Planar Coil Multilayers. *Song, F.*, +, *TMAG Feb. 2019 4001505*
- Enhanced Low-Temperature Interfacial Gilbert Damping in Pt/YIG/Pt Trilayer Structures. *Pati, S.P.*, +, *TMAG Feb. 2019 6100104*
- Formation and Perpendicular Magnetic Coupling of  $\text{A1}$  and  $\text{L}_{10}$  CoPt in CoPt/TiN Films on Glass Substrate. *An, H.*, +, *TMAG Feb. 2019 2100204*
- High GMR Effect and Perfect Microstructure in CoFe/Cu Multilayers. *Milyaev, M.*, +, *TMAG April 2019 2300904*
- Insertion Layer Thickness Dependence of Magnetic and Electrical Properties for Double-CoFeB/MgO-Interface Magnetic Tunnel Junctions. *Miura, S.*, +, *TMAG July 2019 3401004*
- Interlayer Exchange Coupling Between Fe and GaMnAs Ferromagnetic Semiconductor. *Tivakornsasithorn, K.*, +, *TMAG Feb. 2019 2400104*
- Low-Temperature Performance of Nanoscale Perpendicular Magnetic Tunnel Junctions With Double MgO-Interface Free Layer. *Cao, K.*, +, *TMAG March 2019 3400304*
- Magnetic Damping Constant of CoFeB/Pt Thin Films With Varying the Thicknesses of Pt and Insertion Layer of Al. *Wu, K.*, +, *TMAG July 2019 4100305*
- Magnetic Tunnel Junctions: Laser Annealing Versus Oven Annealing. *Sharma, A.*, +, *TMAG Jan. 2019 4400104*
- Perpendicular Exchange Bias in  $(\text{Co/Pt})_n$  Multilayers. *Elphick, K.*, +, *TMAG July 2019 4800106*
- Perpendicularly Magnetized Thin-Film Antidot Arrays for Superparamagnetic Microbead Actuation. *Ouk, M.*, +, *TMAG Sept. 2019 4600707*
- Spin Injection From EuS/Co Multilayers Into GaAs Detected by Polarized Electroluminescence. *Goschew, A.*, +, *TMAG July 2019 1400804*
- Spin-Orbit Torque-Driven Magnetic Switching of Co/Pt-CoFeB Exchange Spring Ferromagnets. *Song, M.*, +, *TMAG Aug. 2019 1401004*
- Studying of the Interlayer Interaction in Magnetic Multilayers (FM/IFM) Measuring the FMR Peak Asymmetry. *Vdovichev, S.N.*, +, *TMAG Aug. 2019 6100906*
- The Correlation Between Magnetic Dead Layer and Perpendicular Magnetic Anisotropy in MgO/CoFeB/Ta Top Structure. *Shen, S.*, +, *TMAG Feb. 2019 3400205*
- Theoretical Study of Gilbert Damping Constants in Magnetic Multilayer Films. *Ozaki, D.*, +, *TMAG July 2019 1300505*
- Vector-Resolved Magneto-optic Kerr Effect Measurements of Spin-Orbit Torque. *Celik, H.*, +, *TMAG Jan. 2019 4100105*

#### Magnetic noise

- Analytical Model for the Magnetic Field Distribution in a Flux Modulation Superconducting Machine. *Colle, A.*, +, *TMAG Dec. 2019 8107309*
- Noise in Mesoscale Magnetic Dots From Random Telegraph Noise to 1/f Noise. *Costanzi, B.N.*, +, *TMAG Feb. 2019 2300103*

- Passive Shield Structure to Reduce Acoustic Noise Around Magnetic Resonance Imaging Device and Prevent Deterioration of Images. *Kawamura, T.*, +, *TMAG Dec. 2019 5100509*

- Temperature Dependence of Noise in Giant- and Tunneling Magnetoresistive Vortex Sensors. *Weitensfelder, H.*, +, *TMAG July 2019 4400505*

#### Magnetic particles

- Biofunctionalizing Magnetic Nanowires Toward Targeting and Killing Leukemia Cancer Cells. *Alsharif, N.A.*, +, *TMAG Feb. 2019 5400105*
- Canonical-Ensemble Calculations of the Magnetic Susceptibility for a Spin-1/2 Spherical Kagome Cluster With Dzyaloshinskii-Moriya Interactions by Using Microcanonical Thermal Pure Quantum States. *Inoue, K.*, +, *TMAG Feb. 2019 2700103*
- Design and Implementation of a Magnetic Press System for Creating Magnetically Oriented Barium Hexaferrite Pucks. *Johnson, S.D.*, +, *TMAG July 2019 2801406*
- Detection and Imaging of Magnetic Field in the Microwave Regime With a Combination of Magnetic Losses Material and Thermofluorescent Molecules. *Ragazzo, H.*, +, *TMAG Feb. 2019 6500104*
- Different Magnetic Field Effects on the  $\varepsilon$ - $\tau$  Phase Transformation Between (Mn,Zn)-Al and Mn-Al-C. *Mitsui, Y.*, +, *TMAG Feb. 2019 2100704*
- Effect of  $\text{Sn}^{4+}$ - $\text{Zn}^{2+}$ - $\text{Co}^{2+}$  Doping on Structural and Magnetic Properties of M-Type Barium Hexaferrites. *Mesdaghi, S.*, +, *TMAG Jan. 2019 2100106*
- Effects of the Sintering Temperature on RF Complex Permeability of NiCu-CoZn Ferrites for Near-Field Communication Applications. *Lathiya, P.*, +, *TMAG Feb. 2019 2800404*
- Electrical Resistivity and Magnetic Performance of Ceramics-Bonded Nd-Fe-B-Type Magnet Consolidated Using Dielectric Oxide Binder. *Kang, M.S.*, +, *TMAG July 2019 2101405*
- Evaluation of Static Magnetic Fields Produced by Magnetic Floors Composed of Strontium Ferrite Powder Utilized in the Construction Industry. *Magdaleno-Adame, S.*, +, *TMAG April 2019 2001907*
- Extraordinary Ferromagnetic Coupling and Magnetodielectric Phenomena in NiO Nanoparticles. *Roy, S.*, +, *TMAG Feb. 2019 2501304*
- Fabrication of Ferrite-Coated Magnetic Fe-Mn-Si-Cr-Ni Alloy Utilizing Selective Oxidation of Mn Element. *Peng, H.*, +, *TMAG May 2019 2900307*
- Ferromagnetism and Giant Paramagnetism of Copper Nanoparticles in Carbon Matrix. *Kocharian, A.*, +, *TMAG Feb. 2019 2300604*
- Homogenization of Magnetoelectric 0-3 Type Composites by 3-D Multiphysics Finite-Element Modeling. *Do, T.A.*, +, *TMAG June 2019 7401004*
- Hybrid Plasmonic-Superparamagnetic Nanoparticle Clusters: Facile Synthesis and Characterization. *Pourmiri, S.*, +, *TMAG July 2019 5300104*
- Influence of pH on Dynamic Magnetic Susceptibility of Iron-Oxide Nanoparticles in a Chitosan Hydrogel Matrix. *Villamin, M.E.*, +, *TMAG Feb. 2019 5000204*
- Magnetic PolyHIPE Composites With Activated Carbon and Iron Oxide Nanoparticles. *Seeharaj, P.*, +, *TMAG Feb. 2019 9400104*
- Magnetic-Polymer Composites for Bonding and 3D Printing of Permanent Magnets. *Palmero, E.M.*, +, *TMAG Feb. 2019 2101004*
- Micro-Traveling Wave Magnetic Particle Imaging—Sub-Millimeter Resolution With Optimized Tracer LS-008. *Vogel, P.*, +, *TMAG Oct. 2019 5300207*
- Microstructure and Magnetic Properties of Anisotropic Strontium Hexaferrite Powders. *Dilipan, A.R.*, +, *TMAG Aug. 2019 2101705*
- Microwave Absorption Properties of Flake-Like  $\text{Nd}_2\text{Co}_{16.5}\text{Si}_{0.5}$  Powders—Paraffin Composite. *Qiao, G.Y.*, +, *TMAG Feb. 2019 2800504*
- Microwave-Assisted Magnetization Reversal in Dispersed Nanosized Barium Ferrite Particles for High-Density Magnetic Recording Tape. *Ozawa, E.*, *TMAG July 2019 3200404*
- Nanostructure Evolution of Co-Evaporated FeNi-SiO<sub>2</sub> Magnetic Nanoparticle Film Prepared Under High Magnetic Field. *Li, G.*, +, *TMAG Feb. 2019 2000604*
- Numerical and Experimental Validation to the Ability of Magnetoconvection to Cool Vegetable-Based Transformer Oil With Magnetic Nanoparticles. *Lee, S.*, +, *TMAG July 2019 4600505*
- Perpendicularly Magnetized Thin-Film Antidot Arrays for Superparamagnetic Microbead Actuation. *Ouk, M.*, +, *TMAG Sept. 2019 4600707*

Photomagnetic Control of Nanoparticles With Radical Pair System: A Promising New Area of Liposomal Drug-Delivery System. *Nakagawa, H.*, +, *TMAG Feb. 2019 5000104*

Remote Sensing of Ciliary Beating Using a SQUID Gradiometer. *Makibatake, R.*, +, *TMAG March 2019 5200105*

Self-Assembled Magnetically Isolated Co Nanoparticles Embedded Inside Carbon Nanotubes. *Prischepa, S.L.*, +, *TMAG Feb. 2019 2300304*

Size Effects on Magnetic Property and Crystal Structure of  $Mn_3O_4$  Nanoparticles in Mesoporous Silica. *Tajiri, T.*, +, *TMAG Feb. 2019 2300204*

Study and Optimization of a High-Gradient Magnetic Separator Using Flat and Lattice Plates. *Kheshti, Z.*, +, *TMAG Feb. 2019 8000308*

Surface Texturing and Enhanced Microwave Absorption of Fe-B Alloy Flakes Through a Dealloying Process. *Tian, N.*, +, *TMAG July 2019 4002105*

Synthesis of  $\gamma^3$ -Fe<sub>4</sub>N Soft Magnetic Material by High-Pressure Nitriding Approach. *Jiang, Y.*, +, *TMAG Feb. 2019 2001504*

Tailoring the Microstructure of Soft Magnetic Composites for Electric Motor Applications. *Schuller, D.*, +, *TMAG Feb. 2019 2001204*

Trajectory of a Non-Magnetic Particle Transported by a Rotating Magnetic Particle Chain. *Lo, W.*, +, *TMAG Feb. 2019 2100404*

Using Magnetic Field Gradients to Shorten the Antigen-Antibody Reaction Time for a Magnetic Immunoassay. *Tsukada, K.*, +, *TMAG July 2019 5100405*

#### Magnetic permeability

Analysis of Magnetic Properties of Soft Magnetic Composite Using Discrete Element Method. *Maruo, A.*, +, *TMAG June 2019 2002205*

Analysis of Zero Stiffness Permanent Magnet Bearing Including Reluctance Effect. *Zeng, L.*, +, *TMAG Oct. 2019 8204908*

Calculation of the Iron Losses in a Spoke-Type Permanent Magnet Synchronous In-Wheel Motor for Electric Vehicles by Utilizing the Bertotti Model. *Liang, P.*, +, *TMAG July 2019 8202407*

Design and Analysis of a Novel LHM Structure Realized in Low-Frequency Band. *Zhang, X.*, +, *TMAG June 2019 2800804*

Design of a Novel Electromagnetic Energy Harvester With Dual Core for Deicing Device of Transmission Lines. *Paul, S.*, +, *TMAG Feb. 2019 8000104*

Effect of Annealing on Magnetic and Mechanical Behaviors of NANOPERM-Type Alloys. *Hasiak, M.*, +, *TMAG Feb. 2019 2001606*

Effects of the Sintering Temperature on RF Complex Permeability of NiCu-CoZn Ferrites for Near-Field Communication Applications. *Lathiya, P.*, +, *TMAG Feb. 2019 2800404*

Electromagnetic Properties and Absorption Evaluation of Processed Carbonyl Iron and MWCNT at PANI Nanocomposites in the X-Band. *Govahi, M.*, +, *TMAG March 2019 2501409*

Electromagnetic Properties of Au/Fe<sub>53</sub>Ni<sub>47</sub> Hybrid Granular Composite Materials. *Kono, K.*, +, *TMAG Feb. 2019 2800104*

Enhanced Microwave Absorption Properties of Absorbing Materials Induced by Complex Coupling Agents. *Ye, L.*, +, *TMAG Feb. 2019 2800605*

Equivalent Strain and Stress Models for the Effect of Mechanical Loading on the Permeability of Ferromagnetic Materials. *Rasilo, P.*, +, *TMAG June 2019 2002104*

Evaluation of a Magnetic Dipole Model in a DC Magnetic Flux Leakage System. *Hosseingholizadeh, S.*, +, *TMAG April 2019 6200407*

Frozen Permeability Method for Magnetic Field Analysis of Permanent Magnet Motors Considering Hysteretic Property. *Shuto, D.*, +, *TMAG June 2019 8201304*

Improved Tunability in Metglas/Ferrite/PZT Magnetoelectric Tunable Inductors. *Zhang, J.*, +, *TMAG July 2019 2501604*

Iron Loss Analysis of Permanent Magnet Motors by Considering Minor Hysteresis Loops Caused by Inverters. *Yamazaki, K.*, +, *TMAG June 2019 1300304*

Microwave Absorption Properties of Flake-Like Nd<sub>2</sub>Co<sub>16.5</sub>Si<sub>0.5</sub> Powders-Paraffin Composite. *Qiao, G.Y.*, +, *TMAG Feb. 2019 2800504*

Miniaturization Techniques Using Magnetic Materials for Broadband Antenna Applications. *Durbha, R.*, +, *TMAG July 2019 2801007*

Nd<sub>x</sub>Fe<sub>1-x</sub>N<sub>y</sub> Magnetic Core Application for Resonance Coil of 13.56 MHz GaN Wireless Power Transmission. *Ide, T.*, +, *TMAG Oct. 2019 2801605*

New Hybrid Stator Design for High-Speed PMSMS Based on Selective Laser Melting of 3-D Printing. *Huang, P.*, +, *TMAG July 2019 8203404*

Numerical and Experimental Determination of Local Building Factors of a Three-Phase Transformer Core Package. *Kanto, Y.*, +, *TMAG Feb. 2019 8400808*

Torque Analysis in Coaxial Magnetic Gears Considering Nonlinear Magnetic Properties and Spatial Harmonics. *Deng, Z.*, +, *TMAG Feb. 2019 8200511*

#### Magnetic recording

A Detection Scheme With TMR Estimation Based on Multi-Layer Perceptrons for Bit Patterned Media Recording. *Han, S.*, +, *TMAG July 2019 3100704*

A Model for Predicting Transition Curvature in Heat-Assisted Magnetic Recording. *Greaves, S.J.*, +, *TMAG July 2019 3001506*

A Partially Pole-Embedded Transducer for Heat-Assisted Magnetic Recording. *Eason, K.*, *TMAG March 2019 3000306*

A Study of TDMR for Magnetic Tape Systems. *Musha, A.*, *TMAG March 2019 3100405*

A Study on Block-Based Neural Network Equalization in TDMR System With LDPC Coding. *Luo, K.*, +, *TMAG Nov. 2019 6700605*

A Study on Iterative Decoding With LLR Modulator by Neural Network Using Adjacent Track Information in SMR System. *Nishikawa, M.*, +, *TMAG Dec. 2019 6701305*

A Study on Iterative Decoding With LLR Modulator Using Neural Network in SMR System. *Nishikawa, M.*, +, *TMAG July 2019 3100604*

An Iterative Two-Head Two-Track Detection Method for Staggered Bit-Patterned Magnetic Recording Systems. *Koonkarnkhai, S.*, +, *TMAG July 2019 3001707*

Areal Density Comparison Between Conventional, Shingled, and Interlaced Heat-Assisted Magnetic Recording With Multiple Sensor Magnetic Recording. *Granz, S.*, +, *TMAG March 2019 3100203*

Characterizing Curvature in Heat-Assisted Magnetic Recording Using Spin-Stand Imaging. *Gilbert, I.*, +, *TMAG July 2019 3001204*

Data Recovery for Multilayer Magnetic Recording. *Chan, K.S.*, +, *TMAG Dec. 2019 6701216*

Domain Wall Motion Control for Racetrack Memory Applications. *Kumar, D.*, +, *TMAG March 2019 2300708*

Effect of Spin-Torque Oscillator Tilt Angle in Microwave-Assisted Magnetic Recording. *Greaves, S.J.*, +, *TMAG March 2019 3000404*

High Track Pitch Density for HAMR Recording: 1M TPI. *Rea, C.*, +, *TMAG March 2019 3000708*

Improving Our Understanding of Measured Jitter (in HAMR). *Hohlfeld, J.*, +, *TMAG March 2019 3000511*

ISI/ITI Turbo Equalizer for TDMR Using Trained Local Area Influence Probabilistic Model. *Sun, X.*, +, *TMAG April 2019 3100515*

Joint Four-Reader Array Equalization and Detection for a Single Track in TDMR. *Wang, S.*, +, *TMAG Dec. 2019 3002006*

Magnetic Field Strength Measurements in Heat-Assisted Magnetic Recording. *Saunders, D.A.*, +, *TMAG Dec. 2019 6700905*

Maximum Likelihood Detection for 3-D-MAMR. *Chan, K.S.*, +, *TMAG Dec. 2019 3002609*

Measuring Cross-Track Thermal Gradient in Heat-Assisted Magnetic Recording. *Gilbert, I.*, +, *TMAG Dec. 2019 6701005*

Measuring Thermal Gradient in HAMR Using Pseudorandom Bit Sequences. *Gilbert, I.*, +, *TMAG March 2019 3001006*

Micromagnetic Model Simulations Considering Write Head, Spin-Torque Oscillator, and Double-Layered Medium Altogether. *Kanai, Y.*, +, *TMAG March 2019 3000613*

Microwave-Assisted Magnetization Reversal in Dispersed Nanosized Barium Ferrite Particles for High-Density Magnetic Recording Tape. *Ozawa, E.*, *TMAG July 2019 3200404*

Mitigating the Effects of Track Mis-Registration in Single-Reader/Two-Track Reading BPMP Systems. *Warisarn, C.*, *TMAG July 2019 3001106*

Modeling of 747 Curves in Magnetic Recording Systems. *Chen, X.*, +, *TMAG Nov. 2019 3002410*

Novel Ionic-Liquid-Type Lubricant for Heat-Assisted Magnetic Recording System. *Hatsuda, K.*, +, *TMAG Sept. 2019 3300707*

- Optical Analysis of HAMR Media. *Victoria, R.H.*, +, *T MAG March 2019 3000908*
- Optimization of Dual-Structure Recording Media for Microwave-Assisted Magnetic Recording. *Greaves, S.J.*, +, *T MAG July 2019 3001305*
- Optimization of the 3-D-MAMR Media Stack. *Chan, K.S.*, +, *T MAG Sept. 2019 7204905*
- Performance Evaluation of LDPC Coding and Iterative Decoding System for 3-D Magnetic Recording With Dot Position Fluctuation. *Masuda, K.*, +, *T MAG July 2019 3001404*
- Sensing and Modeling Heat Transfer Between a Recording Head and Medium for Clearance Setting in HAMR. *Zuckerman, N.*, +, *T MAG March 2019 3300205*
- Skew-Aware Joint Multi-Track Equalization for Array Reader-Based Interlaced Magnetic Recording. *Hwang, E.*, +, *T MAG July 2019 3100804*
- Spacing Control in Heat-Assisted Magnetic Recording. *Xiong, S.*, +, *T MAG March 2019 3300306*
- Spin-Orbit Torque-Driven Magnetic Switching of Co/Pt-CoFeB Exchange Spring Ferromagnets. *Song, M.*, +, *T MAG Aug. 2019 1401004*
- The Network-Shaped Upheaval Structure in (002) Textured MgO Layer for L1<sub>0</sub> FePt-Based Granular Media With Columnar Nanostructure. *Shimizu, A.*, +, *T MAG July 2019 3200208*
- Thermal Diffusion Phenomena of the Functional Polymer Lubricants for the Heat-Assisted Magnetic Recording. *Chung, P.S.*, +, *T MAG July 2019 3300604*
- Viscoelastic Lubricant Deformation and Disk-to-Head Transfer During Heat-Assisted Magnetic Recording. *Sakhalkar, S.V.*, +, *T MAG July 2019 3300506*
- Magnetic recording noise**
- A Detection Scheme With TMR Estimation Based on Multi-Layer Perceptrons for Bit Patterned Media Recording. *Han, S.*, +, *T MAG July 2019 3100704*
- Curvature and Skew in Heat-Assisted Magnetic Recording. *Liu, Z.*, +, *T MAG March 2019 3000808*
- Deep Neural Network Based Media Noise Predictors for Use in High-Density Magnetic Recording Turbo-Detectors. *Sayyafan, A.*, +, *T MAG Dec. 2019 6701406*
- Micromagnetic Study of Media Noise Plateau in Heat-Assisted Magnetic Recording. *Hsu, W.*, +, *T MAG Feb. 2019 3000104*
- Magnetic relaxation**
- Scalar Magnetic Potential Interpolation for Non-Conformal Meshing in Mesh-Based Generated Reluctance Networks. *Asfirane, S.*, +, *T MAG July 2019 7204808*
- Magnetic resonance**
- Effects of the Sintering Temperature on RF Complex Permeability of NiCu-CoZn Ferrites for Near-Field Communication Applications. *Lathiya, P.*, +, *T MAG Feb. 2019 2800404*
- Electromagnetic Properties of Au/Fe<sub>53</sub>Ni<sub>47</sub> Hybrid Granular Composite Materials. *Kono, K.*, +, *T MAG Feb. 2019 2800104*
- Electromagnetic Properties of Fe<sub>50</sub>Co<sub>50</sub>/Cu Granular Composite Materials Containing Flaky Particles. *Kasagi, T.*, +, *T MAG Feb. 2019 2800204*
- Experiments With a Compact Wireless Power Transfer System Using Strongly Coupled Magnetic Resonance and Metamaterials. *Correa, D.C.*, +, *T MAG Aug. 2019 8401904*
- Thermomagnetic Behavior of a Ferrimagnet of High Spins: Monte Carlo Analysis. *De La Espriella, N.*, +, *T MAG Dec. 2019 6000807*
- Magnetic resonance imaging**
- Collective Superspin Glass State of Interacting Cobalt Ferrite Nanoparticles. *Kubisztal, M.*, +, *T MAG Dec. 2019 2301306*
- Passive Shield Structure to Reduce Acoustic Noise Around Magnetic Resonance Imaging Device and Prevent Deterioration of Images. *Kawamura, T.*, +, *T MAG Dec. 2019 5100509*
- Suppression of Spin Glass Behavior in Phase Separated La<sub>0.22</sub>Pr<sub>0.40</sub>Ca<sub>0.38</sub>MnO<sub>3</sub> by Nanostructuring. *Kumari, S.*, +, *T MAG Dec. 2019 1200107*
- Magnetic semiconductors**
- Anomalous Hall Effect in a Magnetic Topological Insulator (BiMn)<sub>2</sub>Te<sub>3</sub>. *Pilidi, A.*, +, *T MAG July 2019 2400506*
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- Magnetic and Transport Properties of Co<sub>1-x</sub>FeV<sub>1-x</sub>Si Epitaxial Films Grown by Molecular Beam Epitaxy. *Yamada, S.*, +, *T MAG Feb. 2019 2400304*
- Magnetic States and Bandgaps of B-Site Substituted Double-Perovskite Ba<sub>2</sub>Pr(Bi, Sb)O<sub>6</sub>. *Taniguchi, H.*, +, *T MAG Feb. 2019 2400404*
- Spin Injection From EuS/Co Multilayers Into GaAs Detected by Polarized Electroluminescence. *Goschew, A.*, +, *T MAG July 2019 1400804*
- Spin-Orbit-Induced Effective Magnetic Field in GaMnAs Ferromagnetic Semiconductor. *Lee, S.*, +, *T MAG Feb. 2019 2400206*
- Magnetic sensors**
- A Digitally Compensated AMR Magnetometer. *Novotny, D.*, +, *T MAG Jan. 2019 4000805*
- A Novel Gauged Potential Formulation for 3-D Electromagnetic Field Analysis Including Both Inductive and Capacitive Effects. *Zhao, Y.*, +, *T MAG June 2019 7400905*
- A Perspective on Magnetic Field Sensors Operating Under Extreme High-Temperature Conditions. *Okeil, H.*, +, *T MAG Jan. 2019 4001004*
- A Real-Time Magnetic Dipole Localization Method Based on Cube Magnetometer Array. *Liu, J.*, +, *T MAG Aug. 2019 4003609*
- Absolute Long-Range Linear Position System With a Single 3-D Magnetic Field Sensor. *Ortner, M.*, +, *T MAG Jan. 2019 4000104*
- AC Small-Signal Model for Magnetoresistive Lateral Spin Valves. *Hu, J.*, +, *T MAG March 2019 1600108*
- Alpha Rhythm and Visual Event-Related Fields Measurements at Room Temperature Using Magneto-Impedance Sensor System. *Ma, J.*, +, *T MAG July 2019 4002706*
- Aluminum Alloy Sensitization Evaluation by Using Eddy Current Techniques Based on IGMR-Magnetometer Head. *Mareschal, O.*, +, *T MAG Jan. 2019 6200104*
- An Electromagnetic Tracking Method Based on Phase Difference Detection. *Huang, X.*, +, *T MAG Sept. 2019 5700108*
- An Ultrasensitive Differential Capacitive Dilatometer. *Martien, D.*, +, *T MAG Feb. 2019 6500204*
- Arc-Faults Detection in PV Systems by Measuring Pink Noise With Magnetic Sensors. *Miao, W.*, +, *T MAG July 2019 4002506*
- Areal Density Comparison Between Conventional, Shingled, and Interlaced Heat-Assisted Magnetic Recording With Multiple Sensor Magnetic Recording. *Granz, S.*, +, *T MAG March 2019 3100203*
- Bio-Inspired Magnetostrictive Tactile Sensor for Surface Material Recognition. *Zheng, W.*, +, *T MAG July 2019 4002307*
- Calibration of Room Temperature Magnetic Sensor Array for Biomagnetic Measurement. *Adachi, Y.*, +, *T MAG July 2019 5000506*
- Curved Trapezoidal Magnetic Flux Concentrator Design for Current Measurement of Multi-Core Power Cable With Magnetic Sensing. *Zhu, K.*, +, *T MAG April 2019 4001809*
- DC Drift Error Mitigation Method for Three-Phase Current Reconstruction With Single Hall Current Sensor. *Yan, H.*, +, *T MAG Feb. 2019 8100604*
- Design and Demonstration of Novel Magnetoencephalogram Detectors. *Uchiyama, T.*, +, *T MAG July 2019 4400408*
- Design and Development of a New Magnetometer Calibration Device. *Angelopoulos, S.*, +, *T MAG Jan. 2019 4000604*
- Design and Implementation of a New 6-DoF Magnetic Levitation Positioning System. *Lahdo, M.*, +, *T MAG Dec. 2019 8107407*
- Electric Field Tuning of Anisotropic Magneto-resistance in Ni-Co/PMN-PT Multiferroic Heterostructure. *Wang, C.*, +, *T MAG Feb. 2019 2501103*
- High Track Pitch Density for HAMR Recording: 1M TPI. *Rea, C.*, +, *T MAG March 2019 3000708*
- High-Field Tunneling Magneto-resistive Angle Sensor. *Deak, J.*, +, *T MAG Oct. 2019 6700104*
- Highly Sensitive Magnetic Field Sensing Using Magnetization Dynamics in Yttrium Iron Garnet Single-Crystal Thin Films. *Koda, T.*, +, *T MAG July 2019 4002604*
- Impact of Contact Misalignment on Magnetic Cross Sensitivity of Integrated Vertical Hall Sensors. *Beran, P.*, +, *T MAG Jan. 2019 4000904*
- Low Power *In Situ* AI Calibration of a Three-Axial Magnetic Sensor. *Alimi, R.*, +, *T MAG July 2019 4002407*

Magnetic Anomaly Target Recognition Based on SVD and SVMs. *Zheng, J.*, +, *TMAG Sept. 2019 6000708*

Magnetic Calibration System With Interference Compensation. *Janosek, M.*, +, *TMAG Jan. 2019 6000104*

Magnetic Field Sensor Based on PT-Symmetry Structure With Magnetic Resonators. *Fang, Y.*, +, *TMAG Aug. 2019 6000508*

Magnetic Optical FBG Sensors Using Optical Frequency-Domain Reflectometry. *Kaplan, N.*, +, *TMAG Jan. 2019 4000704*

Magnetic Sensors: Taxonomy, Applications, and New Trends. *Hristoforou, E.*, +, *TMAG July 2019 4002814*

Magnetic-Field-Sensing-Based Approach for Current Reconstruction, Sag Detection, and Inclination Detection for Overhead Transmission System. *Xu, Q.*, +, *TMAG July 2019 4003307*

Magnetoresistive Sensor Development Roadmap (Non-Recording Applications). *Zheng, C.*, +, *TMAG April 2019 0800130*

Offset Reduction in GMI-Based Device by Using Double-Frequency Bias-Current Modulation. *Espes, A.*, +, *TMAG Jan. 2019 4000504*

Optimal Halbach Magnet Array Design for Portable NMR Targeting Multiphase Flow Metering Applications. *Meribout, M.*, +, *TMAG Jan. 2019 4001207*

Optimization of the Gap Size of Flux Concentrators: Pushing Further on Low Noise Levels and High Sensitivities in Spin-Valve Sensors. *Silva, M.*, +, *TMAG July 2019 4400605*

Overview of Spintronic Sensors With Internet of Things for Smart Living. *Liu, X.*, +, *TMAG Nov. 2019 0800222*

Practical Use of the GMI Effect to Make a Current Sensor. *Asfour, A.*, +, *TMAG Jan. 2019 4000410*

Quasi-Free-Standing Bilayer Graphene Hall-Effect Sensor. *Kachniarz, M.*, +, *TMAG Jan. 2019 4000204*

Recognizing Coiled Tubing Defect Characteristics Based on Weak Magnetic Detection Technology. *Zhou, Z.*, +, *TMAG Sept. 2019 6201406*

Reconfigurable Spintronics Wheatstone Bridge Sensors With Offset Voltage Compensation at Wafer Level. *Franco, F.*, +, *TMAG July 2019 4400705*

Remote Sensing of Ciliary Beating Using a SQUID Gradiometer. *Makibatake, R.*, +, *TMAG March 2019 5200105*

Rotational Eddy Current Speed Sensor. *Mirzaei, M.*, +, *TMAG Sept. 2019 4003710*

Sensing and Modeling Heat Transfer Between a Recording Head and Medium for Clearance Setting in HAMR. *Zuckerman, N.*, +, *TMAG March 2019 3300205*

Temperature Dependence of Noise in Giant- and Tunneling Magnetoresistive Vortex Sensors. *Weitenfelder, H.*, +, *TMAG July 2019 4400505*

Thermally Induced Magnetic Anisotropy in Nickel Films on Surface Acoustic Wave Devices. *Mathews, S.A.*, +, *TMAG Feb. 2019 4001304*

Three-Axis Micofluxgate With a Fluxguide. *Jeng, J.*, +, *TMAG July 2019 2002304*

Unstable Playback Response of CPP-GMR Read Head Induced by Electromagnetic Interference: Structural Dependence. *Khunkitti, P.*, +, *TMAG Dec. 2019 3001906*

Using the Standard Linear Ramps of the CMS Superconducting Magnet for Measuring the Magnetic Flux Density in the Steel Flux-Return Yoke. *Klyukhin, V.*, +, *TMAG Feb. 2019 8300504*

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Calculation of the Remnant Magnetization and Magnetic Saturation Characteristics for Sintered NdFeB Permanent Magnets Utilizing Finite Element Transient Simulations. *Magdaleno-Adame, S.*, +, *TMAG Dec. 2019 2101909*

Study and Optimization of a High-Gradient Magnetic Separator Using Flat and Lattice Plates. *Kheshti, Z.*, +, *TMAG Feb. 2019 8000308*

Suppression of Spin Glass Behavior in Phase Separated  $\text{La}_{0.22}\text{Pr}_{0.40}\text{Ca}_{0.38}\text{MnO}_3$  by Nanostructuring. *Kumari, S.*, +, *TMAG Dec. 2019 1200107*

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Analytical Model for the Magnetic Field Distribution in a Flux Modulation Superconducting Machine. *Colle, A.*, +, *TMAG Dec. 2019 8107309*

Magnetic Gradient Measurement Using Micro-Fabricated Shaped Rubidium Vapor Cell. *Ji, Y.*, +, *TMAG Sept. 2019 4700405*

Passive Shield Structure to Reduce Acoustic Noise Around Magnetic Resonance Imaging Device and Prevent Deterioration of Images. *Kawamura, T.*, +, *TMAG Dec. 2019 5100509*

Reduction of Eddy Current Loss in Rectangular Coils Using Magnetic Shield: Analysis With Homogenization Method. *Fujita, S.*, +, *TMAG June 2019 7000604*

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A Novel STT-MRAM Design With Electric-Field-Assisted Synthetic Anti-Ferromagnetic Free Layer. *Hao, R.*, +, *TMAG March 2019 3400506*

Phase Diagram of  $360^\circ$  Domain Walls in Magnetic Rings. *Bickel, J.E.*, +, *TMAG July 2019 2301006*

Skyrmion-Based Racetrack Memory With Continuous Loop Built From Ferromagnetic Metal and Insulator. *Honda, S.*, +, *TMAG Feb. 2019 1500304*

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Characterization of Continuous Wave Laser-Induced Thermal Gradients in Magnetic Tunnel Junctions Integrated Into Microresonators via COMSOL Simulations. *Cansever, H.*, +, *TMAG July 2019 7401505*

Magnetization Reversal and Domain Nucleation in Ultra-Thin Co/Re(0001) Capped by Graphitic C. *Genuzio, F.*, +, *TMAG Feb. 2019 2300504*

Self-Assembled Magnetically Isolated Co Nanoparticles Embedded Inside Carbon Nanotubes. *Prischepa, S.L.*, +, *TMAG Feb. 2019 2300304*

Tuning the Magnetic Anisotropy of  $\text{Fe}_3\text{O}_4/\text{Pt}$  Heterostructures Fabricated by Atomic Layer Deposition With *In Situ* Magnetic Field. *Zhang, L.*, +, *TMAG March 2019 2001707*

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3-D Numerical Modeling for the Magnetization of Superconductors Using a Local Discontinuous Galerkin Finite Element Method. *Law, Y.*, +, *TMAG Aug. 2019 9000111*

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Thermomagnetic Behavior of a Ferrimagnet of High Spins: Monte Carlo Analysis. *De La Espriella, N.*, +, *TMAG Dec. 2019 6000807*

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Canonical-Ensemble Calculations of the Magnetic Susceptibility for a Spin-1/2 Spherical Kagome Cluster With Dzyaloshinskii-Moriya Interactions by Using Microcanonical Thermal Pure Quantum States. *Inoue, K.*, +, *TMAG Feb. 2019 2700103*

Demagnetizing Effects and Correction in Permeameter Measurements of Soft Magnetic Cylinders. *Chen, D.*, *TMAG May 2019 6000410*

Ferromagnetism and Giant Paramagnetism of Copper Nanoparticles in Carbon Matrix. *Kocharian, A.*, +, *TMAG Feb. 2019 2300604*

Influence of pH on Dynamic Magnetic Susceptibility of Iron-Oxide Nanoparticles in a Chitosan Hydrogel Matrix. *Villamin, M.E.*, +, *TMAG Feb. 2019 5000204*

Low-Temperature Magnetism of Gold Nano Particles Contained in Electrochemical Sugar Recognition System. *Goto, T.*, +, *TMAG Feb. 2019 2300404*

Magnetic and Optical Study of Nematic Liquid Crystal E7 Mixed  $\text{Fe}_3\text{O}_4$  Ferrofluid. *Alomari, A.*, +, *TMAG Dec. 2019 4601007*

Magnetic Properties and Critical and Compensation Temperatures in Mixed Spin-1/2–Spin-1 Ferrimagnetic-Centered Rectangular Structure Using Monte Carlo Simulation. *Obeidat, A.A.*, +, *TMAG Sept. 2019 1000305*

Magnetic Susceptibility Estimation for Magnetostatics. *Vijn, A.*, +, *TMAG March 2019 7400309*

Material Identification of Single-Organic Particles Realized by Observing Their Field-Induced Translations. *Fukuyama, H.*, +, *TMAG Feb. 2019 6000304*

Optomechanical Actuation of Diamagnetically Levitated Pyrolytic Graphite. *Ewall-Wice, M.*, +, *TMAG July 2019 2501506*

Size Effects on Magnetic Property and Crystal Structure of  $\text{Mn}_3\text{O}_4$  Nanoparticles in Mesoporous Silica. *Tajiri, T.*, +, *TMAG Feb. 2019 2300204*

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A Novel STT-MRAM Design With Electric-Field-Assisted Synthetic Anti-Ferromagnetic Free Layer. *Hao, R.*, +, *TMAG March 2019 3400506*

Insertion Layer Thickness Dependence of Magnetic and Electrical Properties for Double-CoFeB/MgO-Interface Magnetic Tunnel Junctions. *Miura, S.*, +, *TMAG July 2019 3401004*



- Low-Temperature Performance of Nanoscale Perpendicular Magnetic Tunnel Junctions With Double MgO-Interface Free Layer. *Cao, K.*, +, *TMAG March 2019 3400304*
- Micromagnetic Modeling of All-Optical Switching. *Raposo, V.*, +, *TMAG July 2019 1300406*
- Optical Receiver With Helicity-Dependent Magnetization Reversal. *Azim, Z.A.*, +, *TMAG Jan. 2019 4400206*
- Resonant Spin-Transfer Torque Magnetoresistive Memory. *Zhu, J.*, +, *TMAG March 2019 3400407*
- Simulation of Strain-Assisted Switching in Synthetic Antiferromagnetic Free Layer-Based Magnetic Tunnel Junction. *Noh, S.*, +, *TMAG April 2019 3400705*
- Spin-Orbit Torque-Driven Magnetic Switching of Co/Pt-CoFeB Exchange Spring Ferromagnets. *Song, M.*, +, *TMAG Aug. 2019 1401004*
- Magnetic tapes**
- A Study of TDMR for Magnetic Tape Systems. *Musha, A.*, *TMAG March 2019 3100405*
- Magnetic thin films**
- 3-D Magnetic Orientation Control of Ferromagnetic Film/Guanine Crystal Hybrid Plate. *Sogame, T.*, +, *TMAG July 2019 5000604*
- Advanced Processing of Micropatterned Elasto-Magnetic Membranes. *Martin, E.L.*, +, *TMAG July 2019 2900406*
- Annealing Temperature Effects on Spin Hall Magnetoresistance in Perpendicularly Magnetized W/CoFeB Bilayers. *Peterson, T.J.*, +, *TMAG Feb. 2019 4100204*
- Anomalous Hall Effect in a Magnetic Topological Insulator (BiMn)<sub>2</sub>Te<sub>3</sub>. *Pilidi, A.*, +, *TMAG July 2019 2400506*
- Effect of Pt and FePt Layer Thickness on Microstructure and Magnetic Properties of L1<sub>0</sub> FePt Films With Perpendicular Anisotropy. *Bae, J.*, +, *TMAG Aug. 2019 3200506*
- Effects of Thickness and Thermal Annealing of FeCoB Thin Films on Ferromagnetic Resonance and Microwave Propagation Properties. *Arteaga-Duran, A.*, +, *TMAG Feb. 2019 2800303*
- Enhanced Field Sensitivity by Strong Mutual Coupling and Magnetoinduction in Amorphous Film/Planar Coil Multilayers. *Song, F.*, +, *TMAG Feb. 2019 4001505*
- Formation and Perpendicular Magnetic Coupling of Al and L1<sub>0</sub> CoPt in CoPt/TiN Films on Glass Substrate. *An, H.*, +, *TMAG Feb. 2019 2100204*
- High-*Q* On-Chip *C*-Band Inductor With a Nanocrystalline MnZn-Ferrite Film Core. *Sai, R.*, +, *TMAG July 2019 2801304*
- Imaging Domains in a Zero-Moment Half Metal. *Siewierska, K.E.*, +, *TMAG Feb. 2019 2600104*
- Improvement of Large Anomalous Hall Effect in Polycrystalline Antiferromagnetic Mn<sub>3-x</sub>Sn Thin Films. *Ikedo, T.*, +, *TMAG July 2019 2501704*
- Ion-Implantation-Induced Disorder in FePt-C Thin Films. *Kumar, D.*, +, *TMAG March 2019 2300805*
- Magnetic Anisotropy and Ferromagnetic Resonance in Nitrogen-Incorporated NiFe<sub>2</sub>O<sub>4</sub> Thin Films. *Anoop Baby, K.B.*, +, *TMAG Feb. 2019 2000704*
- Magnetic Damping Constant of CoFeB/Pt Thin Films With Varying the Thicknesses of Pt and Insertion Layer of Al. *Wu, K.*, +, *TMAG July 2019 4100305*
- Magnetic Domain Observation of Ferrite Sintered Magnets Using MFM Images Observed from Multiple Distances and Image Processing. *Obara, G.*, +, *TMAG April 2019 6500504*
- Magnetic Properties of Reactive Co-Sputtered NiFe-Oxide Samples. *Binod, D.C.*, +, *TMAG Feb. 2019 2900205*
- Magnetization Reversal and Domain Nucleation in Ultra-Thin Co/Re(0001) Capped by Graphitic C. *Genuzio, F.*, +, *TMAG Feb. 2019 2300504*
- Magnetization Studies on Tb-Fe and Tb-Fe-Co Thin Films. *Rajasekhar, P.*, +, *TMAG Feb. 2019 2500804*
- Micromagnetic Modeling of All-Optical Switching. *Raposo, V.*, +, *TMAG July 2019 1300406*
- Nanostructure Evolution of Co-Evaporated FeNi-SiO<sub>2</sub> Magnetic Nanoparticle Film Prepared Under High Magnetic Field. *Li, G.*, +, *TMAG Feb. 2019 2000604*
- Observation of Longitudinal Spin Seebeck Voltage in YIG Films Chemically Prepared by Co-Precipitation and Spin Coating. *Yamada, K.*, +, *TMAG Feb. 2019 4500104*
- Optical Analysis of HAMR Media. *Victoria, R.H.*, +, *TMAG March 2019 3000908*
- Perpendicular Exchange Bias in (Co/Pt)<sub>n</sub> Multilayers. *Elphick, K.*, +, *TMAG July 2019 4800106*
- Perpendicularly Magnetized Thin-Film Antidot Arrays for Superparamagnetic Microbead Actuation. *Ouk, M.*, +, *TMAG Sept. 2019 4600707*
- Realization of Energy Harvesting Based on Stress-Induced Modification of Magnetic Domain Structures in Microwires. *Bhatti, S.*, +, *TMAG July 2019 2301107*
- Resonant Spin-Transfer Torque Magnetoresistive Memory. *Zhu, J.*, +, *TMAG March 2019 3400407*
- Spin-Orbit Torque-Driven Magnetic Switching of Co/Pt-CoFeB Exchange Spring Ferromagnets. *Song, M.*, +, *TMAG Aug. 2019 1401004*
- Studies of Exchange Coupling in FeCo/L1<sub>0</sub>-FePt Bilayer Thin Films. *Vashisht, G.*, +, *TMAG March 2019 2101205*
- Studies of HAMR Recording by Hybrid Monte Carlo Micromagnetics. *Miao, J.*, +, *TMAG July 2019 3001604*
- Study of Surface Character of Micrometer-Scale Dipole-Exchange Spin Waves in an Yttrium Iron Garnet Film. *Lim, J.*, +, *TMAG Feb. 2019 6100504*
- Theoretical Study of Gilbert Damping Constants in Magnetic Multilayer Films. *Ozaki, D.*, +, *TMAG July 2019 1300505*
- Thermally Induced Magnetic Anisotropy in Nickel Films on Surface Acoustic Wave Devices. *Mathews, S.A.*, +, *TMAG Feb. 2019 4001304*
- Tuning the Magnetic Anisotropy of Fe<sub>3</sub>O<sub>4</sub>/Pt Heterostructures Fabricated by Atomic Layer Deposition With *In Situ* Magnetic Field. *Zhang, L.*, +, *TMAG March 2019 2001707*
- Magnetic transition temperature**
- Size Effects on Magnetic Property and Crystal Structure of Mn<sub>3</sub>O<sub>4</sub> Nanoparticles in Mesoporous Silica. *Tajiri, T.*, +, *TMAG Feb. 2019 2300204*
- Magnetic transitions**
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- Different Magnetic Field Effects on the ε-τ Phase Transformation Between (Mn,Zn)-Al and Mn-Al-C. *Mitsui, Y.*, +, *TMAG Feb. 2019 2100704*
- Magnetic Properties and Critical and Compensation Temperatures in Mixed Spin-1/2-Spin-1 Ferrimagnetic-Centered Rectangular Structure Using Monte Carlo Simulation. *Obeidat, A.A.*, +, *TMAG Sept. 2019 1000305*
- Multiple-*Q* Magnetic States in Spin-Orbit Coupled Metals. *Hayami, S.*, +, *TMAG Feb. 2019 1500107*
- Phase Diagram of 360° Domain Walls in Magnetic Rings. *Bickel, J.E.*, +, *TMAG July 2019 2301006*
- Structural and Magnetic Properties and Magnetocaloric Effect in SmNi<sub>5</sub> Compound. *Bajorek, A.*, +, *TMAG Feb. 2019 2500304*
- Magnetic tunneling**
- A Novel STT-MRAM Design With Electric-Field-Assisted Synthetic Anti-Ferromagnetic Free Layer. *Hao, R.*, +, *TMAG March 2019 3400506*
- Characterization of Continuous Wave Laser-Induced Thermal Gradients in Magnetic Tunnel Junctions Integrated Into Microresonators via COMSOL Simulations. *Cansever, H.*, +, *TMAG July 2019 7401505*
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- Differential Spin Hall Effect-Based Nonvolatile Static Random Access Memory for Energy-Efficient and Fast Data Restoration Application. *Shreya, S.*, +, *TMAG Sept. 2019 3401211*
- Direct Tunneling and Related TMR Anomalies in Magnetic Tunnel Junctions With Embedded Nanoparticles. *Turenne, D.*, +, *TMAG Dec. 2019 4400804*
- Exploration of Non-Volatile MTJ/CMOS Circuits for DPA-Resistant Embedded Hardware. *Kumar, S.D.*, +, *TMAG Dec. 2019 3401308*
- Insertion Layer Thickness Dependence of Magnetic and Electrical Properties for Double-CoFeB/MgO-Interface Magnetic Tunnel Junctions. *Miura, S.*, +, *TMAG July 2019 3401004*

- Magnetic Tunnel Junctions: Laser Annealing Versus Oven Annealing. *Sharma, A., +, TMAG Jan. 2019 4400104*
- Micromagnetic Study of Edge-Damage Effects in Perpendicular CoFeB/MgO Magnetic Tunnel Junction. *Yoshida, C., +, TMAG July 2019 3401105*
- Non-Volatile Spintronic Flip-Flop Design for Energy-Efficient SEU and DNU Resilience. *Alghareb, F.S., +, TMAG March 2019 3400611*
- Optical Receiver With Helicity-Dependent Magnetization Reversal. *Azim, Z.A., +, TMAG Jan. 2019 4400206*
- Power-Efficient Spin-Torque Nano-Oscillator-Based Wireless Communication With CMOS High-Gain Low-Noise Transmitter and Receiver. *Lee, H.S., +, TMAG May 2019 4001910*
- Resonant Spin-Transfer Torque Magnetoresistive Memory. *Zhu, J., +, TMAG March 2019 3400407*
- Simulation of Strain-Assisted Switching in Synthetic Antiferromagnetic Free Layer-Based Magnetic Tunnel Junction. *Noh, S., +, TMAG April 2019 3400705*

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- An Improved Method for Measuring the Magnetic Properties of Silicon Steel With Double Sheets at High Frequency. *Chen, R., +, TMAG Feb. 2019 6100404*
- Closed-Circuit Versus Open-Circuit Characterization of Hard Magnets. *Fliegans, J., +, TMAG Feb. 2019 2101105*
- Improvement of Reproducibility of Magnetic Moment Detected by a SQUID Magnetometer Through Radial Offset Measurement on a YIG Sphere. *Matsumoto, N., +, TMAG Feb. 2019 9400305*
- Vector Magnetic Properties Measurement of Silicon Steel Under Biased Magnetic Excitation Along Laminated Direction. *Zhang, C., +, TMAG Feb. 2019 8000204*

#### Magnetization

- 3-D Numerical Modeling for the Magnetization of Superconductors Using a Local Discontinuous Galerkin Finite Element Method. *Law, Y., +, TMAG Aug. 2019 9000111*
- A Hybrid Interior Permanent Magnet Variable Flux Memory Machine Using Two-Part Rotor. *Zheng, Y., +, TMAG July 2019 8106008*
- A Novel STT-MRAM Design With Electric-Field-Assisted Synthetic Anti-Ferromagnetic Free Layer. *Hao, R., +, TMAG March 2019 3400506*
- A Thin-Layer Volume Integral Equation Formulation for Linear and Non-Linear Magnetostatic Problems. *Hendijani, N., +, TMAG Feb. 2019 7000308*
- Adiabatic Temperature Changes at Structural and Magnetic Phase Transitions in  $\text{Ni}_{45}\text{Mn}_{43}\text{CoSn}_{11}$  at High Magnetic Fields. *Pandey, S., +, TMAG Feb. 2019 2500604*
- An Improved Method for Measuring the Magnetic Properties of Silicon Steel With Double Sheets at High Frequency. *Chen, R., +, TMAG Feb. 2019 6100404*
- Analysis of Zero Stiffness Permanent Magnet Bearing Including Reluctance Effect. *Zeng, L., +, TMAG Oct. 2019 8204908*
- Areal Density Capability of Dual-Structure Media for Microwave-Assisted Magnetic Recording. *Greaves, S.J., +, TMAG Dec. 2019 6701509*
- Calculation of the Remnant Magnetization and Magnetic Saturation Characteristics for Sintered NdFeB Permanent Magnets Utilizing Finite Element Transient Simulations. *Magdaleno-Adame, S., +, TMAG Dec. 2019 2101909*
- Canonical-Ensemble Calculations of the Magnetic Susceptibility for a Spin-1/2 Spherical Kagome Cluster With Dzyaloshinskii-Moriya Interactions by Using Microcanonical Thermal Pure Quantum States. *Inoue, K., +, TMAG Feb. 2019 2700103*
- Changes in Microstructure and Magnetic Properties of Fe-B-Cu-C Ribbons According to Annealing Conditions. *Lee, K., +, TMAG Feb. 2019 2000904*
- Coercivity Mechanism of Ga-Doped Nd-Fe-B Sintered Magnets. *Matsuura, Y., +, TMAG Dec. 2019 5100606*
- Comprehensive Investigation of Magnetic Properties for Fe-Si Steel Under Alternating and Rotational Magnetizations Up to Kilohertz Range. *Yue, S., +, TMAG July 2019 6100705*
- Coupled Dynamics of Magnetizations in Spin-Hall Oscillators via Spin-Current Injection. *Taniguchi, T., TMAG Feb. 2019 1400204*

- Current-Driven Skyrmion Dynamics Along Curved Tracks. *Luis, R.F., +, TMAG July 2019 1500408*
- Diagnosis Method of Magnetization Distribution in Permanent Magnet Using Approximate Function Based on 1-D Fourier Series Expansion. *Okamoto, Y., +, TMAG June 2019 7204704*
- Eddy Current Calculation of a High-Speed Slotted Machine With Halbach Magnetization at No-Load Condition. *Xue, L., +, TMAG Nov. 2019 8107710*
- Effects of Rare-Earth (R = Pr, Gd, Ho, Er) Doping on Magnetostructural Phase Transitions and Magnetocaloric Properties in  $\text{Ni}_{43-1}\text{R}_x\text{Mn}_{46}\text{Sn}_{11}$  Shape Memory Alloys. *Aryal, A., +, TMAG Feb. 2019 2500505*
- Electron-Doping Effect on the Magnetic-Field-Sensitive Dielectric Anomaly in  $\text{CaMn}_{1-x}\text{Sb}_x\text{O}_3$ . *Taniguchi, H., +, TMAG Feb. 2019 1000104*
- Fabrication of Ferrite-Coated Magnetic Fe-Mn-Si-Cr-Ni Alloy Utilizing Selective Oxidation of Mn Element. *Peng, H., +, TMAG May 2019 2900307*
- Field Dependence of the Magnetization at Increasing Size: An Empirical Approach for Cobalt Ferrite Nanoparticles. *Stein, C.R., +, TMAG Feb. 2019 6000203*
- General Analytical Magnetic Model for Partitioned-Stator Flux-Reversal Machines With Four Types of Magnetization Patterns. *Vahaj, A.A., +, TMAG Nov. 2019 8107621*
- High-Field Tunneling Magnetoresistive Angle Sensor. *Deak, J., +, TMAG Oct. 2019 6700104*
- Impact of Spin Torque Oscillator Frequency in Microwave-Assisted Magnetic Recording. *Zhu, J., TMAG Dec. 2019 6700808*
- Improvement of Large Anomalous Hall Effect in Polycrystalline Antiferromagnetic  $\text{Mn}_{3-x}\text{Sn}$  Thin Films. *Ikedo, T., +, TMAG July 2019 2501704*
- Impulse Magnetized Magnetic Screws. *Mohamed, H.M., +, TMAG July 2019 8001504*
- Insertion Layer Thickness Dependence of Magnetic and Electrical Properties for Double-CoFeB/MgO-Interface Magnetic Tunnel Junctions. *Miura, S., +, TMAG July 2019 3401004*
- Integral Formulation for Magnetic and Conductive Wire Loops in an External Time-Harmonic Magnetoquasi-Static Field. *Giussani, L., +, TMAG Nov. 2019 7502304*
- Magnetic and Optical Study of Nematic Liquid Crystal E7 Mixed  $\text{Fe}_3\text{O}_4$  Ferrofluid. *Alomari, A., +, TMAG Dec. 2019 4601007*
- Magnetic and Thermoelectric Properties of Fe-Ti-Sn Alloys. *Saito, T., +, TMAG Feb. 2019 2900104*
- Magnetic Anisotropy and Ferromagnetic Resonance in Nitrogen-Incorporated  $\text{NiFe}_2\text{O}_4$  Thin Films. *Anoop Baby, K.B., +, TMAG Feb. 2019 2000704*
- Magnetic Phase Transition and Magnetocaloric Effect in Ternary  $\text{Er}_2\text{Ni}_2\text{Ga}$  Compound. *Guo, D., +, TMAG Jan. 2019 2500204*
- Magnetic PolyHIPE Composites With Activated Carbon and Iron Oxide Nanoparticles. *Seeharaj, P., +, TMAG Feb. 2019 9400104*
- Magnetic States and Bandgaps of B-Site Substituted Double-Perovskite  $\text{Ba}_2\text{Pr}(\text{Bi}, \text{Sb})\text{O}_6$ . *Taniguchi, H., +, TMAG Feb. 2019 2400404*
- Magnetic Susceptibility Estimation for Magnetostatics. *Vijn, A., +, TMAG March 2019 7400309*
- Magnetoimpedance Response of a Double-Exchange Metallic Ferromagnet  $\text{La}_{0.80}\text{Sr}_{0.20}\text{MnO}_3$ . *Chaudhuri, U., +, TMAG July 2019 2801205*
- Micromagnetic Study of Edge-Damage Effects in Perpendicular CoFeB/MgO Magnetic Tunnel Junction. *Yoshida, C., +, TMAG July 2019 3401105*
- Modeling of Magnetostrictive Property of Electrical Steel Sheet Under Vectorial Excitation. *Wang, Z., +, TMAG June 2019 7300304*
- Modulation of Magnetism and Magnetic Anisotropy at the Heavy-Metal/FeRh Interface. *Odkhuu, D., TMAG Feb. 2019 7000104*
- Nanostructure Evolution of Co-Evaporated FeNi-SiO<sub>2</sub> Magnetic Nanoparticle Film Prepared Under High Magnetic Field. *Li, G., +, TMAG Feb. 2019 2000604*
- Perpendicular Exchange Bias in  $(\text{Co/Pt})_n$  Multilayers. *Elphick, K., +, TMAG July 2019 4800106*
- Realization of Energy Harvesting Based on Stress-Induced Modification of Magnetic Domain Structures in Microwires. *Bhatti, S., +, TMAG July 2019 2301107*

- Resonant Spin-Transfer Torque Magnetoresistive Memory. *Zhu, J.*, +, *TMAG March 2019 3400407*
- Rotational Single Sheet Tester for Multiaxial Magneto-Mechanical Effects in Steel Sheets. *Aydin, U.*, +, *TMAG March 2019 2001810*
- Simple Numerical Calculation Method of Rotational Iron Loss in Silicon Steel Sheets. *Gao, Y.*, +, *TMAG June 2019 6300404*
- Simulation of Strain-Assisted Switching in Synthetic Antiferromagnetic Free Layer-Based Magnetic Tunnel Junction. *Noh, S.*, +, *TMAG April 2019 3400705*
- Structural and Magnetic Properties and Magnetocaloric Effect in SmNi<sub>5</sub> Compound. *Bajorek, A.*, +, *TMAG Feb. 2019 2500304*
- The Effect of the Superlattice on the Magnetic and Transport Properties of Epitaxial Magnetite Thin Films. *Alraddadi, S.*, +, *TMAG March 2019 2700205*
- Theory and Design of Tunable Full-Mode and Half-Mode Ferrite Waveguide Isolators. *Ghaffar, F.A.*, +, *TMAG Aug. 2019 4003408*
- Thermomagnetic Behavior of a Ferrimagnet of High Spins: Monte Carlo Analysis. *De La Espriella, N.*, +, *TMAG Dec. 2019 6000807*
- Transient Chaos in Nanomagnets Subject to Elliptically Polarized AC Applied Fields. *Serpico, C.*, +, *TMAG Feb. 2019 4300305*
- Tuning the Magnetic Anisotropy of Fe<sub>3</sub>O<sub>4</sub>/Pt Heterostructures Fabricated by Atomic Layer Deposition With *In Situ* Magnetic Field. *Zhang, L.*, +, *TMAG March 2019 2001707*
- Tuning the Structural Transitions and Magnetocaloric Response in Gd<sub>5</sub>Si<sub>1.7</sub>Ge<sub>2.3</sub> Alloys Through Cobalt Addition. *Uthaman, B.*, +, *TMAG Oct. 2019 2501911*
- Vector-Resolved Magneto-optic Kerr Effect Measurements of Spin-Orbit Torque. *Celik, H.*, +, *TMAG Jan. 2019 4100105*
- Magnetization reversal**
- Cache Memory Design With Magnetic Skyrmions in a Long Nanotrack. *Chen, M.*, +, *TMAG Aug. 2019 1500309*
- Closed-Circuit Versus Open-Circuit Characterization of Hard Magnets. *Fliegans, J.*, +, *TMAG Feb. 2019 2101105*
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- Magnetization Reversal and Domain Nucleation in Ultra-Thin Co/Re(0001) Capped by Graphitic C. *Genuzio, F.*, +, *TMAG Feb. 2019 2300504*
- Microwave-Assisted Magnetization Reversal in Dispersed Nanosized Barium Ferrite Particles for High-Density Magnetic Recording Tape. *Ozawa, E.*, *TMAG July 2019 3200404*
- Optical Receiver With Helicity-Dependent Magnetization Reversal. *Azim, Z.A.*, +, *TMAG Jan. 2019 4400206*
- Spin-Orbit-Induced Effective Magnetic Field in GaMnAs Ferromagnetic Semiconductor. *Lee, S.*, +, *TMAG Feb. 2019 2400206*
- Studies of Exchange Coupling in FeCo/L1<sub>0</sub>-FePt Bilayer Thin Films. *Vashisht, G.*, +, *TMAG March 2019 2101205*
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- Magnetically Induced Flickering Change in the Light-Reflecting Cuticulae of the Common Bluebottle Butterfly *Graphium Sarpedon*. *Iwasaka, M.*, +, *TMAG July 2019 5200204*
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- Magnetoacoustic effects**
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- Magnetocaloric effects**
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- Structural and Magnetic Properties and Magnetocaloric Effect in SmNi<sub>5</sub> Compound. *Bajorek, A.*, +, *TMAG Feb. 2019 2500304*
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- Magnetoelastic effects**
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- Elastic and Magnetoelastic Properties of Fe-Rich Tetragonal Y-Fe Compounds: Phenomenology and Electron Theory. *Inoue, J.*, +, *TMAG Feb. 2019 2100304*
- Local Measurement of Peening-Induced Residual Stresses on Iron Nickel Material Using Needle Probes Technique. *Tene Deffo, Y.A.*, +, *TMAG July 2019 7100208*
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- Voltage-Controlled, Nonreciprocal Millimeter-Wave Propagation From Magnetoelastic Membranes Infused With Aligned Nickel Microparticles. *Parsa, N.*, +, *TMAG Feb. 2019 2501005*
- Magnetolectric effects**
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- Electric Field Tuning of Anisotropic Magnetoresistance in Ni-Co/PMN-PT Multiferroic Heterostructure. *Wang, C.*, +, *TMAG Feb. 2019 2501103*
- Electron-Doping Effect on the Magnetic-Field-Sensitive Dielectric Anomaly in CaMn<sub>1-x</sub>Sb<sub>x</sub>O<sub>3</sub>. *Taniguchi, H.*, +, *TMAG Feb. 2019 1000104*
- Extraordinary Ferromagnetic Coupling and Magnetodielectric Phenomena in NiO Nanoparticles. *Roy, S.*, +, *TMAG Feb. 2019 2501304*
- Homogenization of Magnetolectric 0-3 Type Composites by 3-D Multiphysics Finite-Element Modeling. *Do, T.A.*, +, *TMAG June 2019 7401004*
- Improved Tunability in Metglas/Ferrite/PZT Magnetolectric Tunable Inductors. *Zhang, J.*, +, *TMAG July 2019 2501604*
- Microwave Monolithic Devices Using Magnetic Hard-Soft Nanocomposite. *Sharma, V.*, +, *TMAG July 2019 4002004*
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- Compact Macrospin-Based Model of Three-Terminal Spin-Hall Nano Oscillators. *Albertsson, D.I.*, +, *TMAG Oct. 2019 4003808*
- Coupled Dynamics of Magnetizations in Spin-Hall Oscillators via Spin-Current Injection. *Taniguchi, T.*, *TMAG Feb. 2019 1400204*
- Differential Spin Hall Effect-Based Nonvolatile Static Random Access Memory for Energy-Efficient and Fast Data Restoration Application. *Shreya, S.*, +, *TMAG Sept. 2019 3401211*
- Effects of Elastic Dephasing on Scaling of Ultra-Small Magnetic Tunnel Junctions. *Das, D.*, +, *TMAG Feb. 2019 1400404*
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- Power-Efficient Spin-Torque Nano-Oscillator-Based Wireless Communication With CMOS High-Gain Low-Noise Transmitter and Receiver. *Lee, H.S.*, +, *TMAG May 2019 4001910*

- Reconfigurable Spintronics Wheatstone Bridge Sensors With Offset Voltage Compensation at Wafer Level. *Franco, F.*, +, *T MAG July 2019 4400705*
- Serially Connected Spin Torque Nano-Oscillators Integrated Directly on a Metal–Oxide–Semiconductor Field-Effect Transistor. *Kang, D.H.*, +, *T MAG April 2019 1400506*
- Skyrmion-Based Racetrack Memory With Continuous Loop Built From Ferromagnetic Metal and Insulator. *Honda, S.*, +, *T MAG Feb. 2019 1500304*
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- Comment on the Paper “Effect of Magnetic Flux Density and Other Properties on Temperature and Velocity Distribution in Magneto hydrodynamic (MHD) Pump”. *Pantokratoras, A.*, *T MAG Sept. 2019 9300201*
- Numerical Model for the Detection of Single Particle in Two-Phase Lorentz Force Velocimetry. *Hang, N.T.T.*, +, *T MAG Feb. 2019 4300204*

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- Magnetostatic Spring Softening and Stiffening in Magneto-Mechanical Resonator Systems. *Grinberg, I.*, +, *T MAG Aug. 2019 4003505*
- Microstructure and Magnetic Properties of Fe/ZrSiO<sub>4</sub> Composites Prepared by Mechanical Milling and Spark Plasma Sintering. *Hu, W.*, +, *T MAG Dec. 2019 2002707*
- Numerical Modeling of Magnetomechanical Characteristics of Ni–Mn–Ga Magnetic Shape Memory Alloy. *Shi, H.*, +, *T MAG Nov. 2019 2801709*
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- Alpha Rhythm and Visual Event-Related Fields Measurements at Room Temperature Using Magneto-Impedance Sensor System. *Ma, J.*, +, *T MAG July 2019 4002706*
- Collective Superspin Glass State of Interacting Cobalt Ferrite Nanoparticles. *Kubisztal, M.*, +, *T MAG Dec. 2019 2301306*
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- Electromagnetic Properties and Absorption Evaluation of Processed Carbonyl Iron and MWCNT at PANI Nanocomposites in the X-Band. *Govahi, M.*, +, *T MAG March 2019 2501409*
- Ferromagnetism and Giant Paramagnetism of Copper Nanoparticles in Carbon Matrix. *Kocharian, A.*, +, *T MAG Feb. 2019 2300604*
- Low Power *In Situ* AI Calibration of a Three-Axial Magnetic Sensor. *Alimi, R.*, +, *T MAG July 2019 4002407*

- Magnetic and Optical Study of Nematic Liquid Crystal E7 Mixed Fe<sub>3</sub>O<sub>4</sub> Ferrofluid. *Alomari, A.*, +, *T MAG Dec. 2019 4601007*
- Magnetic Calibration System With Interference Compensation. *Janosek, M.*, +, *T MAG Jan. 2019 6000104*
- Magnetic Gradient Measurement Using Micro-Fabricated Shaped Rubidium Vapor Cell. *Ji, Y.*, +, *T MAG Sept. 2019 4700405*
- Magneto resistive Sensor Development Roadmap (Non-Recording Applications). *Zheng, C.*, +, *T MAG April 2019 0800130*
- Microstructure and Magnetic Properties of Anisotropic Strontium Hexaferrite Powders. *Dilipan, A.R.*, +, *T MAG Aug. 2019 2101705*
- Synthesis of  $\gamma^3$ -Fe<sub>4</sub>N Soft Magnetic Material by High-Pressure Nitriding Approach. *Jiang, Y.*, +, *T MAG Feb. 2019 2001504*
- Thermally Induced Magnetic Anisotropy in Nickel Films on Surface Acoustic Wave Devices. *Mathews, S.A.*, +, *T MAG Feb. 2019 4001304*

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- Hybrid Plasmonic-Superparamagnetic Nanoparticle Clusters: Facile Synthesis and Characterization. *Pourmiri, S.*, +, *T MAG July 2019 5300104*

#### Magneto resistance

- AC Small-Signal Model for Magneto resistive Lateral Spin Valves. *Hu, J.*, +, *T MAG March 2019 1600108*
- Annealing Temperature Effects on Spin Hall Magneto resistance in Perpendicularly Magnetized W/CoFeB Bilayers. *Peterson, T.J.*, +, *T MAG Feb. 2019 4100204*
- Anomalous Hall Effect in a Magnetic Topological Insulator (BiMn)<sub>2</sub>Te<sub>3</sub>. *Pilidi, A.*, +, *T MAG July 2019 2400506*
- Calibration of Room Temperature Magnetic Sensor Array for Biomagnetic Measurement. *Adachi, Y.*, +, *T MAG July 2019 5000506*
- Extraordinary Ferromagnetic Coupling and Magnetodielectric Phenomena in NiO Nanoparticles. *Roy, S.*, +, *T MAG Feb. 2019 2501304*
- Hall Effect and Resistivity in Epitaxial MnSi Thin Films Under Ambient and High Pressure. *Menzel, D.*, +, *T MAG Feb. 2019 1500204*
- Resonant Spin-Transfer Torque Magneto resistive Memory. *Zhu, J.*, +, *T MAG March 2019 3400407*
- The Study on Magnetization Reversal of Stripe-Domain Structure in Ni Wires Fabricated on a LiNbO<sub>3</sub> Substrate. *Yamaguchi, A.*, +, *T MAG Feb. 2019 2500404*

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- High-Field Tunneling Magneto resistive Angle Sensor. *Deak, J.*, +, *T MAG Oct. 2019 6700104*
- Magnetic Sensors: Taxonomy, Applications, and New Trends. *Hristoforou, E.*, +, *T MAG July 2019 4002814*
- Magnetic-Field-Sensing-Based Approach for Current Reconstruction, Sag Detection, and Inclination Detection for Overhead Transmission System. *Xu, Q.*, +, *T MAG July 2019 4003307*
- Magneto resistive Sensor Development Roadmap (Non-Recording Applications). *Zheng, C.*, +, *T MAG April 2019 0800130*
- Practical Use of the GMI Effect to Make a Current Sensor. *Asfour, A.*, +, *T MAG Jan. 2019 4000410*
- Resonant Spin-Transfer Torque Magneto resistive Memory. *Zhu, J.*, +, *T MAG March 2019 3400407*
- Temperature Dependence of Noise in Giant- and Tunneling Magneto resistive Vortex Sensors. *Weitenfelder, H.*, +, *T MAG July 2019 4400505*

Unstable Playback Response of CPP-GMR Read Head Induced by Electromagnetic Interference: Structural Dependence. *Khunkitti, P.*, +, *TMAG Dec. 2019 3001906*

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Investigation of the Influence of Magnetic Field Distribution on the Magnetorheological Absorber With Individually Controllable Coils. *Ouyang, Q.*, +, *TMAG Aug. 2019 4600613*

Microstructural Stability of Magnetorheological Fluids Based on Magnetic Energy Analysis. *Zheng, J.*, +, *TMAG Oct. 2019 4600910*

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A 3-D Hybrid Cell Boundary Element Method for Time-Harmonic Eddy Current Problems on Multiply Connected Domains. *Moro, F.*, +, *TMAG March 2019 9200111*

A Thin-Layer Volume Integral Equation Formulation for Linear and Non-Linear Magnetostatic Problems. *Hendijani, N.*, +, *TMAG Feb. 2019 7000308*

Accurate Extraction of Winding Inductances Using Dual Formulations Without Source Field Computation. *Zhao, Y.*, +, *TMAG June 2019 7201504*

An Improved Newton Method Based on Choosing Initial Guess Applied to Scalar Formulation in Nonlinear Magnetostatics. *Cherif, R.*, +, *TMAG June 2019 7202204*

An Integral Face Formulation for Thin Non-Conductive Magnetic Regions. *Chavin-Collin, G.*, +, *TMAG June 2019 7000504*

Analytical Model for the Magnetic Field Distribution in a Flux Modulation Superconducting Machine. *Colle, A.*, +, *TMAG Dec. 2019 8107309*

Areal Density Capability of Dual-Structure Media for Microwave-Assisted Magnetic Recording. *Greaves, S.J.*, +, *TMAG Dec. 2019 6701509*

Auto-Gauging of Vector Potential by Parallel Sparse Direct Solvers—Numerical Observations. *Tang, Z.*, +, *TMAG June 2019 7200705*

Crystal Structure and Dzyaloshinski–Moriya Micromagnetics. *Ullah, A.*, +, *TMAG July 2019 7100305*

Dot Sensitivity Analysis of the Current Region for Topology Optimization in Magnetostatic Systems. *Hong, S.G.*, +, *TMAG June 2019 8102804*

Locally Corrected Nyström to Moment Method Conversion for Volume Integral Equations. *Pfeiffer, R.A.*, +, *TMAG April 2019 7200207*

Magnetic Susceptibility Estimation for Magnetostatics. *Vijn, A.*, +, *TMAG March 2019 7400309*

Magnetostatic Spring Softening and Stiffening in Magneto-Mechanical Resonator Systems. *Grinberg, I.*, +, *TMAG Aug. 2019 4003505*

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3-D Finite Element Analysis of Magnetolectric Composites Accounting for Material Nonlinearity and Eddy Currents. *Do, T.A.*, +, *TMAG Oct. 2019 7402008*

A Micromechanically Motivated Constitutive Model for Magnetostrictive Materials With Rate Effects. *Sathish Kumar, R.*, +, *TMAG Feb. 2019 7300113*

An Ultrasensitive Differential Capacitive Dilatometer. *Martien, D.*, +, *TMAG Feb. 2019 6500204*

Effect of Magnetic Forces and Magnetostriction on the Stator Vibrations of a Bearingless Synchronous Reluctance Motor. *Mukherjee, V.*, +, *TMAG June 2019 8101804*

External Loading Effects on Guided Wave Magnetostrictive Sensor Using a Surface-Bonded Nickel Patch. *Yoo, B.*, +, *TMAG Feb. 2019 2500905*

High-Frequency Output Characteristics of Giant Magnetostrictive Transducer. *Li, Y.*, +, *TMAG June 2019 8202305*

Improved Tunability in Metglas/Ferrite/PZT Magnetolectric Tunable Inductors. *Zhang, J.*, +, *TMAG July 2019 2501604*

Local Measurement of Peening-Induced Residual Stresses on Iron Nickel Material Using Needle Probes Technique. *Tene Deffo, Y.A.*, +, *TMAG July 2019 7100208*

Magnetic Optical FBG Sensors Using Optical Frequency-Domain Reflectometry. *Kaplan, N.*, +, *TMAG Jan. 2019 4000704*

Magnetization Studies on Tb–Fe and Tb–Fe–Co Thin Films. *Rajasekhar, P.*, +, *TMAG Feb. 2019 2500804*

Magnetostrictive Sensors for Composite Damage Detection and Wireless Structural Health Monitoring. *Leong, Z.*, +, *TMAG July 2019 4003006*

Modeling of Magnetostrictive Property of Electrical Steel Sheet Under Vectorial Excitation. *Wang, Z.*, +, *TMAG June 2019 7300304*

Proposal of Wind Vibrational Power Generator Using Magnetostrictive Material. *Hasegawa, K.*, +, *TMAG July 2019 8203104*

Self-Sensing Estimation of Mechanical Stress in Magnetostrictive Actuators. *Apicella, V.*, +, *TMAG Jan. 2019 2500106*

Study of Magnetostriction Influence of Electrical Sheet Steel Under Different DC Biases. *Chen, D.*, +, *TMAG Feb. 2019 2001305*

Study on Vibration of Iron Core of Transformer and Reactor Based on Maxwell Stress and Anisotropic Magnetostriction. *Zhang, P.*, +, *TMAG Feb. 2019 9400205*

Texture Evolution and Magnetostriction of Rolled  $(\text{Co}_{70}\text{Fe}_{30})_{99.8}(\text{NbC})_{0.2}$  Sheets. *Zhao, Y.*, +, *TMAG Oct. 2019 2501805*

Thermally Induced Magnetic Anisotropy in Nickel Films on Surface Acoustic Wave Devices. *Mathews, S.A.*, +, *TMAG Feb. 2019 4001304*

#### Magnetostrictive devices

1-D and 2-D Magnetostrictive Actuators. *Park, Y.*, +, *TMAG July 2019 8204105*

Bio-Inspired Magnetostrictive Tactile Sensor for Surface Material Recognition. *Zheng, W.*, +, *TMAG July 2019 4002307*

External Loading Effects on Guided Wave Magnetostrictive Sensor Using a Surface-Bonded Nickel Patch. *Yoo, B.*, +, *TMAG Feb. 2019 2500905*

High-Frequency Output Characteristics of Giant Magnetostrictive Transducer. *Li, Y.*, +, *TMAG June 2019 8202305*

Magnetostrictive Energy Harvesting: Materials and Design Study. *Backman, G.*, +, *TMAG July 2019 4700206*

Magnetostrictive Tactile Sensor Array for Object Recognition. *Zhang, B.*, +, *TMAG July 2019 4002207*

Modeling and Analysis of Galfenol Nonlinear Cantilever Energy Harvester With Elastic Magnifier. *Cao, S.*, +, *TMAG June 2019 8200905*

Proposal of Wind Vibrational Power Generator Using Magnetostrictive Material. *Hasegawa, K.*, +, *TMAG July 2019 8203104*

Self-Sensing Estimation of Mechanical Stress in Magnetostrictive Actuators. *Apicella, V.*, +, *TMAG Jan. 2019 2500106*

Study of Dynamic Behavior of Magnetostrictively Patterned Flexible Micro-Wings. *Cho, C.*, +, *TMAG Feb. 2019 4001604*

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Magnetically Actuated Piezoelectric-Based Rotational Energy Harvester With Enhanced Output in Wide Range of Rotating Speeds. *Rashidi, R.*, +, *TMAG Sept. 2019 8700208*

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Adiabatic Temperature Changes at Structural and Magnetic Phase Transitions in  $\text{Ni}_{45}\text{Mn}_{43}\text{CoSn}_{11}$  at High Magnetic Fields. *Pandey, S.*, +, *TMAG Feb. 2019 2500604*

Different Magnetic Field Effects on the  $\epsilon$ - $\tau$  Phase Transformation Between (Mn,Zn)-Al and Mn-Al-C. *Mitsui, Y.*, +, *TMAG Feb. 2019 2100704*

Effects of Rare-Earth (R = Pr, Gd, Ho, Er) Doping on Magnetostructural Phase Transitions and Magnetocaloric Properties in  $\text{Ni}_{43-x}\text{R}_x\text{Mn}_{46}\text{Sn}_{11}$  Shape Memory Alloys. *Aryal, A.*, +, *TMAG Feb. 2019 2500505*

Fabrication of Ferrite-Coated Magnetic Fe-Mn-Si-Cr-Ni Alloy Utilizing Selective Oxidation of Mn Element. *Peng, H.*, +, *TMAG May 2019 2900307*

Hall Effect and Resistivity in Epitaxial MnSi Thin Films Under Ambient and High Pressure. *Menzel, D.*, +, *TMAG Feb. 2019 1500204*

Imaging Domains in a Zero-Moment Half Metal. *Siewierska, K.E.*, +, *TMAG Feb. 2019 2600104*

Improvement of Large Anomalous Hall Effect in Polycrystalline Antiferromagnetic  $\text{Mn}_{3+x}\text{Sn}$  Thin Films. *Ikedo, T.*, +, *TMAG July 2019 2501704*

In-Field Annealing and Quenching for Ferromagnetic MnBi Under 19 T. *Kobayashi, R.*, +, *TMAG Feb. 2019 1000204*

MnGa (001)-Textured Film Fabricated on Thermally Oxidized Si Substrate for Application to Ion Beam Bit Patterned Media. *Ishikawa, T.*, +, *TMAG July 2019 3200104*

Numerical Modeling of Magnetomechanical Characteristics of Ni-Mn-Ga Magnetic Shape Memory Alloy. *Shi, H.*, +, *TMAG Nov. 2019 2801709*

Shape Magnetic Anisotropy From Spin Density in Nanoscale Slab Systems. *Oda, T.*, +, *TMAG Feb. 2019 1300104*

The Network-Shaped Upheaval Structure in (002) Textured MgO Layer for  $\text{L}_{10}$  FePt-Based Granular Media With Columnar Nanostructure. *Shimizu, A.*, +, *TMAG July 2019 3200208*

Tuning the Magnetic Anisotropy of NiPtMnGa by Substitution and Epitaxial Strain. *Herper, H.C.*, +, *TMAG Feb. 2019 2100804*

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Electron-Doping Effect on the Magnetic-Field-Sensitive Dielectric Anomaly in  $\text{CaMn}_{1-x}\text{Sb}_x\text{O}_3$ . *Taniguchi, H.*, +, *TMAG Feb. 2019 1000104*

Exploration of Non-Volatile MTJ/CMOS Circuits for DPA-Resistant Embedded Hardware. *Kumar, S.D.*, +, *TMAG Dec. 2019 3401308*

Exploration of the 3-D Printing of Transformer Structures With Embedded Ferrite Cores. *Bowen, D.*, +, *TMAG Feb. 2019 8400705*

High- $Q$  On-Chip C-Band Inductor With a Nanocrystalline MnZn-Ferrite Film Core. *Sai, R.*, +, *TMAG July 2019 2801304*

Interlayer Exchange Coupling Between Fe and GaMnAs Ferromagnetic Semiconductor. *Tivakornsasithorn, K.*, +, *TMAG Feb. 2019 2400104*

Size Effects on Magnetic Property and Crystal Structure of  $\text{Mn}_3\text{O}_4$  Nanoparticles in Mesoporous Silica. *Tajiri, T.*, +, *TMAG Feb. 2019 2300204*

Spin-Orbit-Induced Effective Magnetic Field in GaMnAs Ferromagnetic Semiconductor. *Lee, S.*, +, *TMAG Feb. 2019 2400206*

Spin-Orbit Currents, Spin-Transfer Torque and Anomalous Tunneling in III-V Heterostructures Probed by Advanced 30- and 40-Bands  $k \cdot p$  Tunneling Methods. *To, D.Q.*, +, *TMAG July 2019 1400707*

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Measurements of Iron Loss in PMSM Stator Cores Based on CoFe and SiFe Lamination Sheets and Stemmed From Different Manufacturing Processes. *Boubaker, N.*, +, *TMAG Jan. 2019 8100309*

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Effects of Rare-Earth (R = Pr, Gd, Ho, Er) Doping on Magnetostructural Phase Transitions and Magnetocaloric Properties in  $\text{Ni}_{43-x}\text{R}_x\text{Mn}_{46}\text{Sn}_{11}$  Shape Memory Alloys. *Aryal, A.*, +, *TMAG Feb. 2019 2500505*

Fabrication of Ferrite-Coated Magnetic Fe-Mn-Si-Cr-Ni Alloy Utilizing Selective Oxidation of Mn Element. *Peng, H.*, +, *TMAG May 2019 2900307*

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Some Actual Problems of Magnetic Filters With Magnetized Packed Beds and Comparative Analysis of Filter Performances. *Abbasov, T.*, *TMAG Dec. 2019 8002512*

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Acceleration of Transient Non-Linear Electromagnetic Field Analyses Using an Automated Subspace Correction Method. *Iwashita, T.*, +, *TMAG June 2019 7203704*

Accurate Extraction of Winding Inductances Using Dual Formulations Without Source Field Computation. *Zhao, Y.*, +, *TMAG June 2019 7201504*

Auto-Gauging of Vector Potential by Parallel Sparse Direct Solvers—Numerical Observations. *Tang, Z.*, +, *TMAG June 2019 7200705*

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Magnetic Anomaly Target Recognition Based on SVD and SVMs. *Zheng, J.*, +, *TMAG Sept. 2019 6000708*

Matrix-Free Nonlinear Finite-Element Solver Using Transmission-Line Modeling on GPU. *Liu, P.*, +, *TMAG July 2019 7401605*

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A Symmetric Field-Circuit Coupled Formulation for 3-D Transient Full-Wave Maxwell Problems. *Zhao, Y.*, +, *TMAG June 2019 7201804*

Computation of Leakage Inductance of End Coils in Electrical Machines Considering Core Effects. *Aragon-Verduzco, D.A.*, +, *TMAG Dec. 2019 8107812*

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Exact Analytical Method for Active Magnetic Bearings With Rotor Eccentricity. *Du, T.*, +, *TMAG Dec. 2019 8301112*

High-Frequency Output Characteristics of Giant Magnetostrictive Transducer. *Li, Y.*, +, *TMAG June 2019 8202305*

Homogenization of Multiscale Eddy Current Problem by Localized Orthogonal Decomposition Method. *Ren, X.*, +, *TMAG Sept. 2019 7500204*

Levitation of Conductive and Magnetically Anisotropic Ball. *Spalek, D.*, *TMAG March 2019 8000507*

Method-Specific Significance of Field Components in Three Methods of Torque Estimation. *Naveen Kumar, E., +, TMAG Dec. 2019 8107909*

Novel Analytical Formulas for Eddy-Current Losses in Semicircle-Section Wound Core of Transformer. *Zhang, C., +, TMAG Nov. 2019 6300612*

Physical DC Modes in the Microwave Resonator With Complex Geometric Topology. *Jiang, W., TMAG Nov. 2019 4003907*

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A Supervised Artificial Neural Network-Assisted Modeling of Magnetorheological Elastomers in Tension–Compression Mode. *Vatandoost, H., +, TMAG Dec. 2019 2502008*

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Areal Density Capability of Dual-Structure Media for Microwave-Assisted Magnetic Recording. *Greaves, S.J., +, TMAG Dec. 2019 6701509*

Impact of Spin Torque Oscillator Frequency in Microwave-Assisted Magnetic Recording. *Zhu, J., TMAG Dec. 2019 6700808*

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Alpha Rhythm and Visual Event-Related Fields Measurements at Room Temperature Using Magneto-Impedance Sensor System. *Ma, J., +, TMAG July 2019 4002706*

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Electroencephalogram Characteristics Induced by Different Magnetic Stimulation Modes of Acupuncture Point. *Fu, L., +, TMAG June 2019 5000304*

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Voltage-Controlled, Nonreciprocal Millimeter-Wave Propagation From Magnetoelastic Membranes Infused With Aligned Nickel Microparticles. *Parsa, N., +, TMAG Feb. 2019 2501005*

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Novel Geometrically Defined Mass Matrices for Tetrahedral Meshes. *Passarotto, M., +, TMAG June 2019 7200904*

Scalar Magnetic Potential Interpolation for Non-Conformal Meshing in Mesh-Based Generated Reluctance Networks. *Asfirane, S., +, TMAG July 2019 7204808*

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Hall Effect and Resistivity in Epitaxial MnSi Thin Films Under Ambient and High Pressure. *Menzel, D., +, TMAG Feb. 2019 1500204*

MnGa (001)-Textured Film Fabricated on Thermally Oxidized Si Substrate for Application to Ion Beam Bit Patterned Media. *Ishikawa, T., +, TMAG July 2019 3200104*

Optical Detection of Phase-Resolved Ferromagnetic Resonance in Epitaxial FeCo Thin Films. *Li, Y., +, TMAG July 2019 6100605*

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Effect of Pt and FePt Layer Thickness on Microstructure and Magnetic Properties of L1<sub>0</sub> FePt Films With Perpendicular Anisotropy. *Bae, J., +, TMAG Aug. 2019 3200506*

Effects of Thickness and Thermal Annealing of FeCoB Thin Films on Ferromagnetic Resonance and Microwave Propagation Properties. *Arteaga-Duran, A., +, TMAG Feb. 2019 2800303*

Imaging Domains in a Zero-Moment Half Metal. *Siewierska, K.E., +, TMAG Feb. 2019 2600104*

Improvement of Large Anomalous Hall Effect in Polycrystalline Antiferromagnetic Mn<sub>3-x</sub>Sn Thin Films. *Ikeda, T., +, TMAG July 2019 2501704*

Magnetic Damping Constant of CoFeB/Pt Thin Films With Varying the Thicknesses of Pt and Insertion Layer of Al. *Wu, K., +, TMAG July 2019 4100305*

Magnetization Studies on Tb–Fe and Tb–Fe–Co Thin Films. *Rajasekhar, P., +, TMAG Feb. 2019 2500804*

Perpendicularly Magnetized Thin-Film Antidot Arrays for Superparamagnetic Microbead Actuation. *Ouk, M., +, TMAG Sept. 2019 4600707*

Reconfigurable Spintronics Wheatstone Bridge Sensors With Offset Voltage Compensation at Wafer Level. *Franco, F., +, TMAG July 2019 4400705*

Studies of Exchange Coupling in FeCo/L1<sub>0</sub>-FePt Bilayer Thin Films. *Vashisht, G., +, TMAG March 2019 2101205*

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Advanced Processing of Micropatterned Elasto-Magnetic Membranes. *Martin, E.L.*, +, *TMAG July 2019 2900406*

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Three-Axis Micofluxgate With a Fluxguide. *Jeng, J.*, +, *TMAG July 2019 2002304*

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Advanced Processing of Micropatterned Elasto-Magnetic Membranes. *Martin, E.L.*, +, *TMAG July 2019 2900406*

Block Inverse Preconditioner for Implicit Time Integration in Finite Element Micromagnetic Solvers. *Fu, S.*, +, *TMAG Dec. 2019 7205111*

Controlled Current-Driven Bi-Directional Motion of Trains of Domain Walls Along a Ferromagnetic Strip. *Sanchez-Tejerina, L.*, +, *TMAG Feb. 2019 7100104*

Crystal Structure and Dzyaloshinski-Moriya Micromagnetics. *Ullah, A.*, +, *TMAG July 2019 7100305*

Current-Driven Skyrmion Dynamics Along Curved Tracks. *Luis, R.F.*, +, *TMAG July 2019 1500408*

Curvature and Skew in Heat-Assisted Magnetic Recording. *Liu, Z.*, +, *TMAG March 2019 3000808*

HAMR Versus PMR: A Comparative Study of Signal-Noise Performance. *Ahmed, R.*, +, *TMAG Dec. 2019 6700707*

Improving Our Understanding of Measured Jitter (in HAMR). *Hohlfeld, J.*, +, *TMAG March 2019 3000511*

ISI/ITI Turbo Equalizer for TDMR Using Trained Local Area Influence Probabilistic Model. *Sun, X.*, +, *TMAG April 2019 3100515*

MEMS-Based Vibrational Energy Harvesting and Conversion Employing Micro-/Nano-Magnetics. *Roy, S.*, +, *TMAG July 2019 4700315*

Micromagnetic Model Simulations Considering Write Head, Spin-Torque Oscillator, and Double-Layered Medium Altogether. *Kanai, Y.*, +, *TMAG March 2019 3000613*

Micromagnetic Modeling of All-Optical Switching. *Raposo, V.*, +, *TMAG July 2019 1300406*

Micromagnetic Study of Edge-Damage Effects in Perpendicular CoFeB/MgO Magnetic Tunnel Junction. *Yoshida, C.*, +, *TMAG July 2019 3401105*

Micromagnetic Study of Media Noise Plateau in Heat-Assisted Magnetic Recording. *Hsu, W.*, +, *TMAG Feb. 2019 3000104*

Micromagnetic Study of Reducing Forbidden Bandgaps and its Width in a Triangular Antidot Array Waveguide With Different Orientations. *Vivek, T.*, +, *TMAG Feb. 2019 7200106*

Permanent Magnets Beyond Nd-Dy-Fe-B. *Hirosawa, S.*, *TMAG Feb. 2019 2100506*

Phase Diagram of 360° Domain Walls in Magnetic Rings. *Bickel, J.E.*, +, *TMAG July 2019 2301006*

Realization of Energy Harvesting Based on Stress-Induced Modification of Magnetic Domain Structures in Microwires. *Bhatti, S.*, +, *TMAG July 2019 2301107*

Remanence State and Coercivity in 1-D Chain of Polycrystalline Hollow Cobalt Nanospheres. *Guerra, Y.*, +, *TMAG April 2019 7200305*

Self-Assembled Magnetically Isolated Co Nanoparticles Embedded Inside Carbon Nanotubes. *Prischepa, S.L.*, +, *TMAG Feb. 2019 2300304*

Skyrmion-Based Racetrack Memory With Continuous Loop Built From Ferromagnetic Metal and Insulator. *Honda, S.*, +, *TMAG Feb. 2019 1500304*

Studies of Exchange Coupling in FeCo/L1<sub>0</sub>-FePt Bilayer Thin Films. *Vashisht, G.*, +, *TMAG March 2019 2101205*

Studies of HAMR Recording by Hybrid Monte Carlo Micromagnetics. *Miao, J.*, +, *TMAG July 2019 3001604*

The Study on Magnetization Reversal of Stripe-Domain Structure in Ni Wires Fabricated on a LiNbO<sub>3</sub> Substrate. *Yamaguchi, A.*, +, *TMAG Feb. 2019 2500404*

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Magnetostrictive Energy Harvesting: Materials and Design Study. *Backman, G.*, +, *TMAG July 2019 4700206*

MEMS-Based Vibrational Energy Harvesting and Conversion Employing Micro-/Nano-Magnetics. *Roy, S.*, +, *TMAG July 2019 4700315*

Study of Dynamic Behavior of Magnetostrictively Patterned Flexible Micro-Wings. *Cho, C.*, +, *TMAG Feb. 2019 4001604*

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Magnetostatic Spring Softening and Stiffening in Magneto-Mechanical Resonator Systems. *Grinberg, I.*, +, *TMAG Aug. 2019 4003505*

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A Micromechanically Motivated Constitutive Model for Magnetostrictive Materials With Rate Effects. *Sathish Kumar, R.*, +, *TMAG Feb. 2019 7300113*

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Electrically Tunable Ferrite Bandpass Filter in X-Band With Wide Tunability. *Kagita, S.*, +, *TMAG July 2019 4003204*

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Detection and Imaging of Magnetic Field in the Microwave Regime With a Combination of Magnetic Losses Material and Thermofluorescent Molecules. *Ragazzo, H.*, +, *TMAG Feb. 2019 6500104*

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Detection and Imaging of Magnetic Field in the Microwave Regime With a Combination of Magnetic Losses Material and Thermofluorescent Molecules. *Ragazzo, H.*, +, *TMAG Feb. 2019 6500104*

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Electrically Tunable Ferrite Bandpass Filter in X-Band With Wide Tunability. *Kagita, S.*, +, *TMAG July 2019 4003204*

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Maximum Likelihood Detection for 3-D-MAMR. *Chan, K.S.*, +, *TMAG Dec. 2019 3002609*

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Detection and Imaging of Magnetic Field in the Microwave Regime With a Combination of Magnetic Losses Material and Thermofluorescent Molecules. *Ragazzo, H.*, +, *TMAG Feb. 2019 6500104*

Enhanced Microwave Absorption Properties of Absorbing Materials Induced by Complex Coupling Agents. *Ye, L.*, +, *TMAG Feb. 2019 2800605*

Microwave Absorption Properties of Flake-Like  $\text{Nd}_2\text{Co}_{16.5}\text{Si}_{0.5}$  Powders-Paraffin Composite. *Qiao, G.Y.*, +, *TMAG Feb. 2019 2800504*

Surface Texturing and Enhanced Microwave Absorption of Fe-B Alloy Flakes Through a Dealloying Process. *Tian, N.*, +, *TMAG July 2019 4002105*

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Effect of Spin-Torque Oscillator Tilt Angle in Microwave-Assisted Magnetic Recording. *Greaves, S.J.*, +, *TMAG March 2019 3000404*

Phase Locking of Spin Transfer Nano-Oscillators Using Common Microwave Sources. *Gopal, R.*, +, *TMAG Aug. 2019 1400909*

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Microwave Monolithic Devices Using Magnetic Hard-Soft Nanocomposite. *Sharma, V.*, +, *TMAG July 2019 4002004*

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Generation of High-Efficiency Vortex Beam Carrying OAM Mode Based on Miniaturized Element Frequency Selective Surfaces. *Wang, Y.*, +, *TMAG Oct. 2019 7501104*

Optical Sensing of Broadband RF Magnetic Field Using a Micrometer-Sized Diamond. *Hu, Z.*, +, *TMAG March 2019 6500304*

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Effects of Thickness and Thermal Annealing of FeCoB Thin Films on Ferromagnetic Resonance and Microwave Propagation Properties. *Arteaga-Duran, A.*, +, *TMAG Feb. 2019 2800303*

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Power-Efficient Spin-Torque Nano-Oscillator-Based Wireless Communication With CMOS High-Gain Low-Noise Transmitter and Receiver. *Lee, H.S.*, +, *TMAG May 2019 4001910*

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Mixed Finite-Element Method for 3-D Closed Cavity Problem With Anisotropic and Lossy Media. *Jiang, W.*, +, *TMAG May 2019 7400506*

Physical DC Modes in the Microwave Resonator With Complex Geometric Topology. *Jiang, W.*, +, *TMAG Nov. 2019 4003907*

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Electromagnetic Properties and Absorption Evaluation of Processed Carbonyl Iron and MWCNT at PANI Nanocomposites in the X-Band. *Govahi, M.*, +, *TMAG March 2019 2501409*

Microwave Absorption Properties of Flake-Like  $\text{Nd}_2\text{Co}_{16.5}\text{Si}_{0.5}$  Powders-Paraffin Composite. *Qiao, G.Y.*, +, *TMAG Feb. 2019 2800504*

Surface Texturing and Enhanced Microwave Absorption of Fe-B Alloy Flakes Through a Dealloying Process. *Tian, N.*, +, *TMAG July 2019 4002105*

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Voltage-Controlled, Nonreciprocal Millimeter-Wave Propagation From Magnetoelastic Membranes Infused With Aligned Nickel Microparticles. *Parsa, N.*, +, *TMAG Feb. 2019 2501005*

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Voltage-Controlled, Nonreciprocal Millimeter-Wave Propagation From Magnetoelastic Membranes Infused With Aligned Nickel Microparticles. *Parsa, N.*, +, *TMAG Feb. 2019 2501005*

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Dynamically Controllable Terahertz Graphene Y-Circulator. *Dmitriev, V.*, +, *TMAG Feb. 2019 4001712*

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Enhanced Microwave Absorption Properties of Absorbing Materials Induced by Complex Coupling Agents. *Ye, L.*, +, *TMAG Feb. 2019 2800605*

Microstructure and Magnetic Properties of Fe/ZrSiO<sub>4</sub> Composites Prepared by Mechanical Milling and Spark Plasma Sintering. *Hu, W.*, +, *TMAG Dec. 2019 2002707*

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Power-Efficient Spin-Torque Nano-Oscillator-Based Wireless Communication With CMOS High-Gain Low-Noise Transmitter and Receiver. *Lee, H.S.*, +, *TMAG May 2019 4001910*

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Analysis of Magnetic Properties of AlNiCo and Magnetization State Estimation in Variable-Flux PMSMs. *Qiao, G.*, +, *TMAG July 2019 8105006*

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Hall Effect and Resistivity in Epitaxial MnSi Thin Films Under Ambient and High Pressure. *Menzel, D.*, +, *TMAG Feb. 2019 1500204*

Magnetic and Transport Properties of  $\text{Co}_{1+x}\text{FeV}_{1-x}\text{Si}$  Epitaxial Films Grown by Molecular Beam Epitaxy. *Yamada, S.*, +, *TMAG Feb. 2019 2400304*

The Effect of the Superlattice on the Magnetic and Transport Properties of Epitaxial Magnetite Thin Films. *Alraddadi, S.*, +, *TMAG March 2019 2700205*

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Using Magnetic Field Gradients to Shorten the Antigen-Antibody Reaction Time for a Magnetic Immunoassay. *Tsukada, K.*, +, *TMAG July 2019 5100405*

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The Effect of Interstitial Nitrogen Addition on the Structural Properties of Supercells of  $\text{NdFe}_{12-x}\text{Ti}_x$ . *Skelland, C.*, +, *TMAG Oct. 2019 6700205*

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Effect of Annealing on Magnetic and Mechanical Behaviors of NANOPERM-Type Alloys. *Hasiak, M.*, +, *TMAG Feb. 2019 2001606*

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Electronic and Magnetic Properties of Transition-Metal-Doped WS<sub>2</sub> Monolayer; First-Principles Investigations. *Hyun, J.*, +, *TMAG Feb. 2019 7000204*

Multiple-*Q* Magnetic States in Spin–Orbit Coupled Metals. *Hayami, S.*, +, *TMAG Feb. 2019 1500107*

**Monte Carlo methods**

A Multilevel Monte Carlo Method for High-Dimensional Uncertainty Quantification of Low-Frequency Electromagnetic Devices. *Galetzka, A.*, +, *TMAG Aug. 2019 7401712*

Deep Learning for Magnetic Field Estimation. *Khan, A.*, +, *TMAG June 2019 7202304*

Development of Triple-Axis Spectrometer Device in HANARO: Numerical Simulation Results on Mirror-Type Collimators. *Lee, J.*, +, *TMAG Feb. 2019 6400104*

Magnetic Properties and Critical and Compensation Temperatures in Mixed Spin-1/2–Spin-1 Ferrimagnetic-Centered Rectangular Structure Using Monte Carlo Simulation. *Obeidat, A.A.*, +, *TMAG Sept. 2019 1000305*

Multi-Objective Robust Optimization for a Dual-Flux-Modulator Coaxial Magnetic Gear. *Liu, X.*, +, *TMAG July 2019 8002008*

Reversal Time of Jump-Noise Dynamics for Large Nucleation. *Parthasarathy, A.*, +, *TMAG Feb. 2019 4300103*

Robust Design of an Outer Rotor Permanent Magnet Motor Through Six-Sigma Methodology Using Response Surface Surrogate Model. *Rafiee, V.*, +, *TMAG Oct. 2019 8107110*

Studies of HAMR Recording by Hybrid Monte Carlo Micromagnetics. *Miao, J.*, +, *TMAG July 2019 3001604*

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Serially Connected Spin Torque Nano-Oscillators Integrated Directly on a Metal–Oxide–Semiconductor Field-Effect Transistor. *Kang, D.H.*, +, *TMAG April 2019 1400506*

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Development and Validation of Numerical Magnetic Force and Torque Model for Magnetically Levitated Actuator. *Xu, F.*, +, *TMAG Jan. 2019 4900109*

Domain Wall Motion Control for Racetrack Memory Applications. *Kumar, D.*, +, *TMAG March 2019 2300708*

Hybrid Multi-DOF Motor for Multi-Copter Unmanned Aerial Vehicle. *Lee, H.*, +, *TMAG June 2019 8201205*

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High-Field Tunneling Magnetoresistive Angle Sensor. *Deak, J.*, +, *TMAG Oct. 2019 6700104*

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A Surface-Mounted Permanent-Magnet Motor With Sinusoidal Pulse-width-Modulation-Shaped Magnets. *Yang, Y.*, +, *TMAG Jan. 2019 8100108*

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A Novel STT-MRAM Design With Electric-Field-Assisted Synthetic Anti-Ferromagnetic Free Layer. *Hao, R.*, +, *TMAG March 2019 3400506*

Area and Energy Efficient Series Multilevel Cell STT-MRAMs for Optimized Read–Write Operations. *Prajapati, S.*, +, *TMAG Jan. 2019 3400110*

Differential Spin Hall Effect-Based Nonvolatile Static Random Access Memory for Energy-Efficient and Fast Data Restoration Application. *Shreya, S.*, +, *TMAG Sept. 2019 3401211*

Effects of Elastic Dephasing on Scaling of Ultra-Small Magnetic Tunnel Junctions. *Das, D.*, +, *TMAG Feb. 2019 1400404*

Exploration of Non-Volatile MTJ/CMOS Circuits for DPA-Resistant Embedded Hardware. *Kumar, S.D.*, +, *TMAG Dec. 2019 3401308*

Importance Sampling for Thermally Induced Switching and Non-Switching Probabilities in Spin-Torque Magnetic Nanodevices. *Yu, Y.*, +, *TMAG Sept. 2019 7205011*

Insertion Layer Thickness Dependence of Magnetic and Electrical Properties for Double-CoFeB/MgO-Interface Magnetic Tunnel Junctions. *Miura, S.*, +, *TMAG July 2019 3401004*

Non-Volatile Spintronic Flip-Flop Design for Energy-Efficient SEU and DNU Resilience. *Alghareb, F.S.*, +, *TMAG March 2019 3400611*

REACT: Read/Write Error Rate Aware Coding Technique for Emerging STT-MRAM Caches. *Aliagha, E.*, +, *TMAG May 2019 3400808*

Resonant Spin-Transfer Torque Magnetoresistive Memory. *Zhu, J.*, +, *TMAG March 2019 3400407*

Simulation of Strain-Assisted Switching in Synthetic Antiferromagnetic Free Layer-Based Magnetic Tunnel Junction. *Noh, S.*, +, *TMAG April 2019 3400705*

Spin–Orbit Torque-Driven Magnetic Switching of Co/Pt–CoFeB Exchange Spring Ferromagnets. *Song, M.*, +, *TMAG Aug. 2019 1401004*

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Electromagnetic Properties and Absorption Evaluation of Processed Carbonyl Iron and MWCNT at PANI Nanocomposites in the X-Band. *Govahi, M.*, +, *TMAG March 2019 2501409*

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Electric Field Tuning of Anisotropic Magnetoresistance in Ni-Co/PMN-PT Multiferroic Heterostructure. *Wang, C.*, +, *TMAG Feb. 2019 2501103*

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A Detection Scheme With TMR Estimation Based on Multi-Layer Perceptrons for Bit Patterned Media Recording. *Han, S.*, +, *TMAG July 2019 3100704*

A Supervised Artificial Neural Network-Assisted Modeling of Magnetorheological Elastomers in Tension–Compression Mode. *Vatandoost, H.*, +, *TMAG Dec. 2019 2502008*

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Effect of Pt and FePt Layer Thickness on Microstructure and Magnetic Properties of L1<sub>0</sub> FePt Films With Perpendicular Anisotropy. *Bae, J.*, +, *TMAG Aug. 2019 3200506*

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Optimal Halbach Magnet Array Design for Portable NMR Targeting Multiphase Flow Metering Applications. *Meribout, M.*, +, *TMAG Jan. 2019 4001207*

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Using the Standard Linear Ramps of the CMS Superconducting Magnet for Measuring the Magnetic Flux Density in the Steel Flux-Return Yoke. *Klyukhin, V.*, +, *TMAG Feb. 2019 8300504*