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This index covers all technical items—papers, correspondence, reviews, etc.—that appeared in this periodical during 2021, and items from previous years that were commented upon or corrected in 2021. Departments and other items may also be covered if they have been judged to have archival value.

The Author Index contains the primary entry for each item, listed under the first author's name. The primary entry includes the coauthors' names, the title of the paper or other item, and its location, specified by the publication abbreviation, year, month, and inclusive pagination. 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 inclusive pages. Note that the item title is found only under the primary entry in the Author Index.

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- Low-Temperature Electrical Performance of PureB Photodiodes Revealing Al-Metallization-Related Degradation of Dark Currents. *Knezevic, T.*, +, *TED June 2021 2810-2817*
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- Theoretical Prediction of High-Performance Room-Temperature InGaAs/Si Single-Photon Avalanche Diode Fabricated by Semiconductor Interlayer Bonding. *Ke, S.*, +, *TED April 2021 1694-1701*

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- Design of a Fan-Out Panel-Level SiC MOSFET Power Module Using Ant Colony Optimization-Back Propagation Neural Network. *Qian, Y.*, +, *TED July 2021 3460-3467*
- Novel Method Enabling Forward and Backward Propagations in NAND Flash Memory for On-Chip Learning. *Lee, S.*, +, *TED July 2021 3365-3370*

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- A Carbon Nanotube-Based Hundred Watt-Level *Ka*-Band Backward Wave Oscillator. *Yuan, X.*, +, *TED May 2021 2467-2472*
- A Novel Coplanar Slow-Wave Structure for Millimeter-Wave BWO Applications. *Zhao, C.*, +, *TED April 2021 1924-1929*
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- Pulse Lengthening of the Microwave Generated by TM$_{02}$ Mode *Ka*-Band RBWO Operating With Low Guiding Magnetic Field. *Wang, D.*, +, *TED June 2021 3015-3020*
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- Line-Edge Roughness Effects on the Electronic Properties of Armchair Black Phosphorene Nanoribbons. *Moez, M.*, +, *TED Oct. 2021 5114-5119*

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- Hydrogenation of Mg-Doped InGaZnO Thin-Film Transistors for Enhanced Electrical Performance and Stability. *Abliz, A., TED July 2021 3379-3383*

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- Compact Multilayer Bandpass Filter Using Low-Temperature Additively Manufacturing Solution. *Li, M.*, +, *TED July 2021 3163-3169*
- Design of Coupled Slow-Wave CPW Millimeter-Wave Bandpass Filter Beyond 100 GHz in 55-nm BiCMOS Technology. *Saadi, A.A.*, +, *TED Sept. 2021 4259-4266*
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- An Easy-to-Fabricate Circular TE$_{21}$/TE$_{01}$ Mode Generator. *Ren, J.*, +, *TED Dec. 2021 6532-6537*
- Novel Rectangular-Ring Vertex Double-Bar Slow Wave Structure for High-Power High-Efficiency Traveling-Wave Tubes. *Wei, W.*, +, *TED Dec. 2021 6512-6517*

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- UV Light Detection Using Resonance Frequency of Piezoelectric Quartz Crystal. *Das, S.*, +, *TED June 2021 2791-2795*

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A Drift-Resilient Hardware Implementation of Neural Accelerators Based on Phase Change Memory Devices. *Munoz-Martin, I.*, +, *TED Dec. 2021 6076-6081*

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Heterogeneous 3-D Integration of Multitier Compute-in-Memory Accelerators: An Electrical-Thermal Co-Design. *Peng, X.*, +, *TED Nov. 2021 5598-5605*

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Interface Optimization of Passivated Er_2O_3/Al_2O_3/InP MOS Capacitors and Modulation of Leakage Current Conduction Mechanism. *Qiao, L.*, +, *TED June 2021 2899-2905*

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Investigation of Two Bits With Multistate Antifuse on nMOS Poly-Silicon Junctionless GAA OTP. *Chang, C.*, +, *TED Dec. 2021 6118-6123*

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  - Reconfigurable $MoTe_2$ Field-Effect Transistors and its Application in Compact CMOS Circuits. *Chen, J.*, +, *TED Sept. 2021 4748-4753*
  - Self-Consistent Modeling of B or N Substitution Doped Bottom Gated Graphene FET With Nonzero Bandgap. *Chandrasekar, L.*, +, *TED July 2021 3658-3664*

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Study of a High-Performance Chemoresistive Ethanol Gas Sensor Synthesized With Au Nanoparticles and an Amorphous IGZO Thin Film. *Peng, R.*, +, *TED Feb. 2021 753-760*

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- ReRAM-Based Pseudo-True Random Number Generator With High Throughput and Unpredictability Characteristics. *Tseng, P.*, +, *TED April 2021 1593-1597*

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Dielectric-Supported Staggered Dual Meander-Line Slow Wave Structure for an *E*-Band TWT. *Wang, H.*, +, *TED Jan. 2021 369-375*

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Recessed Anode AlGaN/GaN Schottky Barrier Diode for Temperature Sensor Application. *Pu, T.*, +, *TED Oct. 2021 5162-5166*

Synaptic Device With High Rectification Ratio Resistive Switching and Its Impact on Spiking Neural Network. *Kim, C.S.*, +, *TED April 2021 1610-1615*

Volatile and Nonvolatile Memory Operations Implemented in a Pt/HfO_2/Ti Memristor. *Wu, L.*, +, *TED April 2021 1622-1626*

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3-D TCAD Methodology for Simulating Double-Hysteresis Filamentary *I–V* Behavior and Holding Current in ESD Protection SCRs. *Karaca, H.*, +, *TED Sept. 2021 4214-4222*

Monolithic Integrated Normally OFF GaN Power Device With Antiparallel Lateral Schottky Barrier Controlled Schottky Rectifier. *Bi, L.*, +, *TED April 2021 1778-1783*

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Noise-Resilient DNN: Tolerating Noise in PCM-Based AI Accelerators via Noise-Aware Training. *Kariyappa, S.*, +, *TED Sept. 2021 4356-4362*

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Comparative Study of the Photoelectric and Thermal Performance Between Traditional and Chip-Scale Packaged White LED. *Chen, C.*, +, *TED April 2021 1710-1716*

Investigation of Electrical and Optical Properties of AlGaInP Red Vertical Micro-Light-Emitting Diodes With Cu/Invar/Cu Metal Substrates. *Sinha, S.*, +, *TED June 2021 2818-2822*

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Amorphous $ZnSn_xO_y$ Fabricated at Room-Temperature for Flexible pH-EGFET Sensor. *Singh, K.*, +, *TED Feb. 2021 793-797*

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Impact of the Ohmic Electrode on the Endurance of Oxide-Based Resistive Switching Memory. *Wiefels, S.*, +, *TED March 2021 1024-1030*

Redundancy

Redundancy and Analog Slicing for Precise In-Memory Machine Learning—Part II: Applications and Benchmark. *Pedretti, G.*, +, *TED Sept. 2021 4379-4383*

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A Sandwich Structure Light-Trapping Fluorescence Antenna With Large Field of View for Visible Light Communication. *Yu, B.*, +, *TED Feb. 2021 565-571*

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An Axial Output Relativistic Magnetron Fed by a Split Cathode and Magnetically Insulated by a Low-Power Solenoid. *Leopold, J.G.*, +, *TED Oct. 2021 5227-5231*

Numerical Analysis of Resonant Multipolar Instabilities in High Power Klystrons. *Cai, J.*, +, *TED July 2021 3617-3621*

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A Robust and Efficient Compact Model for Phase-Change Memory Circuit Simulations. *Chen, X.*, +, *TED Sept. 2021 4404-4410*

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A Novel Program Operation Scheme With Negative Bias in 3-D NAND Flash Memory. *Sim, J.*, +, *TED Dec. 2021 6112-6117*

Electrical and Reliability Characteristics of FinFETs With High-*k* Gate Stack and Plasma Treatments. *Li, Y.*, +, *TED Jan. 2021 4-9*

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Evaluation of IGBT Module Remaining Lifetime in Wind Power Converters Considering Impacts of Failure Location. *Lai, W.*, +, *TED April 2021 1810-1818*

Fabrication of Fast and Reliable Pulse Laser-Ablated ZnO Nanoparticles-Based Formaldehyde Sensor. *Das, S.*, +, *TED April 2021 1872-1877*

High-Resistance State Reduction During Initial Cycles of AlO_xN_y-Based RRAM. *Duan, Y.*, +, *TED Nov. 2021 5606-5611*

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