

# 2013 Index

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This index covers all technical items — papers, correspondence, reviews, etc. — that appeared in this periodical during 2013, and items from previous years that were commented upon or corrected in 2013. 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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- Boschke, R.**, see Mueller, S., *TED Dec. 2013 4199-4205*
- Bothe, K. M.**, von Hauff, P. A., Afshar, A., Foroughi-Abari, A., Cadien, K. C., and Barlage, D. W., Electrical Comparison of HfO<sub>2</sub> and ZrO<sub>2</sub> Gate Dielectrics on GaN; *TED Dec. 2013 4119-4124*
- Bouamrane, F.**, see Paoloni, C., *TED March 2013 1236-1243*
- Boulais, K. A.**, Santiago, F., Wick, P. L., Mejeur, J. M., Rayms-Keller, A., Lowry, M. S., Long, K. J., and Sessions, W. D., Circuit Analysis of Photo-sensitive Capacitance in Semi-Insulating GaAs; *TED Feb. 2013 793-798*
- Bour, D.**, see Kizilyalli, I. C., *TED Oct. 2013 3067-3070*
- Bourdelle, K. K.**, see Brown, A. R., *TED Nov. 2013 3611-3617*
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- Bradshaw, G. K.**, see Carlin, C. Z., *TED Aug. 2013 2532-2536*
- Breglio, G.**, Irace, A., Napoli, E., Riccio, M., and Spirito, P., Experimental Detection and Numerical Validation of Different Failure Mechanisms in IGBTs During Unclamped Inductive Switching; *TED Feb. 2013 563-570*
- Brouk, I.**, see Nemirovsky, Y., *TED May 2013 1575-1583*
- Brouk, I.**, see Leitner, T., *TED June 2013 1982-1988*
- Brown, A. R.**, Daval, N., Bourdelle, K. K., Nguyen, B.-Y., and Asenov, A., Comparative Simulation Analysis of Process-Induced Variability in Nanoscale SOI and Bulk Trigate FinFETs; *TED Nov. 2013 3611-3617*
- Brown, A. R.**, see Wang, X., *TED Aug. 2013 2485-2492*
- Brown, D. F.**, see Shinohara, K., *TED Oct. 2013 2982-2996*
- Brox-Nilsen, C.**, Jin, J., Luo, Y., Bao, P., and Song, A. M., Sputtered ZnO Thin-Film Transistors With Carrier Mobility Over 50 cm<sup>2</sup>/Vs; *TED Oct. 2013 3424-3429*
- Bruckner, P.**, see Schwantuschke, D., *TED Oct. 2013 3112-3118*
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- Busacca, A.**, see Adamo, G., *TED Nov. 2013 3718-3725*
- Buttay, C.**, Ouaida, R., Morel, H., Bergogne, D., Raynaud, C., and Morel, F., Thermal Stability of Silicon Carbide Power JFETs; *TED Dec. 2013 4191-4198*
- Buttgen, B.**, see Sarkar, M., *TED March 2013 1154-1161*
- Byun, C.-W.**, Reddy, A. M., Son, S. W., Lee, Y. W., and Joo, S. K., Channel Width Splitting Effect on Driving Characteristics of Silicide Seed-Induced Laterally Crystallized Poly-Si Thin-Film Transistors; *TED April 2013 1390-1396*

C

- Cadien, K. C.**, see Bothe, K. M., *TED Dec. 2013 4119-4124*
- Cai, J.**, Han, D., Geng, Y., Wang, W., Wang, L., Zhang, S., and Wang, Y., High-Performance Transparent AZO TFTs Fabricated on Glass Substrate; *TED July 2013 2432-2435*
- Cai, J.**, see Muralidhar, R., *TED March 2013 1276-1278*
- Cai, J. Y.**, see Luo, X. R., *TED Sept. 2013 2840-2846*
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- Calloni, A.**, see Ghetti, A., *TED Oct. 2013 3291-3297*
- Camarchia, V.**, Rubio, J. J. M., Pirola, M., Quaglia, R., Colantonio, P., Giannini, F., Giofre, R., Piazzon, L., Emanuelsson, T., and Wegeland, T., High-Efficiency 7 GHz Doherty GaN MMIC Power Amplifiers for Microwave Backhaul Radio Links; *TED Oct. 2013 3592-3595*
- Camuso, G.**, Napoli, E., Pathirana, V., Udugampola, N., Hsieh, A. P.-S., Trajkovic, T., and Udre, F., Effect of Bandgap Narrowing on Performance of Modern Power Devices; *TED Dec. 2013 4185-4190*
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- Cao, Y.**, see Velamala, J. B., *TED Nov. 2013 3645-3654*
- Carlin, C. Z.**, Bradshaw, G. K., Samberg, J. P., Colter, P. C., and Bedair, S. M., Minority Carrier Transport and Their Lifetime in InGaAs/GaAsP Multiple Quantum Well Structures; *TED Aug. 2013 2532-2536*
- Carlin, J.-F.**, see Tirelli, S., *TED Oct. 2013 3091-3098*
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- Cerdeira, A.**, see Chang Hyun Kim, *TED March 2013 1136-1141*
- Ceyhan, A.**, and Naeemi, A., Cu Interconnect Limitations and Opportunities for SWNT Interconnects at the End of the Roadmap; *TED Jan. 2013 374-382*
- Ceyhan, A.**, and Naeemi, A., Cu/Low-*k* Interconnect Technology Design and Benchmarking for Future Technology Nodes; *TED Dec. 2013 4041-4047*
- Cha, D.**, see Mejia, I., *TED Jan. 2013 327-332*
- Chakraborty, P. S.**, Moen, K. A., and Cressler, J. D., An Investigation on the Optimization and Scaling of Complementary SiGe HBTs; *TED Jan. 2013 34-41*
- Chan, B. T.**, see Belmonte, A., *TED Nov. 2013 3690-3695*
- Chan, M.**, see Zhang, L., *TED Oct. 2013 3527-3533*
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- Chandrakasan, A. P.**, see Lee, K.-J., *TED Jan. 2013 383-390*
- Chang Hyun Kim, Castro-Carranza, A.**, Estrada, M., Cerdeira, A., Bonnassieux, Y., Horowitz, G., and Iniguez, B., A Compact Model for Organic

- Field-Effect Transistors With Improved Output Asymptotic Behaviors; *TED March 2013 1136-1141*
- Chang, C.-P.**, see Ho, B., *TED Jan. 2013 153-158*
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- Chang, E. Y.**, see Nguyen, H. Q., *TED Jan. 2013 235-240*
- Chang, H.-C.**, see Trinh, H. D., *TED May 2013 1555-1560*
- Chang, H.-Y.**, Adams, B., Chien, P.-Y., Li, J., and Woo, J. C. S., Improved Subthreshold and Output Characteristics of Source-Pocket Si Tunnel FET by the Application of Laser Annealing; *TED Jan. 2013 92-96*
- Chang, J.-F.**, see Hsieh, T.-Y., *TED May 2013 1681-1688*
- Chang, J.-Y.**, Yen, S.-H., Chang, Y.-A., Liou, B.-T., and Kuo, Y.-K., Numerical Investigation of High-Efficiency InGaN-Based Multijunction Solar Cell; *TED Dec. 2013 4140-4145*
- Chang, K. E.**, see Kim, J. J., *TED Nov. 2013 3683-3689*
- Chang, L.**, see Rajendran, B., *TED Jan. 2013 246-253*
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- Chang, S.-J.**, see Hsiao, C.-H., *TED June 2013 1905-1910*
- Chang, S.-J.**, Duan, B.-G., Liu, C.-W., Hsiao, C.-H., Young, S.-J., and Huang, C.-S., UV Enhanced Indium-Doped ZnO Nanorod Field Emitter; *TED Nov. 2013 3901-3906*
- Chang, S.-J.**, see Hou, J.-L., *TED March 2013 1178-1182*
- Chang, T.-C.**, see Hsieh, T.-Y., *TED May 2013 1681-1688*
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- Chang, T.-L.**, see Wang, C.-P., *TED May 2013 1668-1672*
- Chang, W.-T.**, and Lin, Y.-S., Performance Dependence on Width-to-Length Ratio of Si Cap/SiGe Channel MOSFETs; *TED Nov. 2013 3663-3668*
- Chang, Y.-A.**, see Chang, J.-Y., *TED Dec. 2013 4140-4145*
- Chang, Y.-C.**, Wei, C.-Y., Chang, Y.-Y., Yang, T.-Y., and Wang, Y.-H., High-Mobility Pentacene-Based Thin-Film Transistors With Synthesized Strontium Zirconate Nickelate Gate Insulators; *TED Dec. 2013 4234-4239*
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- Charbon, E.**, see Fishburn, M. W., *TED March 2013 1028-1033*
- Charbuillet, C.**, see Dormieu, B., *TED Jan. 2013 13-19*
- Chasin, A.**, Nag, M., Bhoolakam, A., Myn, K., Steudel, S., Schols, S., Genoe, J., Gielen, G., and Heremans, P., Gigahertz Operation of a-IGZO Schottky Diodes; *TED Oct. 2013 3407-3412*
- Chattopadhyay, A.**, see Mallik, A., *TED March 2013 935-943*
- Chaudhary, A.**, and Mahapatra, S., A Physical and SPICE Mobility Degradation Analysis for NBTI; *TED July 2013 2096-2103*
- Chauhan, Y. S.**, see Khandelwal, S., *TED Feb. 2013 714-718*
- Chauhan, Y. S.**, see Khandelwal, S., *TED Oct. 2013 3216-3222*
- Chen, A.**, A Comprehensive Crossbar Array Model With Solutions for Line Resistance and Nonlinear Device Characteristics; *TED April 2013 1318-1326*
- Chen, B.**, see Deng, Y., *TED Feb. 2013 719-726*
- Chen, B.**, see Gao, B., *TED April 2013 1379-1383*
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- Chen, C.**, see Ruan, Y., *TED Nov. 2013 3741-3745*
- Chen, C.**, see Song, W., *TED Jan. 2013 494-497*
- Chen, C. H.**, Liao, M.-H., Chang, L. C., Kao, S. C., Yu, M.-Y., Liu, G.-H., and Huang, M.-C., Relaxation of Residual Stress in Bent GaN Film on Sapphire Substrate by Laser Treatment With an Optimized Surface Structure Design; *TED Feb. 2013 767-770*
- Chen, C.-C.**, see Liou, J.-K., *TED July 2013 2282-2289*
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- Chen, C.-W.**, see Chung, C.-T., *TED June 2013 1878-1883*
- Chen, C.-W.**, Chung, C.-T., Tzeng, J.-Y., Li, P.-H., Chang, P.-S., Chien, C.-H., and Luo, G.-L., Germanium N and P Multifin Field-Effect Transistors With High-Performance Germanium (Ge)  $p^+/n$  and  $n^+/p$  Heterojunctions Formed on Si Substrate; *TED April 2013 1334-1341*
- Chen, C.-Y.**, see Yan, C.-R., *TED March 2013 992-997*
- Chen, D.**, Jacobson, Z. A., and Liu, T.-J. K., Raised-Source/Drain Double-Gate Transistor Design Optimization for Low Operating Power; *TED March 2013 1040-1045*
- Chen, D.**, Zhang, C., Wang, Z., Zhang, J., Feng, Q., Xu, S., Zhou, X., and Hao, Y., Performance Comparison of Conventional and Inverted Organic Bulk Heterojunction Solar Cells From Optical and Electrical Aspects; *TED Jan. 2013 451-457*
- Chen, D.**, see Peng, Y., *TED March 2013 1208-1212*
- Chen, D. G.**, see Tang, F., *TED Aug. 2013 2561-2566*
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- Chen, H.-B.**, see Han, M.-H., *TED June 2013 1807-1813*
- Chen, H.-H.**, see Yan, C.-R., *TED March 2013 992-997*
- Chen, H.-P.**, Ahn, J., McIntyre, P. C., and Taur, Y., Comparison of Bulk-Oxide Trap Models: Lumped Versus Distributed Circuit; *TED Nov. 2013 3920-3924*
- Chen, H.-Y.**, Hsu, S.-Y., and Chen, K.-N., Electrical Performance and Reliability Investigation of Cosputtered Cu/Ti Bonded Interconnects; *TED Oct. 2013 3521-3526*
- Chen, J.**, Wang, M., Zhang, D., Lv, P., and Wong, M., Schottky Barrier Controlled Conduction in Poly-Si TFTs With Metal Source and Drain; *TED June 2013 1958-1964*
- Chen, J.**, see Zhang, Y., *TED Aug. 2013 2677-2681*
- Chen, J.**, see Jiang, X., *TED Nov. 2013 3669-3675*
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- Chen, M.-C.**, see Hou, J.-L., *TED March 2013 1178-1182*
- Chen, M.-J.**, Lee, W.-H., and Huang, Y.-H., Error-Free Matthiessen's Rule in the MOSFET Universal Mobility Region; *TED Feb. 2013 753-758*
- Chen, M.-J.**, Lee, C.-C., and Chen, W.-L., Effect of Strained  $k \cdot p$  Deformation Potentials on Hole Inversion-Layer Mobility; *TED April 2013 1365-1371*
- Chen, P. S.**, see Shinohara, K., *TED Oct. 2013 2982-2996*
- Chen, Q.**, Huang, C., Wu, D., Tan, Z., and Wang, Z., Ultralow-Capacitance Through-Silicon Vias With Annular Air-Gap Insulation Layers; *TED April 2013 1421-1426*
- Chen, S.**, see Ruan, Y., *TED Nov. 2013 3741-3745*
- Chen, S.**, see Pan, A., *TED Sept. 2013 2712-2720*
- Chen, T. P.**, Young, S. J., Chang, S. J., Hsiao, C. H., and Wu, S. L., Photoelectrical and Low-Frequency Noise Characteristics of ZnO Nanorod Photodetectors Prepared on Flexible Substrate; *TED Jan. 2013 229-234*
- Chen, T.-C.**, see Hsieh, T.-Y., *TED May 2013 1681-1688*
- Chen, T.-T.**, see Wang, C.-P., *TED May 2013 1668-1672*
- Chen, T.-T.**, Fu, H.-K., Dai, C.-F., Wang, C.-P., Chu, C.-W., and Chou, P.-T., Low-Frequency Noise Analysis of Electrostatic Discharge Tolerance of InGaN Light-Emitting Diodes; *TED Nov. 2013 3794-3798*
- Chen, W.**, see Si, J., *TED Oct. 2013 3223-3229*
- Chen, W.**, see Wang, Z., *TED May 2013 1607-1612*
- Chen, W.**, Wang, M., Zhou, Y., and Wong, M., Degradation of Polycrystalline Silicon TFT CMOS Inverters under AC Operation; *TED Jan. 2013 295-300*
- Chen, W.**, see Zhou, Q., *TED March 2013 1075-1081*
- Chen, W.-L.**, see Chen, M.-J., *TED April 2013 1365-1371*
- Chen, X.**, see Kong, M., *TED Oct. 2013 3508-3514*
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- Chen, X.**, see Cheng, J., *TED July 2013 2428-2431*
- Chen, X.**, see Kong, M., *TED July 2013 2318-2323*
- Chen, Y.**, Li, Q., Kuang, W., Hu, K., and Tolner, H., Exoemission Properties of PDP Protective Layers; *TED Oct. 2013 3485-3492*
- Chen, Y. Y.**, Goux, L., Clima, S., Govoreanu, B., Degraeve, R., Kar, G. S., Fantini, A., Groeseneken, G., Wouters, D. J., and Jurczak, M., Endurance/Retention Trade-off on HfO<sub>2</sub>/Metal Cap 1T1R Bipolar RRAM; *TED March 2013 1114-1121*

- Chen, Y.-C.**, see Wu, J.-L., *TED July 2013* 2324-2330
- Chen, Y.-C.**, see Hsieh, T.-Y., *TED May 2013* 1681-1688
- Chen, Y.-N.**, Fan, M.-L., Hu, V.-H., Su, P., and Chuang, C.-T., Design and Analysis of Robust Tunneling FET SRAM; *TED March 2013* 1092-1098
- Chen, Y.-N.**, see Fan, M.-L., *TED June 2013* 2038-2044
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- Cheng, B.**, see Yang, Y., *TED Feb. 2013* 739-745
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- Cheng, B.**, see Gong, X., *TED May 2013* 1640-1648
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- Cheng, H. H.**, see Wu, K. Y., *TED April 2013* 1298-1301
- Cheng, J.**, and Chen, X., New Planar Junction Edge Termination Technique Using OPTVLD With a Buried Layer; *TED July 2013* 2428-2431
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- Cheng, R.**, see Ding, Y., *TED Sept. 2013* 2703-2711
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- Chernyavskiy, I. A.**, see Antonsen, T. M., *TED Sept. 2013* 2906-2911
- Cheung, Y. F.**, and Choi, H. W., Color-Tunable and Phosphor-Free White-Light Multilayered Light-Emitting Diodes; *TED Jan. 2013* 333-338
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- Chew, K. W. J.**, see Loo, X. S., *TED Sept. 2013* 2892-2899
- Chew, W. C.**, see Huang, J. Z., *TED July 2013* 2111-2119
- Chi, D.**, see Dalapati, G. K., *TED Jan. 2013* 192-199
- Chi, K.-L.**, Yeh, S.-T., Yeh, Y.-H., Lin, K.-Y., Shi, J.-W., Wu, Y.-R., Lee, M. L., and Sheu, J.-K., GaN-Based Dual-Color LEDs With p-Type Insertion Layer for Controlling the Ratio of Two-Color Intensities; *TED Sept. 2013* 2821-2826
- Chi, S.**, see Xiao, X., *TED Dec. 2013* 4159-4164
- Chia, C. K.**, and Dalapati, G. K., Monte Carlo Simulation of Hot Carrier Transport in Heterogeneous Ge/Al<sub>x</sub>Ga<sub>1-x</sub>As (0 ≤ x ≤ 0.8) Multilayer Avalanche Photodiodes; *TED Oct. 2013* 3435-3441
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- Chiah, S. B.**, Zhou, X., and Yuan, L., Compact Zero-Temperature Coefficient Modeling Approach for MOSFETs Based on Unified Regional Modeling of Surface Potential; *TED July 2013* 2164-2170
- Chiarella, T.**, see Lee, J. W., *TED Sept. 2013* 2960-2962
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- Chien, C.-H.**, see Chen, C.-W., *TED April 2013* 1334-1341
- Chien, F.-T.**, see Chiu, H.-C., *TED Nov. 2013* 3877-3882
- Chien, F.-T.**, Chen, C.-W., Lee, T.-C., Wang, C.-L., Cheng, C.-H., Kang, T.-K., and Chiu, H.-C., A Novel Self-Aligned Double-Channel Polysilicon Thin-Film Transistor; *TED Feb. 2013* 799-804
- Chien, P.-Y.**, see Chang, H.-Y., *TED Jan. 2013* 92-96
- Chin, H.-C.**, see Liu, B., *TED June 2013* 1852-1860
- Chini, A.**, Soci, F., Meneghini, M., Meneghesso, G., and Zanoni, E., Deep Levels Characterization in GaN HEMTs—Part II: Experimental and Numerical Evaluation of Self-Heating Effects on the Extraction of Traps Activation Energy; *TED Oct. 2013* 3176-3182
- Chini, A.**, see Zanoni, E., *TED Oct. 2013* 3119-3131
- Chini, A.**, see Bisi, D., *TED Oct. 2013* 3166-3175
- Chiu, H.-C.**, see Chien, F.-T., *TED Feb. 2013* 799-804
- Chiu, H.-C.**, Yang, C.-W., Wang, H.-C., Huang, F.-H., Kao, H.-L., and Chien, F.-T., Characteristics of AlGaIn/GaN HEMTs With Various Field-Plate and Gate-to-Drain Extensions; *TED Nov. 2013* 3877-3882
- Chiu, J.-P.**, Liu, Y.-H., Hsieh, H.-D., Li, C.-W., Chen, M.-C., and Wang, T., Statistical Characterization and Modeling of the Temporal Evolutions of  $\Delta V_t$  Distribution in NBTI Recovery in Nanometer MOSFETs; *TED March 2013* 978-984
- Chiu, Y. S.**, see Trinh, H. D., *TED May 2013* 1555-1560
- Chmielowska, M.**, see Rennesson, S., *TED Oct. 2013* 3105-3111
- Cho, E. N.**, see Park, S., *TED May 2013* 1689-1694
- Cho, E.-S.**, see Bae, M., *TED Oct. 2013* 3465-3473
- Cho, G.**, see Aritome, S., *TED April 2013* 1327-1333
- Cho, K. H.**, see Najam, F., *TED Aug. 2013* 2457-2463
- Cho, M.**, see Franco, J., *TED Jan. 2013* 396-404
- Cho, M.**, Roussel, P., Kaczer, B., Degraeve, R., Franco, J., Aoulaiche, M., Chiarella, T., Kauerauf, T., Horiguchi, N., and Groeseneken, G., Channel Hot Carrier Degradation Mechanism in Long/Short Channel *n*-FinFETs; *TED Dec. 2013* 4002-4007
- Cho, M. J.**, see Lee, J. W., *TED Sept. 2013* 2960-2962
- Cho, S.**, Kang, I. M., and Kim, K. R., More Accurate and Reliable Extraction of Tunneling Resistance in Tunneling FET and Verification in Small-Signal Circuit Operation; *TED Oct. 2013* 3318-3324
- Cho, Y.**, see Kim, J.-M., *TED May 2013* 1673-1680
- Choi, D.-Y.**, see Sohn, C.-W., *TED April 2013* 1302-1309
- Choi, E. S.**, see Aritome, S., *TED April 2013* 1327-1333
- Choi, G.**, see Oh, S.-I., *TED Aug. 2013* 2537-2541
- Choi, H. C.**, see Mun, B.-J., *TED Oct. 2013* 3430-3434
- Choi, H. W.**, see Cheung, Y. F., *TED Jan. 2013* 333-338
- Choi, I.**, see Aritome, S., *TED April 2013* 1327-1333
- Choi, J.**, see Aritome, S., *TED April 2013* 1327-1333
- Choi, J.-H.**, see Fayrushin, A., *TED June 2013* 2031-2037
- Choi, J.-H.**, see Rha, S. H., *TED March 2013* 1128-1135
- Choi, J.-M.**, see Woo, J.-H., *TED Sept. 2013* 2951-2955
- Choi, R.**, see Kim, J. J., *TED Nov. 2013* 3683-3689
- Choi, S.**, Heller, E. R., Dorsey, D., Vetry, R., and Graham, S., The Impact of Bias Conditions on Self-Heating in AlGaIn/GaN HEMTs; *TED Jan. 2013* 159-162
- Choi, S.**, Heller, E. R., Dorsey, D., Vetry, R., and Graham, S., Thermometry of AlGaIn/GaN HEMTs Using Multispectral Raman Features; *TED June 2013* 1898-1904
- Choi, S.-J.**, see Moon, D.-I., *TED April 2013* 1355-1360
- Choi, S.-J.**, see Duarte, J. P., *TED Feb. 2013* 848-855
- Choi, S.-J.**, see Duarte, J. P., *TED Feb. 2013* 840-847
- Choi, W.-Y.**, see Lee, M.-J., *TED March 2013* 998-1004
- Choi, Y.-K.**, see Duarte, J. P., *TED Feb. 2013* 840-847
- Choi, Y.-K.**, see Duarte, J. P., *TED Feb. 2013* 848-855
- Choi, Y.-K.**, see Moon, D.-I., *TED April 2013* 1355-1360
- Choi, Y.-K.**, see Woo, J.-H., *TED Sept. 2013* 2951-2955
- Chopra, S.**, see Ho, B., *TED Jan. 2013* 153-158
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- Chou, B.-Y.**, see Liu, H.-Y., *TED Jan. 2013* 213-220
- Chou, C.-H.**, see Hsieh, T.-Y., *TED May 2013* 1681-1688
- Chou, H.-L.**, Huang, C.-F., and Gong, J., Dimension Dependence of Unusual HCl-Induced Degradation on N-Channel High-Voltage DEMOSFET; *TED May 2013* 1723-1729
- Chou, P.-C.**, see Liou, J.-K., *TED July 2013* 2282-2289
- Chou, P.-H.**, see Wang, H.-L., *TED March 2013* 1088-1091
- Chou, P.-T.**, see Wang, C.-P., *TED May 2013* 1668-1672
- Chou, P.-T.**, see Chen, T.-T., *TED Nov. 2013* 3794-3798
- Chou, S.-H.**, Fan, M.-L., and Su, P., Investigation and Comparison of Work Function Variation for FinFET and UTB SOI Devices Using a Voronoi Approach; *TED April 2013* 1485-1489
- Chou, T. M.**, see Saunier, P., *TED Oct. 2013* 3099-3104
- Chow, T. P.**, see Takashima, S., *TED Oct. 2013* 3025-3031
- Chow, T. P.**, see Li, Z., *TED Oct. 2013* 3230-3237
- Chowdhury, S.**, and Mishra, U. K., Lateral and Vertical Transistors Using the AlGaIn/GaN Heterostructure; *TED Oct. 2013* 3060-3066
- Christie, L.**, see Sumathy, M., *TED May 2013* 1769-1775
- Chu, A.-K.**, see Hsieh, T.-Y., *TED May 2013* 1681-1688
- Chu, C.-W.**, see Chen, T.-T., *TED Nov. 2013* 3794-3798
- Chu, L.-W.**, see Lin, C.-Y., *TED Nov. 2013* 3625-3631
- Chu, S.-Y.**, see Wu, J.-L., *TED July 2013* 2324-2330
- Chua, C.**, and Aditya, S., A 3-D U-Shaped Meander-Line Slow-Wave Structure for Traveling-Wave-Tube Applications; *TED March 2013* 1251-1256
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- Chuang, C.-T.**, see Hu, V. P.-H., *TED Jan. 2013* 147-152
- Chuang, C.-T.**, see Chen, Y.-N., *TED March 2013* 1092-1098
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- Chuang, C.-T.**, see Fan, M.-L., *TED June 2013 2038-2044*
- Chuang, M.-Y.**, see Reggiani, S., *TED Feb. 2013 691-698*
- Chui, C. O.**, see Leung, G., *TED Oct. 2013 3277-3284*
- Chui, C. O.**, see Wang, S., *TED July 2013 2186-2193*
- Chui, C. O.**, see Shih, K.-H., *TED May 2013 1613-1618*
- Chui, C. O.**, see Pan, A., *TED Sept. 2013 2712-2720*
- Chui, C. O.**, see Leung, G., *TED Jan. 2013 84-91*
- Chung, C.**, see Fayrushin, A., *TED June 2013 2031-2037*
- Chung, C.-T.**, Chen, C.-W., Lin, J.-C., Wu, C.-C., Chien, C.-H., Luo, G.-L., Kei, C.-C., and Hsiao, C.-N., Epitaxial Germanium on SOI Substrate and Its Application of Fabricating High  $I_{ON}/I_{OFF}$  Ratio Ge FinFETs; *TED June 2013 1878-1883*
- Chung, C.-T.**, see Chen, C.-W., *TED April 2013 1334-1341*
- Chung, S.**, see Aritome, S., *TED April 2013 1327-1333*
- Chung, W.-C.**, see Hsieh, T.-Y., *TED May 2013 1681-1688*
- Chung, Y. J.**, see Rha, S. H., *TED March 2013 1128-1135*
- Ciccognani, W.**, see Colangeli, S., *TED Oct. 2013 3238-3248*
- Cil, K.**, Dirisaglik, F., Adnane, M., King, A., Faracis, A., Akbulut, M. B., Zhu, Y., Lam, C., Gokirmak, A., and Silva, H., Electrical Resistivity of Liquid  $Ge_2Sb_2Te_5$  Based on Thin-Film and Nanoscale Device Measurements; *TED Jan. 2013 433-437*
- Ciocchini, N.**, Cassinerio, M., Fugazza, D., and Ielmini, D., Evidence for Non-Arrhenius Kinetics of Crystallization in Phase Change Memory Devices; *TED Nov. 2013 3767-3774*
- Claeys, C.**, see dos Santos, S. D., *TED Jan. 2013 444-450*
- Claeys, C.**, see Der Agopian, P. G., *TED Aug. 2013 2493-2497*
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- Clima, S.**, see Govoreanu, B., *TED Aug. 2013 2471-2478*
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- Cody, N. W.**, see Damrongplisit, N., *TED May 2013 1790-1793*
- Cohen, S.**, see Cohen-Elias, D., *TED Jan. 2013 163-170*
- Cohen-Elias, D.**, Gavrilov, A., Cohen, S., Kraus, S., and Ritter, D., InP DHBTs Having Lateral and Sidewall Collector Schottky Contacts; *TED Jan. 2013 163-170*
- Colace, L.**, see Sorianello, V., *TED June 2013 1995-2000*
- Colalongo, L.**, see Torricelli, F., *TED June 2013 1892-1897*
- Colangeli, S.**, Bentini, A., Ciccognani, W., Limiti, E., and Nanni, A., GaN-Based Robust Low-Noise Amplifiers; *TED Oct. 2013 3238-3248*
- Colantonio, P.**, see Camarchia, V., *TED Oct. 2013 3592-3595*
- Collaert, N.**, see Walke, A. M., *TED Dec. 2013 4065-4072*
- Collaert, N.**, see Walke, A. M., *TED Dec. 2013 4057-4064*
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- Compagnoni, C. M.**, see Ghetti, A., *TED Oct. 2013 3291-3297*
- Cook, A. M.**, see Joye, C. D., *TED Jan. 2013 506-509*
- Cook, A. M.**, Joye, C. D., Kimura, T., Wright, E. L., and Calame, J. P., Broadband 220-GHz Vacuum Window for a Traveling-Wave Tube Amplifier; *TED March 2013 1257-1259*
- Cooper, D.**, see Coquand, R., *TED Feb. 2013 727-732*
- Cooper, D.**, see Villalon, A., *TED Dec. 2013 4079-4084*
- Cooper, D.**, see Villalon, A., *TED May 2013 1568-1574*
- Cooper, J. A.**, see Penumatcha, A. V., *TED March 2013 923-926*
- Coppard, R.**, see Guerin, M., *TED June 2013 2045-2051*
- Coquand, R.**, Casse, M., Barraud, S., Cooper, D., Maffini-Alvaro, V., Samson, M.-P., Monfray, S., Boeuf, F., Ghibaudo, G., Faynot, O., and Poiroux, T., Strain-Induced Performance Enhancement of Trigate and Omega-Gate Nanowire FETs Scaled Down to 10-nm Width; *TED Feb. 2013 727-732*
- Cordier, Y.**, see Defrance, N., *TED March 2013 1054-1059*
- Cordier, Y.**, see Renneson, S., *TED Oct. 2013 3105-3111*
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- Cristoloveanu, S.**, see Villalon, A., *TED Dec. 2013 4079-4084*
- Crupi, F.**, Albano, D., Alioto, M., Franco, J., Selmi, L., Mitard, J., and Groeseneken, G., Impact of High-Mobility Materials on the Performance of Near- and Sub-Threshold CMOS Logic Circuits; *TED March 2013 972-977*
- Cui, Q.**, Si, M., Sporea, R. A., and Guo, X., Simple Noise Margin Model for Optimal Design of Unipolar Thin-Film Transistor Logic Circuits; *TED May 2013 1782-1785*
- Curutchet, A.**, see Khandelwal, S., *TED Oct. 2013 3216-3222*

## D

**Delayer, V.**, see Hubert, Q., *TED July 2013 2268-2275*

**Delker, C. J.**, Zi, Y., Yang, C., and Janes, D. B., Low-Frequency Noise Contributions From Channel and Contacts in InAs Nanowire Transistors; *TED Sept. 2013 2900-2905*

**Della Corte, F. G.**, and Rao, S., Use of Amorphous Silicon for Active Photonic Devices; *TED May 2013 1495-1505*

**Delprat, D.**, see Liu, B., *TED July 2013 2135-2141*

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**Deng, S.**, see Li, D., *TED Sept. 2013 2924-2930*

**Deng, S.**, see Zhang, Y., *TED Aug. 2013 2677-2681*

**Deng, T.**, Chen, Z., and Zhang, Y. P., Coupling Mechanisms and Effects Between On-Chip Antenna and Inductor or Coplanar Waveguide; *TED Jan. 2013 20-27*

**Deng, W.**, see Xiao, X., *TED Aug. 2013 2687-2690*

**Deng, W.**, see Xiao, X., *TED Dec. 2013 4159-4164*

**Deng, Y.**, Huang, P., Chen, B., Yang, X., Gao, B., Wang, J., Zeng, L., Du, G., Kang, J., and Liu, X., RRAM Crossbar Array With Cell Selection Device: A Device and Circuit Interaction Study; *TED Feb. 2013 719-726*

**Deng, Y. X.**, see Huang, P., *TED Dec. 2013 4090-4097*

**Deng, Z.**, see Zhang, N., *TED Aug. 2013 2648-2655*

**Dentoni Litta, E.**, Hellstrom, P.-E., Henkel, C., and Ostling, M., Thulium Silicate Interfacial Layer for Scalable High-k/Metal Gate Stacks; *TED Oct. 2013 3271-3276*

**Der Agopian, P. G.**, Martino, J. A., Rooyackers, R., Vandooren, A., Simoen, E., and Claeys, C., Experimental Comparison Between Trigate p-TFET and p-FinFET Analog Performance as a Function of Temperature; *TED Aug. 2013 2493-2497*

**der Maur, M. A.**, and Di Carlo, A., AlGaIn/GaN HEMT Degradation: An Electro-Thermo-Mechanical Simulation; *TED Oct. 2013 3142-3148*

**Desai, S.**, see Mahapatra, S., *TED March 2013 901-916*

**DeSalvo, B.**, see Suri, M., *TED July 2013 2402-2409*

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**Di Carlo, A.**, see Auf der Maur, M., *TED Jan. 2013 171-177*

**Di Carlo, A.**, see Paoloni, C., *TED March 2013 1236-1243*

**Di Lecce, V.**, Grassi, R., Gnudi, A., Gnani, E., Reggiani, S., and Baccarani, G., Graphene-Base Heterojunction Transistor: An Attractive Device for Terahertz Operation; *TED Dec. 2013 4263-4268*

**Di Lecce, V.**, Grassi, R., Gnudi, A., Gnani, E., Reggiani, S., and Baccarani, G., Graphene Base Transistors: A Simulation Study of DC and Small-Signal Operation; *TED Oct. 2013 3584-3591*

**Di, S.**, see Li, C., *TED Nov. 2013 3655-3662*

**Diaz, C. H.**, see Trinh, H. D., *TED May 2013 1555-1560*

**Dillen, D. C.**, see Liu, E.-S., *TED Dec. 2013 4027-4033*

**Ding, X.-R.**, see Li, Z.-T., *TED April 2013 1397-1403*

**Ding, Y.**, Cheng, R., Koh, S.-M., Liu, B., and Yeo, Y.-C., Phase Change Liner Stressor for Strain Engineering of P-Channel FinFETs; *TED Sept. 2013 2703-2711*

**Dirisaglik, F.**, see Cil, K., *TED Jan. 2013 433-437*

**Disney, D.**, see Kizilyalli, I. C., *TED Oct. 2013 3067-3070*

**Dixit, A.**, see Agarwal, S., *TED Sept. 2013 2728-2733*

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**Dominguez, C.**, see Gonzalez-Fernandez, A. A., *TED June 2013 1971-1974*

**Doolittle, W. A.**, see Greenlee, J. D., *TED Jan. 2013 427-432*

**Dormieu, B.**, Scheer, P., Charbuillet, C., Jaouen, H., and Danneville, F., Revisited RF Compact Model of Gate Resistance Suitable for High-K/Metal Gate Technology; *TED Jan. 2013 13-19*

**Dorsey, D.**, see Choi, S., *TED Jan. 2013 159-162*

**Dorsey, D.**, see Choi, S., *TED June 2013 1898-1904*

**dos Santos, S. D.**, Nicoletti, T., Martino, J. A., Aoulaiche, M., Veloso, A., Jurczak, M., Simoen, E., and Claeys, C., On the Variability of the Front/Back-Channel LF Noise in UTBOX SOI nMOSFETs; *TED Jan. 2013 444-450*

**Douvry, Y.**, see Defrance, N., *TED March 2013 1054-1059*

**Dowling, K.**, see Hsu, Y.-Y., *TED July 2013 2338-2345*

**Du, C. H.**, Chang, T.-H., Liu, P. K., Huang, Y. C., Jiang, P. X., Xu, S. X., Geng, Z. H., Hao, B. L., Xiao, L., Liu, G. F., Li, Z. D., and Shi, S. H., Design of a W-band Gyro-TWT Amplifier With a Lossy Ceramic-Loaded Circuit; *TED July 2013 2388-2394*

**Du, C. H.**, see Xu, S. X., *TED Oct. 2013 3570-3575*

**Du, C.-H.**, see Liu, Q.-L., *TED April 2013 1463-1468*

**Du, G.**, see Huang, P., *TED Dec. 2013 4090-4097*

**Du, G.**, see Deng, Y., *TED Feb. 2013 719-726*

**Du, J.**, see Zhang, Y., *TED Aug. 2013 2677-2681*

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**Du, X.**, see Hou, Y., *TED Oct. 2013 3474-3477*

**Duan, B.-G.**, see Chang, S.-J., *TED Nov. 2013 3901-3906*

**Duan, M.**, Zhang, J. F., Ji, Z., Zhang, W. D., Kaczer, B., Schram, T., Ritzenhaller, R., Groeseneken, G., and Asenov, A., New Analysis Method for Time-Dependent Device-To-Device Variation Accounting for Within-Device Fluctuation; *TED Aug. 2013 2505-2511*

**Duan, M.**, Zhang, J. F., Ji, Z., Zhang, W. D., Kaczer, B., De Gendt, S., and Groeseneken, G., New Insights Into Defect Loss, Slowdown, and Device Lifetime Enhancement; *TED Jan. 2013 413-419*

**Duan, M.**, see Hatta, S. W. M., *TED May 2013 1745-1753*

**Duan, T.**, and Ang, D. S., Capacitance Hysteresis in the High-k/Metal Gate-Stack From Pulsed Measurement; *TED April 2013 1349-1354*

**Duan, Z.**, see Wang, Z., *TED Jan. 2013 471-477*

**Duarte, J. P.**, Choi, S.-J., Moon, D.-I., Ahn, J.-H., Kim, J.-Y., Kim, S., and Choi, Y.-K., A Universal Core Model for Multiple-Gate Field-Effect Transistors. Part II: Drain Current Model; *TED Feb. 2013 848-855*

**Duarte, J. P.**, Choi, S.-J., Moon, D.-I., Ahn, J.-H., Kim, J.-Y., Kim, S., and Choi, Y.-K., A Universal Core Model for Multiple-Gate Field-Effect Transistors. Part I: Charge Model; *TED Feb. 2013 840-847*

**Duarte, J. P.**, see Moon, D.-I., *TED April 2013 1355-1360*

**Duffy, R.**, see Shayesteh, M., *TED July 2013 2178-2185*

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**Elboby, H.**, see Thapa, A., *TED Nov. 2013 3883-3887*

**Elhami Khorasani, A.**, Alford, T. L., and Schroder, D. K., Modified Pulsed MOS Capacitor for Characterization of Ultraclean Thin p/p<sup>+</sup> Silicon Epitaxial Layers; *TED Aug. 2013 2592-2597*

**Elolampi, B.**, see Hsu, Y.-Y., *TED July 2013 2338-2345*

**Emanuelsson, T.**, see Camarchia, V., *TED Oct. 2013 3592-3595*

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**Ersman, P. A.**, see Kawahara, J., *TED June 2013 2052-2056*

**Escotte, L.**, see Nsele, S. D., *TED April 2013 1372-1378*

**Esseni, D.**, and Pala, M. G., Interface Traps in InAs Nanowire Tunnel FETs and MOSFETs—Part II: Comparative Analysis and Trap-Induced Variability; *TED Sept. 2013 2802-2807*

**Esseni, D.**, see Pala, M. G., *TED Sept. 2013 2795-2801*

**Esseni, D.**, see Lizzit, D., *TED June 2013 1884-1891*

**Esseni, D.**, see van Hemert, T., *TED March 2013 1005-1010*

**Estrada, M.**, see Chang Hyun Kim, *TED March 2013 1136-1141*

**Estrada, M.**, Ulloa, F., Avila, M., Sanchez, J., Cerdeira, A., Castro-Carranza, A., Iniguez, B., Marsal, L. F., and Pallares, J., Frequency and Voltage Dependence of the Capacitance of MIS Structures Fabricated With Polymeric Materials; *TED June 2013 2057-2063*

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## F

**Faez, R.**, see Karamitaheri, H., *TED July 2013 2142-2147*

**Fahad, H. M.**, and Hussain, M. M., High-Performance Silicon Nanotube Tunneling FET for Ultralow-Power Logic Applications; *TED March 2013 1034-1039*

**Falck, E.**, see Baburske, R., *TED July 2013 2308-2317*

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**Fan, J.**, Zhang, Y., and Wang, Y., A 30-kW High-Power X-band to Ku-band Klystron Frequency Multiplier; *TED April 2013 1457-1462*

- Fan, J.**, see Wang, R., *TED Nov. 2013 3676-3682*
- Fan, J.**, Liu, H., Ma, F., and Hao, Y., Improvement of the Anneal-Induced Valence Band Offset Variation by the Hybrid Deposition of  $\text{HfO}_2$  on Si; *TED May 2013 1536-1539*
- Fan, J.**, Huang, R., Wang, R., Xu, Q., Ai, Y., Xu, X., Li, M., and Wang, Y., Two-Dimensional Self-Limiting Wet Oxidation of Silicon Nanowires: Experiments and Modeling; *TED Sept. 2013 2747-2753*
- Fan, M.-L.**, Hu, V. P.-H., Chen, Y.-N., Su, P., and Chuang, C.-T., Analysis of Single-Trap-Induced Random Telegraph Noise and its Interaction With Work Function Variation for Tunnel FET; *TED June 2013 2038-2044*
- Fan, M.-L.**, see Hu, V. P.-H., *TED Jan. 2013 147-152*
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- Fang, Z.**, Wang, X. P., Li, X., Chen, Z. X., Kamath, A., Lo, G. Q., and Kwong, D. L., Fully CMOS-Compatible 1T1R Integration of Vertical Nanopillar GAA Transistor and Oxide-Based RRAM Cell for High-Density Non-volatile Memory Application; *TED March 2013 1108-1113*
- Fang, Z.**, Yu, H. Y., Fan, W. J., Ghibaud, G., Buckley, J., DeSalvo, B., Li, X., Wang, X. P., Lo, G. Q., and Kwong, D. L., Current Conduction Model for Oxide-Based Resistive Random Access Memory Verified by Low-Frequency Noise Analysis; *TED March 2013 1272-1275*
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- Faynot, O.**, see Villalon, A., *TED May 2013 1568-1574*
- Fayrushin, A.**, Lee, C.-H., Park, Y., Choi, J.-H., and Chung, C., Unified Endurance Degradation Model of Floating Gate NAND Flash Memory; *TED June 2013 2031-2037*
- Feenstra, R. M.**, see Zhao, P., *TED March 2013 951-957*
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- Franco, J.**, Kaczer, B., Toledano-Luque, M., Roussel, P. J., Kauerauf, T., Mitard, J., Witters, L., Grasser, T., and Groeseneken, G., SiGe Channel Technology: Superior Reliability Toward Ultra-Thin EOT Devices—Part II: Time-Dependent Variability in Nanoscaled Devices and Other Reliability Issues; *TED Jan. 2013 405-412*
- Franco, J.**, Kaczer, B., Roussel, P. J., Mitard, J., Cho, M., Witters, L., Grasser, T., and Groeseneken, G., SiGe Channel Technology: Superior Reliability Toward Ultrathin EOT Devices—Part I: NBTI; *TED Jan. 2013 396-404*
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- Futagawa, M.**, Suzuki, D., Otake, R., Dasai, F., Ishida, M., and Sawada, K., Fabrication of a  $128 \times 128$  Pixels Charge Transfer Type Hydrogen Ion Image Sensor; *TED Aug. 2013 2634-2639*

## G

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- Gatabi, I. R.**, Johnson, D. W., Woo, J. H., Anderson, J. W., Coan, M. R., Piner, E. L., and Harris, H. R., PECVD Silicon Nitride Passivation of AlGaIn/GaN Heterostructures; *TED March 2013 1082-1087*
- Gautam, R.**, Saxena, M., Gupta, R. S., and Gupta, M., Gate All Around MOSFET With Vacuum Gate Dielectric for Improved Hot Carrier Reliability and RF Performance; *TED June 2013 1820-1827*
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- Gerrer, L.**, Amoroso, S. M., Markov, S., Adamu-Lema, F., and Asenov, A., 3-D Statistical Simulation Comparison of Oxide Reliability of Planar MOS-FETs and FinFET; *TED Dec. 2013 4008-4013*
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- Ghibaud, G.**, see Coquand, R., *TED Feb. 2013 727-732*
- Ghibaud, G.**, see Fang, Z., *TED March 2013 1272-1275*
- Ghione, G.**, Chen, K. J., Egawa, T., Meneghesso, G., Palacios, T., and Quay, R., Guest Editorial Special Issue on GaN Electronic Devices; *TED Oct. 2013 2975-2981*
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- Gong, X.**, Han, G., Liu, B., Wang, L., Wang, W., Yang, Y., Kong, E. Y.-J., Su, S., Xue, C., Cheng, B., and Yeo, Y.-C., Sub-400°C CSi<sub>2</sub>H<sub>6</sub> Passivation, HfO<sub>2</sub> Gate Dielectric, and Single TaN Metal Gate: A Common Gate Stack Technology for In<sub>0.7</sub>Ga<sub>0.3</sub>As and Ge<sub>1-x</sub>Sn<sub>x</sub> CMOS; *TED May 2013 1640-1648*
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- Gonzalez-Fernandez, A. A.**, Juvert, J., Aceves-Mijares, M., Llobera, A., and Dominguez, C., Influence by Layer Structure on the Output EL of CMOS Compatible Silicon-Based Light Emitters; *TED June 2013 1971-1974*
- Gonzalez-Iglesias, D.**, Rodriguez, M. P. B., Belda, O. M., Gimeno, B., Boria, V. E., Raboso, D., and Semenov, V. E., Analysis of Multipactor Effect Using a Phase-Shift Keying Single-Carrier Digital Modulated Signal; *TED Aug. 2013 2664-2670*
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- Govoreanu, B.**, Clima, S., Radu, I. P., Chen, Y.-Y., Wouters, D. J., and Jurczak, M., Complementary Role of Field and Temperature in Triggering ON/OFF Switching Mechanisms in Hf/HfO<sub>2</sub> Resistive RAM Cells; *TED Aug. 2013 2471-2478*
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**Guerin, M.**, Bergeret, E., Benevent, E., Daami, A., Pannier, P., and Coppard, R., Organic Complementary Logic Circuits and Volatile Memories Integrated on Plastic Foils; *TED June 2013 2045-2051*  
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**Gunn, K. J.**, see Lingwood, C. J., *TED Aug. 2013 2671-2676*  
**Guo, G.**, Wei, Y., Zhang, M., Travish, G., Yue, L., Xu, J., Yin, H., Huang, M., Gong, Y., and Wang, W., Novel Folded Frame Slow-Wave Structure for Millimeter-Wave Traveling-Wave Tube; *TED Nov. 2013 3895-3900*  
**Guo, H.**, see Zhang, L., *TED Oct. 2013 3527-3533*  
**Guo, J.**, see Liu, L., *TED Dec. 2013 4133-4139*  
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**Gupta, S.**, see Mahapatra, S., *TED March 2013 901-916*  
**Gupta, S. K.**, Kulkarni, J. P., and Roy, K., Tri-Mode Independent Gate FinFET-Based SRAM With Pass-Gate Feedback: Technology-Circuit Co-Design for Enhanced Cell Stability; *TED Nov. 2013 3696-3704*  
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## H

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**Hahn, H.**, Reuters, B., Pooth, A., Hollander, B., Heuken, M., Kalisch, H., and Vescan, A., p-Channel Enhancement and Depletion Mode GaN-Based HFETs With Quaternary Backbarriers; *TED Oct. 2013 3005-3011*  
**Hainaut, C.**, see Kone, G. A., *TED March 2013 1068-1074*  
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**Han, M.-H.**, Chang, C.-Y., Chen, H.-B., Cheng, Y.-C., and Wu, Y.-C., Device and Circuit Performance Estimation of Junctionless Bulk FinFETs; *TED June 2013 1807-1813*  
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**Hatakeyama, T.**, Fukuda, K., and Okumura, H., Physical Models for SiC and Their Application to Device Simulations of SiC Insulated-Gate Bipolar Transistors; *TED Feb. 2013 613-621*  
**Hatta, S. W. M.**, Ji, Z., Zhang, J. F., Duan, M., Zhang, W. D., Soin, N., Kaczer, B., De Gendt, S., and Groeseneken, G., Energy Distribution of Positive Charges in Gate Dielectric: Probing Technique and Impacts of Different Defects; *TED May 2013 1745-1753*  
**Hattori, F.**, Umegami, H., and Yamamoto, M., Capacitor-Less Gate Drive Circuit Capable of High-Efficiency Operation for Non-Insulating-Gate GaN FETs; *TED Oct. 2013 3249-3255*  
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**Hayashi, Y.**, Matsunaga, N., Wada, M., Nakao, S., Watanabe, K., Kato, S., Sakata, A., Kajita, A., and Shibata, H., Control of Resistance by Oxide on the Surface of Cu Interconnects With CuSiN and Ti-based Barrier Metal; *TED Jan. 2013 42-48*  
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**Hilt, O.**, Kotara, P., Brunner, F., Knauer, A., Zhytnytska, R., and Wurfl, J., Improved Vertical Isolation for Normally-Off High Voltage GaN-HFETs on n-SiC Substrates; *TED Oct. 2013 3084-3090*  
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- Horowitz, G.**, see Chang Hyun Kim, *TED March 2013 1136-1141*
- Hou, D.**, Bilbro, G. L., and Trew, R. J., A Compact Physical AlGaIn/GaN HFET Model; *TED Feb. 2013 639-645*
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- Hou, J.-L.**, Chang, S.-J., Chen, M.-C., Liu, C. H., Hsueh, T.-J., Sheu, J.-K., and Li, S., GaN-Based Planar p-i-n Photodetectors With the Be-Implanted Isolation Ring; *TED March 2013 1178-1182*
- Hou, L.**, see Shi, W., *TED April 2013 1361-1364*
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- Hou, Y.**, Gong, Y., Xu, J., Wang, S., Wei, Y., Yue, L., and Feng, J., A Novel Ridge-Vane-Loaded Folded-Waveguide Slow-Wave Structure for 0.22-THz Traveling-Wave Tube; *TED March 2013 1228-1235*
- Hou, Y.**, Mei, Z., Liang, H., Ye, D., Gu, C., Du, X., and Lu, Y., Annealing Effects of Ti/Au Contact on n-MgZnO/p-Si Ultraviolet-B Photodetectors; *TED Oct. 2013 3474-3477*
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- Hsiao, C.-H.**, Huang, C.-S., Young, S.-J., Chang, S.-J., Guo, J.-J., Liu, C.-W., and Yang, T.-Y., Field-Emission and Photoelectrical Characteristics of Ga-ZnO Nanorods Photodetector; *TED June 2013 1905-1910*
- Hsiao, C.-H.**, see Chang, S.-J., *TED Nov. 2013 3901-3906*
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- Hsieh, H.-D.**, see Chiu, J.-P., *TED March 2013 978-984*
- Hsieh, T.-Y.**, Chang, T.-C., Chen, Y.-T., Liao, P.-Y., Chen, T.-C., Tsai, M.-Y., Chen, Y.-C., Chen, B.-W., Chu, A.-K., Chou, C.-H., Chung, W.-C., and Chang, J.-F., Characterization and Investigation of a Hot-Carrier Effect in Via-Contact Type a-InGaZnO Thin-Film Transistors; *TED May 2013 1681-1688*
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- Hsu, S.-H.**, Kang, W. P., Davidson, J. L., Huang, J. H., and Kerns, D. V., Nanodiamond Vacuum Field Emission Integrated Differential Amplifier; *TED Jan. 2013 487-493*
- Hsu, S.-Y.**, see Chen, H.-Y., *TED Oct. 2013 3521-3526*
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- Hsu, W.-C.**, see Liu, H.-Y., *TED July 2013 2231-2237*
- Hsu, Y.-Y.**, Lucas, K., Davis, D., Elolampi, B., Ghaffari, R., Rafferty, C., and Dowling, K., Novel Strain Relief Design for Multilayer Thin Film Stretchable Interconnects; *TED July 2013 2338-2345*
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- Hu, G.**, Hu, S., Liu, R., Wang, L., Zhou, X., and Tang, T.-A., Quasi-Ballistic Transport Model for Graphene Field-Effect Transistor; *TED July 2013 2410-2414*
- Hu, H.-F.**, see Wang, Y., *TED July 2013 2302-2307*
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- Hu, S.**, Hoe, Y. Y. G., Li, H., Zhao, D., Shi, J., Han, Y., Teo, K. H., Xiong, Y. Z., He, J., Zhang, X., Je, M., and Madihian, M., A Thermal Isolation Technique Using Through-Silicon Vias for Three-Dimensional ICs; *TED March 2013 1282-1287*
- Hu, V. P.-H.**, see Fan, M.-L., *TED June 2013 2038-2044*
- Hu, V. P.-H.**, Fan, M.-L., Su, P., and Chuang, C.-T., Comparative Leakage Analysis of GeOI FinFET and Ge Bulk FinFET; *TED Oct. 2013 3596-3600*
- Hu, V. P.-H.**, Fan, M.-L., Su, P., and Chuang, C.-T., Threshold Voltage Design and Performance Assessment of Hetero-Channel SRAM Cells; *TED Jan. 2013 147-152*
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- Huang, J.**, see Tsai, M.-Y., *TED July 2013 2331-2337*
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- Huang, P.**, Liu, X. Y., Chen, B., Li, H. T., Wang, Y. J., Deng, Y. X., Wei, K. L., Zeng, L., Gao, B., Du, G., Zhang, X., and Kang, J. F., A Physics-Based Compact Model of Metal-Oxide-Based RRAM DC and AC Operations; *TED Dec. 2013 4090-4097*
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- Huang, T.**, Liu, Z. J., Zhu, X., Ma, J., Lu, X., and Lau, K. M., DC and RF Performance of Gate-Last AlN/GaN MOSHEMTs on Si With Regrown Source/Drain; *TED Oct. 2013 3019-3024*
- Huang, T.**, see Liu, S., *TED Nov. 2013 3632-3638*
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- Hubert, Q.**, Jahan, C., Toffoli, A., Delaye, V., Lafond, D., Grampeix, H., and de Salvo, B., Detailed Analysis of the Role of Thin-HfO<sub>2</sub> Interfacial Layer in Ge<sub>2</sub>Sb<sub>2</sub>Te<sub>5</sub>-Based PCM; *TED July 2013 2268-2275*
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**Iizuka, T.**, Fukushima, K., Tanaka, A., Sakuda, T., Kikuchihara, H., Miyake, M., Mattausch, H. J., and Miura-Mattausch, M., Modeling of the Impurity-Gradient Effect in High-Voltage Laterally Diffused MOSFETs; *TED Feb. 2013 684-690*  
**Iizuka, T.**, see Koh, R., *TED Feb. 2013 708-713*  
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**Ikeda, H.**, and Sano, N., Surface Potential-Based Polycrystalline-Silicon Thin-Film Transistors Compact Model by Nonequilibrium Approach; *TED Oct. 2013 3417-3423*  
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**Im, K.-S.**, see Lee, J.-H., *TED Oct. 2013 3032-3039*  
**Im, K.-S.**, Won, C.-H., Jo, Y.-W., Lee, J.-H., Bawedin, M., Cristoloveanu, S., and Lee, J.-H., High-Performance GaN-Based Nanochannel FinFETs With/Without AlGaIn/GaN Heterostructure; *TED Oct. 2013 3012-3018*  
**Imai, A.**, see Nanjo, T., *TED March 2013 1046-1053*  
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**Ishida, M.**, Ueda, T., Tanaka, T., and Ueda, D., GaN on Si Technologies for Power Switching Devices; *TED Oct. 2013 3053-3059*  
**Ishida, M.**, see Futagawa, M., *TED Aug. 2013 2634-2639*  
**Ishida, T.**, Mine, T., Hisamoto, D., Shimamoto, Y., and Yamada, R., Electron-Trap and Hole-Trap Distributions in Metal/Oxide/Nitride/Oxide/Silicon Structures; *TED Feb. 2013 863-869*  
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## J

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**Janardhanan, S.**, see Kumar, M. J., *TED Oct. 2013 3285-3290*  
**Jandhyala, S.**, Abraham, A., Anghel, C., and Mahapatra, S., Errata to "Piecewise Linearization Technique for Compact Charge Modeling of Independent DG MOSFET" [Jul 12 1974-1979]; *TED Jan. 2013 518*  
**Janes, D. B.**, see Delker, C. J., *TED Sept. 2013 2900-2905*  
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**Jazaeri, F.**, Barbut, L., and Sallese, J.-M., Modeling and Design Space of Junctionless Symmetric DG MOSFETs With Long Channel; *TED July 2013 2120-2127*  
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**Jazaeri, F.**, Barbut, L., and Sallese, J.-M., Trans-Capacitance Modeling in Junctionless Symmetric Double-Gate MOSFETs; *TED Dec. 2013 4034-4040*  
**Je, M.**, see Hu, S., *TED March 2013 1282-1287*  
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**Jia, K.**, see Shi, L., *TED Jan. 2013 346-353*  
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**Jiang, J.**, Wan, Q., and Zhang, Q., Transparent Junctionless Electric-Double-Layer Transistors Gated by a Reinforced Chitosan-Based Biopolymer Electrolyte; *TED June 2013 1951-1957*  
**Jiang, L. J.**, see Huang, J. Z., *TED July 2013 2111-2119*  
**Jiang, P. X.**, see Du, C. H., *TED July 2013 2388-2394*  
**Jiang, X.**, see Wang, R., *TED Nov. 2013 3676-3682*  
**Jiang, X.**, Wang, R., Yu, T., Chen, J., and Huang, R., Investigations on Line-Edge Roughness (LER) and Line-Width Roughness (LWR) in Nanoscale CMOS Technology: Part I—Modeling and Simulation Method; *TED Nov. 2013 3669-3675*  
**Jianhua, Z.**, see Xifeng, L., *TED Oct. 2013 3413-3416*  
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**Jin, D.**, and del Alamo, J. A., Methodology for the Study of Dynamic ON-Resistance in High-Voltage GaN Field-Effect Transistors; *TED Oct. 2013 3190-3196*  
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**Johansson, S.**, see Persson, K.-M., *TED Sept. 2013 2761-2767*  
**Johansson, S.**, Berg, M., Persson, K.-M., and Lind, E., A High-Frequency Transconductance Method for Characterization of High- $\kappa$  Border Traps in III-V MOSFETs; *TED Feb. 2013 776-781*  
**Johnson, D. W.**, see Gatabi, I. R., *TED March 2013 1082-1087*  
**Johnson, D. W.**, Lee, R. T. P., Hill, R. J. W., Wong, M. H., Bersuker, G., Piner, E. L., Kirsch, P. D., and Harris, H. R., Threshold Voltage Shift Due to Charge Trapping in Dielectric-Gated AlGaIn/GaN High Electron Mobility Transistors Examined in Au-Free Technology; *TED Oct. 2013 3197-3203*  
**Johnson, J. B.**, see Agarwal, S., *TED Sept. 2013 2728-2733*  
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- Joka, T.**, see Wakejima, A., *TED Oct. 2013 3183-3189*
- Joly, Y.**, Lopez, L., Truphemus, L., Portal, J.-M., Aziza, H., Julien, F., Fornara, P., Masson, P., Ogier, J.-L., and Bert, Y., Gate Voltage Matching Investigation for Low-Power Analog Applications; *TED March 2013 1263-1267*
- Joo, H. S.**, see Aritome, S., *TED April 2013 1327-1333*
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- Joye, C. D.**, see Cook, A. M., *TED March 2013 1257-1259*
- Joye, C. D.**, Calame, J. P., Cook, A. M., and Garven, M., High-Power Copper Gratings for a Sheet-Beam Traveling-Wave Amplifier at G-band; *TED Jan. 2013 506-509*
- Juang, Y.-D.**, see Wu, J.-L., *TED July 2013 2324-2330*
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- Jung, B.**, see Kim, B., *TED May 2013 1730-1737*
- Jung, E.**, Kim, M. S., and Kim, H., Analysis of Contributing Factors for Determining the Reliability Characteristics of GaN-Based White Light-Emitting Diodes With Dual Degradation Kinetics; *TED Jan. 2013 186-191*
- Jung, H.-E.**, and Shin, M., Surface-Roughness-Limited Mean Free Path in Silicon Nanowire Field Effect Transistors; *TED June 2013 1861-1866*
- Jung, J.**, see Rha, S. H., *TED March 2013 1128-1135*
- Jung, S.-J.**, Song, J.-K., and Kwon, O.-K., Three-Side Buttable Integrated Ultrasound Chip With a 16x16 Reconfigurable Transceiver and Capacitive Micromachined Ultrasonic Transducer Array for 3-D Ultrasound Imaging Systems; *TED Oct. 2013 3562-3569*
- Jung, U.**, see Kim, J. J., *TED Nov. 2013 3683-3689*
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- Jurczak, M.**, see dos Santos, S. D., *TED Jan. 2013 444-450*
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## K

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- Kamakura, Y.**, see Yamauchi, Y., *TED Aug. 2013 2518-2524*
- Kamath, A.**, see Fang, Z., *TED March 2013 1108-1113*
- Kamiya, K.**, Yang, M. Y., Magyari-Kope, B., Niwa, M., Nishi, Y., and Shiraiishi, K., Vacancy Cohesion-Isolation Phase Transition Upon Charge Injection and Removal in Binary Oxide-Based RRAM Filamentary-Type Switching; *TED Oct. 2013 3400-3406*
- Kan'an, N.**, Faraclas, A., Williams, N., Silva, H., and Gokirmak, A., Computational Analysis of Rupture-Oxide Phase-Change Memory Cells; *TED May 2013 1649-1655*
- Kan, E. C.**, see Rajwade, S. R., *TED June 2013 1944-1950*
- Kan, E. C.**, see Rajwade, S. R., *TED Oct. 2013 3378-3384*
- Kang, B.**, and Kim, S.-B., Temperature Dependence of the Component Currents and Internal Quantum Efficiency in Blue Light-Emitting Diodes; *TED March 2013 1060-1067*
- Kang, C. Y.**, see Sohn, C.-W., *TED April 2013 1302-1309*
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- Kang, M.**, see Lee, K., *TED March 2013 1099-1107*
- Kang, T.-K.**, and Yang, Y.-Y., Poly-Si Nanowire TFT With Raised Source/Drain and Nitride Spacer; *TED July 2013 2415-2418*
- Kang, T.-K.**, see Chien, F.-T., *TED Feb. 2013 799-804*
- Kang, T.-K.**, High-Performance SLS Nanowire TFTs With Dual-Gate Structure; *TED July 2013 2276-2281*
- Kang, W. P.**, see Hsu, S.-H., *TED Jan. 2013 487-493*
- Kang, X.**, see Van Hove, M., *TED Oct. 2013 3071-3078*
- Kang, Y.**, Verma, M., Liu, T., and Orłowski, M. K., Pulse Operation of a Floating-Electrode Memristive Device; *TED April 2013 1476-1479*
- Kao, C.-Y.**, see Lee, M. H., *TED July 2013 2423-2427*
- Kao, H.-L.**, see Chiu, H.-C., *TED Nov. 2013 3877-3882*
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- Kao, K.-H.**, see Walke, A. M., *TED March 2013 1019-1027*
- Kao, K.-H.**, Verhulst, A. S., Vandenberghe, W. G., and De Meyer, K., Counterdoped Pocket Thickness Optimization of Gate-on-Source-Only Tunnel FETs; *TED Jan. 2013 6-12*
- Kao, S. C.**, see Chen, C. H., *TED Feb. 2013 767-770*
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- Kar-Roy, A.**, see Stefanov, K. D., *TED Dec. 2013 4173-4179*
- Karamitaheri, H.**, Pourfath, M., Faez, R., and Kosina, H., Atomistic Study of the Lattice Thermal Conductivity of Rough Graphene Nanoribbons; *TED July 2013 2142-2147*
- Karanassios, V.**, see Abbaszadeh, S., *TED Feb. 2013 880-883*
- Karim, K. S.**, see Abbaszadeh, S., *TED Feb. 2013 880-883*
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- Kaushik, J. K.**, Balakrishnan, V. R., Panwar, B. S., and Muralidharan, R., On the Origin of Kink Effect in Current-Voltage Characteristics of AlGaIn/GaN High Electron Mobility Transistors; *TED Oct. 2013 3351-3357*
- Kawahara, J.**, Ersman, P. A., Katoh, K., and Berggren, M., Fast-Switching Printed Organic Electrochemical Transistors Including Electronic Vias Through Plastic and Paper Substrates; *TED June 2013 2052-2056*
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- Khaliji, K.**, Noei, M., Tabatabaei, S. M., Pourfath, M., Fathipour, M., and Abdi, Y., Tunable Bandgap in Bilayer Armchair Graphene Nanoribbons: Concurrent Influence of Electric Field and Uniaxial Strain; *TED Aug. 2013 2464-2470*
- Khandelwal, S.**, Yadav, C., Agnihotri, S., Chauhan, Y. S., Curutchet, A., Zimmer, T., De Jaeger, J.-C., Defrance, N., and Fjeldly, T. A., Robust Surface-Potential-Based Compact Model for GaN HEMT IC Design; *TED Oct. 2013 3216-3222*
- Khandelwal, S.**, see Yigletu, F. M., *TED Nov. 2013 3746-3752*
- Khandelwal, S.**, Sharma, S., Chauhan, Y. S., Gneiting, T., and Fjeldly, T. A., Modeling and Simulation Methodology for SOA-Aware Circuit Design in DC and Pulsed-Mode Operation of HV MOSFETs; *TED Feb. 2013 714-718*
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- Kilchytska, V.**, see Makovejev, S., *TED June 2013 1844-1851*
- Kim, B.**, Lee, J., Lee, J., Jung, B., and Chappell, W. J., RF CMOS Integrated On-Chip Tunable Absorptive Bandstop Filter Using Q-Tunable Resonators; *TED May 2013 1730-1737*

- Kim, B. K.**, see Mun, B.-J., *TED Oct. 2013 3430-3434*
- Kim, C. H.**, Bonnassieux, Y., and Horowitz, G., Charge Distribution and Contact Resistance Model for Coplanar Organic Field-Effect Transistors; *TED Jan. 2013 280-287*
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- Kim, J.**, see Kim, J.-M., *TED May 2013 1673-1680*
- Kim, J. J.**, Kim, M., Jung, U., Chang, K. E., Lee, S., Kim, Y., Lee, Y. G., Choi, R., and Lee, B. H., Intrinsic Time Zero Dielectric Breakdown Characteristics of HfAlO Alloys; *TED Nov. 2013 3683-3689*
- Kim, J. K.**, Modification of a Driving Waveform in an AC Plasma Display Panel With Sc-doped MgO Protecting Layer; *TED Aug. 2013 2556-2560*
- Kim, J.-B.**, see Shin, M.-S., *TED March 2013 1169-1177*
- Kim, J.-H.**, see Mun, B.-J., *TED Oct. 2013 3430-3434*
- Kim, J.-M.**, Cho, Y., Lee, S.-H., Kim, J., and Lee, S.-W., Behavioral Circuit Model of Active-Matrix Liquid Crystal Display With Charge-Shared Pixel Structure; *TED May 2013 1673-1680*
- Kim, J.-Y.**, see Duarte, J. P., *TED Feb. 2013 848-855*
- Kim, J.-Y.**, see Duarte, J. P., *TED Feb. 2013 840-847*
- Kim, K.**, see Liu, E.-S., *TED Dec. 2013 4027-4033*
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- Kim, S.**, see Mehrotra, S. R., *TED July 2013 2171-2177*
- Kim, S.**, see Duarte, J. P., *TED Feb. 2013 840-847*
- Kim, S.**, Yokoyama, M., Nakane, R., Ichikawa, O., Osada, T., Hata, M., Takenaka, M., and Takagi, S., High-Performance InAs-On-Insulator n-MOSFETs With Ni-InGaAs S/D Realized by Contact Resistance Reduction Technology; *TED Oct. 2013 3342-3350*
- Kim, S.**, Yokoyama, M., Taoka, N., Nakane, R., Yasuda, T., Ichikawa, O., Fukuhara, N., Hata, M., Takenaka, M., and Takagi, S., Sub-60-nm Extremely Thin Body In<sub>x</sub>Ga<sub>1-x</sub>As-On-Insulator MOSFETs on Si With Ni-InGaAs Metal S/D and MOS Interface Buffer Engineering and Its Scalability; *TED Aug. 2013 2512-2517*
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- Kiyoyama, K.**, see Lee, K.-W., *TED Nov. 2013 3842-3848*
- Kizilyalli, I. C.**, Edwards, A. P., Nie, H., Disney, D., and Bour, D., High Voltage Vertical GaN p-n Diodes With Avalanche Capability; *TED Oct. 2013 3067-3070*
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- Klimeck, G.**, see Mehrotra, S. R., *TED July 2013 2171-2177*
- Kloes, A.**, see Schwarz, M., *TED Feb. 2013 884-886*
- Kloes, A.**, Schwarz, M., Holtij, T., and Navas, A., Quantum Confinement and Volume Inversion in MOS<sup>3</sup> Model for Short-Channel Tri-Gate MOSFETs; *TED Aug. 2013 2691-2694*
- Klupfel, F. J.**, Schein, F.-L., Lorenz, M., Frenzel, H., von Wenckstern, H., and Grundmann, M., Comparison of ZnO-Based JFET, MESFET, and MISFET; *TED June 2013 1828-1833*
- Knauer, A.**, see Hilt, O., *TED Oct. 2013 3084-3090*
- Knauer, A.**, see Lobo Ploch, N., *TED Feb. 2013 782-786*
- Knebel, S.**, Kupke, S., Schroeder, U., Slesazek, S., Mikolajick, T., Agaiby, R., and Trentzsch, M., Influence of Frequency Dependent Time to Breakdown on High-K/Metal Gate Reliability; *TED July 2013 2368-2371*
- Kneissl, M.**, see Lobo Ploch, N., *TED Feb. 2013 782-786*
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- Ko, M.-D.**, see Sohn, C.-W., *TED April 2013 1302-1309*
- Ko, M.-D.**, Sohn, C.-W., Baek, C.-K., and Jeong, Y.-H., Study on a Scaling Length Model for Tapered Tri-Gate FinFET Based on 3-D Simulation and Analytical Analysis; *TED Sept. 2013 2721-2727*
- Koh, R.**, and Iizuka, T., Parameter Extraction and Comparison of Self-Heating Models for Power MOSFETs Based on Transient Current Measurements; *TED Feb. 2013 708-713*
- Koh, S.-M.**, see Ding, Y., *TED Sept. 2013 2703-2711*
- Koh, S.-M.**, see Zhou, Q., *TED April 2013 1310-1317*
- Kohlstadt, E.**, see Arca, F., *TED May 2013 1663-1667*
- Kohno, T.**, Kuranaga, T., Kageyama, H., Ishii, M., Kasai, N., Nakamura, N., and Akimoto, H., LTPS AM-OLED Display Consisting of Two-TFTs/One-Capacitor Pixel Circuits for Producing High-Uniformity Images; *TED Nov. 2013 3780-3786*
- Kojima, T.**, see Miyake, M., *TED Feb. 2013 571-579*
- Kolar, J. W.**, see Ortiz, G., *TED Feb. 2013 587-597*
- Koley, K.**, Dutta, A., Syamal, B., Saha, S. K., and Sarkar, C. K., Subthreshold Analog/RF Performance Enhancement of Underlap DG FETs With High-K Spacer for Low Power Applications; *TED Jan. 2013 63-69*
- Kone, G. A.**, Grandchamp, B., Hainaut, C., Marc, F., Labat, N., Zimmer, T., Nodjiadjim, V., Riet, M., Dupuy, J.-Y., Godin, J., and Maneux, C., Submicrometer InP/InGaAs DHBT Architecture Enhancements Targeting Reliability Improvements; *TED March 2013 1068-1074*
- Kong, E. Y.-J.**, see Gong, X., *TED May 2013 1640-1648*
- Kong, E. Y.-J.**, see Liu, B., *TED July 2013 2135-2141*
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- Kong, M.**, Du, W., and Chen, X., Study on Dual Channel n-p-LDMOS Power Devices With Three Terminals; *TED Oct. 2013 3508-3514*
- Kong, M.**, and Chen, X., A Novel Isolation Method for Half-Bridge Power ICs; *TED July 2013 2318-2323*
- Koppinen, P. J.**, Stewart, M. D., and Zimmerman, N. M., Fabrication and Electrical Characterization of Fully CMOS-Compatible Si Single-Electron Devices; *TED Jan. 2013 78-83*
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- Koyanagi, M.**, see Lee, K.-W., *TED Nov. 2013 3842-3848*
- Kraemer, T.**, Ostermay, I., Jensen, T., Johansen, T. K., Schmueckle, F.-J., Thies, A., Krozer, V., Heinrich, W., Krueger, O., Traenkle, G., Lisker, M., Trusch, A., Kulse, P., and Tillack, B., InP-DHBT-on-BiCMOS Technology With  $f_T/f_{max}$  of 400/350 GHz for Heterogeneous Integrated Millimeter-Wave Sources; *TED July 2013 2209-2216*
- Kranti, A.**, see Parihar, M. S., *TED May 2013 1540-1546*
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- Kreupl, F.**, see Li, H., *TED Sept. 2013 2870-2876*
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- Kumar, M. J.**, and Janardhanan, S., Doping-Less Tunnel Field Effect Transistor: Design and Investigation; *TED Oct. 2013* 3285-3290
- Kumar, M. J.**, see Nadda, K., *TED Sept. 2013* 2956-2959
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- Kuppurao, S.**, see Ho, B., *TED Jan. 2013* 153-158
- Kuranaga, T.**, see Kohno, T., *TED Nov. 2013* 3780-3786
- Kuroda, R.**, Yonezawa, A., Teramoto, A., Li, T.-L., Tochigi, Y., and Sugawa, S., A Statistical Evaluation of Random Telegraph Noise of In-Pixel Source Follower Equivalent Surface and Buried Channel Transistors; *TED Oct. 2013* 3555-3561
- Kwak, B.-C.**, see Shin, M.-S., *TED March 2013* 1169-1177
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- Langfelder, G.**, CMOS Pixels Directly Sensitive to Both Visible and Near-Infrared Radiation; *TED May 2013* 1695-1700
- Lapeyrade, M.**, see Lobo Ploch, N., *TED Feb. 2013* 782-786
- Larcher, L.**, see Vandelli, L., *TED May 2013* 1754-1762
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- Le Royer, C.**, see Villalon, A., *TED Dec. 2013* 4079-4084
- Le-Thai, H.**, Xhakoni, A., and Gielen, G., A Gain-Adaptive Column Amplifier for Wide-Dynamic-Range CMOS Image Sensors; *TED Oct. 2013* 3601-3604
- Leadley, D. R.**, see Warburton, R. E., *TED Nov. 2013* 3807-3813
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- Lee, C.-H.**, see Fayrushin, A., *TED June 2013* 2031-2037
- Lee, C.-I.**, and Lin, W.-C., A Novel p-i-n Inductor for Tunable Wideband Matching Network Application; *TED Aug. 2013* 2611-2618
- Lee, C.-J.**, see Xie, Q., *TED June 2013* 1814-1819
- Lee, C.-K.**, Hwang, A. Y., Yang, H., Kim, D.-H., Bae, J.-U., Shin, W.-S., and Jeong, J. K., Improvement in the Photo-Bias Stability of Zinc Tin Oxide Thin-Film Transistors by Introducing a Thermal Oxidized TiO<sub>2</sub> Film as a Hole Carrier Blocking Layer; *TED Dec. 2013* 4165-4172
- Lee, C.-L.**, and Hsieh, C.-C., A 0.8-V 4096-Pixel CMOS Sense-and-Stimulus Imager for Retinal Prosthesis; *TED March 2013* 1162-1168
- Lee, C.-S.**, see Luo, J., *TED June 2013* 1834-1843
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- Lee, G.-W.**, see Na, K.-Y., *TED Oct. 2013* 3515-3520
- Lee, H.-S.**, see Zhang, Y., *TED July 2013* 2224-2230
- Lee, J.**, Baek, I., Yang, D., and Yang, K., On-Chip FPN Calibration for a Linear-Logarithmic APS Using Two-Step Charge Transfer; *TED June 2013* 1989-1994
- Lee, J.**, see Kim, B., *TED May 2013* 1730-1737
- Lee, J.**, see Kim, B., *TED May 2013* 1730-1737
- Lee, J. C.**, see Sohn, C.-W., *TED April 2013* 1302-1309
- Lee, J. H.**, see Mun, B.-J., *TED Oct. 2013* 3430-3434
- Lee, J. H.**, Simoen, E., Veloso, A., Cho, M. J., Arimura, H., Boccardi, G., Ragnarsson, L.-K., Chiarella, T., Horiguchi, N., Thean, A., and Groeseneken, G., Low Frequency Noise Analysis for Post-Treatment of Replacement Metal Gate; *TED Sept. 2013* 2960-2962
- Lee, J.-H.**, Park, C., Im, K.-S., and Lee, J.-H., AlGaIn/GaN-Based Lateral-Type Schottky Barrier Diode With Very Low Reverse Recovery Charge at High Temperature; *TED Oct. 2013* 3032-3039
- Lee, J.-H.**, see Lee, J.-H., *TED Oct. 2013* 3032-3039
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- Lee, J.-H.**, see Im, K.-S., *TED Oct. 2013* 3012-3018
- Lee, J.-S.**, see Sohn, C.-W., *TED April 2013* 1302-1309
- Lee, K.**, Kang, M., Seo, S., Kang, D., Kim, S., Li, D. H., and Shin, H., Activation Energies ( $E_a$ ) of Failure Mechanisms in Advanced NAND Flash Cells for Different Generations and Cycling; *TED March 2013* 1099-1107
- Lee, K.**, Fallahzad, B., Min, H., and Tutuc, E., Transport Gap in Dual-Gated Graphene Bilayers Using Oxides as Dielectrics; *TED Jan. 2013* 103-108
- Lee, K.**, An, T., Joo, S., Kwon, K.-W., and Kim, S., Modeling of Parasitic Fringing Capacitance in Multifin Trigate FinFETs; *TED May 2013* 1786-1789
- Lee, K.**, see Aritome, S., *TED April 2013* 1327-1333
- Lee, K. H.**, see Tan, Y. H., *TED Jan. 2013* 56-62
- Lee, K. M.**, see Bae, M., *TED Oct. 2013* 3465-3473
- Lee, K.-J.**, Park, H., Kong, J., and Chandrakasan, A. P., Demonstration of a Subthreshold FPGA Using Monolithically Integrated Graphene Interconnects; *TED Jan. 2013* 383-390
- Lee, K.-W.**, Ohara, Y., Kiyoyama, K., Bea, J.-C., Murugesan, M., Fukushima, T., Tanaka, T., and Koyanagi, M., Die-Level 3-D Integration Technology for Rapid Prototyping of High-Performance Multifunctionality Hetero-Integrated Systems; *TED Nov. 2013* 3842-3848
- Lee, M.**, see Rha, S. H., *TED March 2013* 1128-1135
- Lee, M. C.**, and Wong, H. Y., Charge Loss Mechanisms of Nitride-Based Charge Trap Flash Memory Devices; *TED Oct. 2013* 3256-3264
- Lee, M. H.**, Lin, J.-C., and Kao, C.-Y., Hetero-Tunnel Field-Effect-Transistors With Epitaxially Grown Germanium on Silicon; *TED July 2013* 2423-2427
- Lee, M. L.**, see Chi, K.-L., *TED Sept. 2013* 2821-2826
- Lee, M.-J.**, and Choi, W.-Y., Area-Dependent Photodetection Frequency Response Characterization of Silicon Avalanche Photodetectors Fabricated With Standard CMOS Technology; *TED March 2013* 998-1004
- Lee, R. T. P.**, see Johnson, D. W., *TED Oct. 2013* 3197-3203
- Lee, S.**, see Aritome, S., *TED April 2013* 1327-1333
- Lee, S.**, see Kim, J. J., *TED Nov. 2013* 3683-3689
- Lee, S. M.**, and Park, J. T., The Impact of Substrate Bias on the Steep Subthreshold Slope in Junctionless MuGFETs; *TED Nov. 2013* 3856-3861
- Lee, S.-H.**, see Kim, J.-M., *TED May 2013* 1673-1680
- Lee, S.-H.**, see Sohn, C.-W., *TED April 2013* 1302-1309
- Lee, S.-W.**, see Kim, J.-M., *TED May 2013* 1673-1680
- Lee, S.-Y.**, Kwon, J.-Y., and Han, M.-K., Investigation of Photo-Induced Hysteresis and Off-Current in Amorphous In-Ga-Zn Oxide Thin-Film Transistors Under UV Light Irradiation; *TED Aug. 2013* 2574-2579
- Lee, T.-C.**, see Chien, F.-T., *TED Feb. 2013* 799-804
- Lee, T.-H.**, Cheong, H.-W., Kwon, O., and Whang, K.-W., Application of MgCaO Cathode Layer to Plasma Display Panel for High Luminous Efficacy; *TED Jan. 2013* 301-304
- Lee, W.-H.**, see Chen, M.-J., *TED Feb. 2013* 753-758
- Lee, Y. G.**, see Kim, J. J., *TED Nov. 2013* 3683-3689
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- Leech, P. W., see Pan, Y., *TED March 2013 1202-1207*
- Lei, M. I., and Mehregany, M., Characterization of Thermoelectric Properties of Heavily Doped n-Type Polycrystalline Silicon Carbide Thin Films; *TED Jan. 2013 513-517*
- Leitner, T., Feiningstein, A., Turchetta, R., Coath, R., Chick, S., Visokolov, G., Savuskan, V., Javitt, M., Gal, L., Brouk, I., Bar-Lev, S., and Nemirovsky, Y., Measurements and Simulations of Low Dark Count Rate Single Photon Avalanche Diode Device in a Low Voltage 180-nm CMOS Image Sensor Technology; *TED June 2013 1982-1988*
- Lesecq, M., see Defrance, N., *TED March 2013 1054-1059*
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- Leung, G., and Chui, C. O., Interactions Between Line Edge Roughness and Random Dopant Fluctuation in Nonplanar Field-Effect Transistor Variability; *TED Oct. 2013 3277-3284*
- Leung, G., and Chui, C. O., Stochastic Variability in Silicon Double-Gate Lateral Tunnel Field-Effect Transistors; *TED Jan. 2013 84-91*
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- Li, C., Xue, C., Liu, Z., Cheng, B., Li, C., and Wang, Q., High-Bandwidth and High-Responsivity Top-Illuminated Germanium Photodiodes for Optical Interconnection; *TED March 2013 1183-1187*
- Li, C., see Li, C., *TED March 2013 1183-1187*
- Li, C., see Li, Z.-T., *TED April 2013 1397-1403*
- Li, C., see Ruan, Y., *TED Nov. 2013 3741-3745*
- Li, C., Zhuang, Y., Di, S., and Han, R., Subthreshold Behavior Models for Nanoscale Short-Channel Junctionless Cylindrical Surrounding-Gate MOSFETs; *TED Nov. 2013 3655-3662*
- Li, C.-W., see Chiu, J.-P., *TED March 2013 978-984*
- Li, D., She, J., Xu, S., and Deng, S., Zinc Oxide Nanowire Lateral Field Emission Devices and its Application as Display Pixel Structures; *TED Sept. 2013 2924-2930*
- Li, D. H., see Lee, K., *TED March 2013 1099-1107*
- Li, G., Zhang, W., Li, P., Sang, S., Hu, J., and Chen, X., Investigation of Charge Injection and Relaxation in Multilayer Dielectric Stacks for Capacitive RF MEMS Switch Application; *TED July 2013 2379-2387*
- Li, H., Liu, W., Cassell, A. M., Kreupl, F., and Banerjee, K., Low-Resistivity Long-Length Horizontal Carbon Nanotube Bundles for Interconnect Applications—Part II: Characterization; *TED Sept. 2013 2870-2876*
- Li, H., Liu, W., Cassell, A. M., Kreupl, F., and Banerjee, K., Low-Resistivity Long-Length Horizontal Carbon Nanotube Bundles for Interconnect Applications—Part I: Process Development; *TED Sept. 2013 2862-2869*
- Li, H., see Hu, S., *TED March 2013 1282-1287*
- Li, H. T., see Huang, P., *TED Dec. 2013 4090-4097*
- Li, H. Y., see Peng, L., *TED April 2013 1444-1450*
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- Li, J., see Ruan, Y., *TED Nov. 2013 3741-3745*
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- Li, J., see Liu, B., *TED June 2013 1852-1860*
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- Li, J.-Y., and Sturm, J. C., The Effect of Germanium Fraction on High-Field Band-to-Band Tunneling in  $p^+ \text{-SiGe}/n^+ \text{-SiGe}$  Junctions in Forward and Reverse Biases; *TED Aug. 2013 2479-2484*
- Li, K., Liu, W., Wang, Y., and Cao, M., Dispersion Characteristics of Two-Beam Folded Waveguide for Terahertz Radiation; *TED Dec. 2013 4252-4257*
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- Li, P.-H., see Chen, C.-W., *TED April 2013 1334-1341*
- Li, Q., see Chen, Y., *TED Oct. 2013 3485-3492*
- Li, Q., Zhou, X., Tang, C. W., and Lau, K. M., Material and Device Characteristics of Metamorphic  $\text{In}_{0.53}\text{Ga}_{0.47}\text{As}$  MOSHEMTs Grown on GaAs and Si Substrates by MOCVD; *TED Dec. 2013 4112-4118*
- Li, Q., see Sharma, D., *TED Dec. 2013 4206-4212*
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- Li, X., see Ni, Z., *TED April 2013 1427-1435*
- Li, X., see Fang, Z., *TED March 2013 1272-1275*
- Li, X., Wang, J., Sun, J., Song, Z., Ye, H., Zhang, Y., Zhang, L., and Zhang, L., Experimental Study on a High-Power Subterahertz Source Generated by an Overmoded Surface Wave Oscillator With Fast Startup; *TED Sept. 2013 2931-2935*
- Li, Z., and Chow, T. P., Design and Simulation of 5–20-kV GaN Enhancement-Mode Vertical Superjunction HEMT; *TED Oct. 2013 3230-3237*
- Li, Z., see Wang, Z., *TED May 2013 1607-1612*
- Li, Z., see Takashima, S., *TED Oct. 2013 3025-3031*
- Li, Z. D., see Du, C. H., *TED July 2013 2388-2394*
- Li, Z. J., see Luo, X. R., *TED Sept. 2013 2840-2846*
- Li, Z.-T., Wang, Q.-H., Tang, Y., Li, C., Ding, X.-R., and He, Z.-H., Light Extraction Improvement for LED COB Devices by Introducing a Patterned Leadframe Substrate Configuration; *TED April 2013 1397-1403*
- Li, Z.-W., see Wang, T.-P., *TED May 2013 1738-1744*
- Liang, F., Wang, G., Zhao, D., and Wang, B.-Z., Wideband Impedance Model for Coaxial Through-Silicon Vias in 3-D Integration; *TED Aug. 2013 2498-2504*
- Liang, H., see Hou, Y., *TED Oct. 2013 3474-3477*
- Liao, M.-H., see Chen, C. H., *TED Feb. 2013 767-770*
- Liao, P.-Y., see Hsieh, T.-Y., *TED May 2013 1681-1688*
- Liao, W., see Tsai, M.-Y., *TED July 2013 2331-2337*
- Liao, W.-S., see Lin, C.-L., *TED Nov. 2013 3639-3644*
- Liao, X., see Zhang, Z., *TED Jan. 2013 221-228*
- Liao, Y.-J., see Yan, C.-R., *TED March 2013 992-997*
- Libera, G. D., see Zuliani, P., *TED Dec. 2013 4020-4026*
- Liehr, M., see Veksler, D., *TED May 2013 1514-1522*
- Lilja, K. E., see Heljo, P. S., *TED Feb. 2013 870-874*
- Limiti, E., see Colangeli, S., *TED Oct. 2013 3238-3248*
- Lin, C. J., see Wang, Z.-S., *TED Jan. 2013 254-259*
- Lin, C.-F., Chen, K.-T., Tseng, W.-P., Shieh, B.-C., and Hsieh, C.-H., Reducing a Piezoelectric Field in InGaN Active Layers by Varying Pattern Sapphire Substrates; *TED Dec. 2013 4180-4184*
- Lin, C.-H., see Trinh, H. D., *TED May 2013 1555-1560*
- Lin, C.-I., see Lin, H.-C., *TED March 2013 1142-1148*
- Lin, C.-L., Hsiao, P.-H., Yeh, W.-K., Liu, H.-W., Yang, S.-R., Chen, Y.-T., Chen, K.-M., and Liao, W.-S., Effects of Fin Width on Device Performance and Reliability of Double-Gate n-Type FinFETs; *TED Nov. 2013 3639-3644*
- Lin, C.-Y., see Yan, C.-R., *TED March 2013 992-997*
- Lin, C.-Y., Chu, L.-W., and Ker, M.-D., Robust ESD Protection Design for 40-Gb/s Transceiver in 65-nm CMOS Process; *TED Nov. 2013 3625-3631*
- Lin, H.-C., Lin, C.-I., Lin, Z.-M., Shie, B.-S., and Huang, T.-Y., Characteristics of Planar Junctionless Poly-Si Thin-Film Transistors With Various Channel Thickness; *TED March 2013 1142-1148*
- Lin, H.-Y., see Wu, J.-L., *TED July 2013 2324-2330*
- Lin, J. P., see Tsai, M.-Y., *TED July 2013 2331-2337*
- Lin, J.-C., see Zhang, R., *TED March 2013 927-934*
- Lin, J.-C., see Lee, M. H., *TED July 2013 2423-2427*
- Lin, J.-C., see Chung, C.-T., *TED June 2013 1878-1883*
- Lin, J.-T., Lin, P.-H., Eng, Y.-C., and Chen, Y.-R., Novel Vertical SOI-Based 1T-DRAM With Trench Body Structure; *TED June 2013 1872-1877*
- Lin, K., see Pawashe, C., *TED Sept. 2013 2936-2942*
- Lin, K.-L., see Luo, W.-C., *TED Nov. 2013 3760-3766*
- Lin, K.-Y., see Chi, K.-L., *TED Sept. 2013 2821-2826*
- Lin, P.-H., see Lin, J.-T., *TED June 2013 1872-1877*
- Lin, S., see Wu, B., *TED Jan. 2013 241-245*
- Lin, S., Shih, T., Lu, Y., Gao, Y., Zhu, L., Chen, G., Wu, B., Guo, Z., Zhang, J., Fan, X., Chang, R. R., and Chen, Z., Determining Junction Temperature in InGaN Light-Emitting Diodes Using Low Forward Currents; *TED Nov. 2013 3775-3779*
- Lin, W.-C., see Lee, C.-I., *TED Aug. 2013 2611-2618*
- Lin, Y. C., see Trinh, H. D., *TED May 2013 1555-1560*
- Lin, Y.-C., see Luo, W.-C., *TED Nov. 2013 3760-3766*
- Lin, Y.-C., see Yan, C.-R., *TED March 2013 992-997*
- Lin, Y.-H., see Liu, S.-H., *TED Oct. 2013 3393-3399*
- Lin, Y.-S., see Chang, W.-T., *TED Nov. 2013 3663-3668*
- Lin, Y.-Y., see Tsai, M.-Y., *TED July 2013 2331-2337*
- Lin, Z.-M., see Lin, H.-C., *TED March 2013 1142-1148*
- Lind, E., see Johansson, S., *TED Feb. 2013 776-781*
- Lind, E., see Persson, K.-M., *TED Sept. 2013 2761-2767*
- Ling, M.-L., see Liu, B., *TED June 2013 1852-1860*
- Lingwood, C. J., Burt, G., Gunn, K. J., Carter, R. G., Marchesin, R., and Jensen, E., Automatic Optimization of a Klystron Interaction Structure; *TED Aug. 2013 2671-2676*
- Liou, B.-T., see Chang, J.-Y., *TED Dec. 2013 4140-4145*
- Liou, J.-K., Chen, C.-C., Chou, P.-C., Cheng, S.-Y., Tsai, J.-H., Liu, R.-C., and Liu, W.-C., Effects of the Use of an Aluminum Reflecting and an  $\text{SiO}_2$



- Insulating Layers (RIL) on the Performance of a GaN-Based Light-Emitting Diode With the Naturally Textured p-GaN Surface; *TED July 2013* 2282-2289
- Liou, R.-H.**, see Yang, F.-J., *TED Sept. 2013* 2847-2853
- Lisker, M.**, see Kraemer, T., *TED July 2013* 2209-2216
- Liu, B.**, see Ding, Y., *TED Sept. 2013* 2703-2711
- Liu, B.**, Gong, X., Zhan, C., Han, G., Chih, H.-C., Ling, M.-L., Li, J., Liu, Y., Hu, J., Daval, N., Veytizou, C., Delprat, D., Nguyen, B.-Y., and Yeo, Y.-C., Germanium Multiple-Gate Field-Effect Transistors Formed on Germanium-on-Insulator Substrate; *TED June 2013* 1852-1860
- Liu, B.**, Zhan, C., Yang, Y., Cheng, R., Guo, P., Zhou, Q., Kong, E. Y.-J., Daval, N., Veytizou, C., Delprat, D., Nguyen, B.-Y., and Yeo, Y.-C., Germanium Multiple-Gate Field-Effect Transistor With In Situ Boron-Doped Raised Source/Drain; *TED July 2013* 2135-2141
- Liu, B.**, see Tong, Y., *TED Feb. 2013* 746-752
- Liu, B.**, see Gong, X., *TED May 2013* 1640-1648
- Liu, B.**, see Zhu, L., *TED Nov. 2013* 3753-3759
- Liu, C. B.**, see Sang, L., *TED June 2013* 2077-2079
- Liu, C. H.**, see Hou, J.-L., *TED March 2013* 1178-1182
- Liu, C.-W.**, see Hsiao, C.-H., *TED June 2013* 1905-1910
- Liu, C.-W.**, see Chang, S.-J., *TED Nov. 2013* 3901-3906
- Liu, D.**, Wang, W., Qiao, S., and Yan, Y., Study of a Coaxial Gyrotron Cavity With Improved Mode Selection; *TED Dec. 2013* 4248-4251
- Liu, E.-S.**, Dillen, D. C., Nah, J., Fallahazad, B., Kim, K., and Tutuc, E., Realization and Scaling of Ge-Si<sub>1-x</sub>Ge<sub>x</sub> Core-Shell Nanowire *n*-FETs; *TED Dec. 2013* 4027-4033
- Liu, G. F.**, see Du, C. H., *TED July 2013* 2388-2394
- Liu, G. F.**, see Xu, S. X., *TED Oct. 2013* 3570-3575
- Liu, G. P.**, see Sang, L., *TED June 2013* 2077-2079
- Liu, G.-H.**, see Chen, C. H., *TED Feb. 2013* 767-770
- Liu, H.**, see Fan, J., *TED May 2013* 1536-1539
- Liu, H.-W.**, see Lin, C.-L., *TED Nov. 2013* 3639-3644
- Liu, H.-Y.**, Chou, B.-Y., Hsu, W.-C., Lee, C.-S., Sheu, J.-K., and Ho, C.-S., Enhanced AlGaIn/GaN MOS-HEMT Performance by Using Hydrogen Peroxide Oxidation Technique; *TED Jan. 2013* 213-220
- Liu, H.-Y.**, Lee, C.-S., Hsu, W.-C., Tseng, L.-Y., Chou, B.-Y., Ho, C.-S., and Wu, C.-L., Investigations of AlGaIn/AlN/GaN MOS-HEMTs on Si Substrate by Ozone Water Oxidation Method; *TED July 2013* 2231-2237
- Liu, J.-C.**, see Luo, W.-C., *TED Nov. 2013* 3760-3766
- Liu, K.**, Teng, Y., Li, L., and Qiu, J., A Gas Switch Triggered by a Microhollow Cathode Discharge (MHCD) Array With Lower Trigger Energy; *TED Feb. 2013* 875-879
- Liu, K.**, see Wang, B., *TED Aug. 2013* 2580-2585
- Liu, L.**, see Zhang, L., *TED Oct. 2013* 3527-3533
- Liu, L.**, see Gao, B., *TED April 2013* 1379-1383
- Liu, L.**, Lu, Y., and Guo, J., On Monolayer MoS<sub>2</sub> Field-Effect Transistors at the Scaling Limit; *TED Dec. 2013* 4133-4139
- Liu, L.**, Lu, Y., and Guo, J., Coupled Electro-Thermal Simulation for Self-Heating Effects in Graphene Transistors; *TED Aug. 2013* 2598-2603
- Liu, M.**, see Sun, Z., *TED Dec. 2013* 3989-3995
- Liu, P. K.**, see Xu, S. X., *TED Oct. 2013* 3570-3575
- Liu, P. K.**, see Du, C. H., *TED July 2013* 2388-2394
- Liu, P.-K.**, see Liu, Q.-L., *TED April 2013* 1463-1468
- Liu, Q.-L.**, Wang, Z.-C., Liu, P.-K., Du, C.-H., Li, H.-Q., and Xu, A.-Y., A THz Backward-Wave Oscillator Based on a Double-Grating Rectangular Waveguide; *TED April 2013* 1463-1468
- Liu, R.**, see Hu, G., *TED July 2013* 2410-2414
- Liu, R.-C.**, see Liou, J.-K., *TED July 2013* 2282-2289
- Liu, S.**, see Zhou, Q., *TED March 2013* 1075-1081
- Liu, S.**, Sun, W., Zhu, R., Huang, T., and Zhang, C., Off-State Stress Degradation Analysis and Optimization for the High-Voltage SOI-pLED MOS With Thick Gate Oxide; *TED Nov. 2013* 3632-3638
- Liu, S.-H.**, Yang, W.-L., Lin, Y.-H., Wu, C.-C., and Chao, T.-S., High-Performance Double-Layer Nickel Nanocrystal Memory by Ion Bombardment Technique; *TED Oct. 2013* 3393-3399
- Liu, T.-J.K.**, see Ho, B., *TED Jan. 2013* 153-158
- Liu, T.**, see Kang, Y., *TED April 2013* 1476-1479
- Liu, T.-J. K.**, see Chen, D., *TED March 2013* 1040-1045
- Liu, T.-J. K.**, see Damrongplaisit, N., *TED May 2013* 1790-1793
- Liu, T.-J. K.**, see Ho, B., *TED Jan. 2013* 28-33
- Liu, W.**, see Li, H., *TED Sept. 2013* 2862-2869
- Liu, W.**, see Zhu, L., *TED Nov. 2013* 3753-3759
- Liu, W.**, see Wang, W., *TED Feb. 2013* 662-669
- Liu, W.**, see Li, K., *TED Dec. 2013* 4252-4257
- Liu, W.**, see Li, H., *TED Sept. 2013* 2870-2876
- Liu, W.**, see Xu, Y., *TED June 2013* 1867-1871
- Liu, W. J.**, Sun, X. W., Tran, X. A., Fang, Z., Wang, Z. R., Wang, F., Wu, L., Zhang, J. F., Wei, J., Zhu, H. L., and Yu, H. Y., Observation of the Ambient Effect in BTI Characteristics of Back-Gated Single Layer Graphene Field Effect Transistors; *TED Aug. 2013* 2682-2686
- Liu, W. J.**, see Tran, X. A., *TED Jan. 2013* 391-395
- Liu, W.-C.**, see Liou, J.-K., *TED July 2013* 2282-2289
- Liu, X.**, see Yang, Y., *TED Feb. 2013* 739-745
- Liu, X.**, see Deng, Y., *TED Feb. 2013* 719-726
- Liu, X.**, see Gao, B., *TED April 2013* 1379-1383
- Liu, X. L.**, see Sang, L., *TED June 2013* 2077-2079
- Liu, X. Y.**, see Huang, P., *TED Dec. 2013* 4090-4097
- Liu, Y.**, see Rajendran, B., *TED Jan. 2013* 246-253
- Liu, Y.**, see Liu, B., *TED June 2013* 1852-1860
- Liu, Y.-H.**, see Chiu, J.-P., *TED March 2013* 978-984
- Liu, Y.-T.**, see Wang, Y., *TED June 2013* 2084-2089
- Liu, Z.**, see Li, C., *TED March 2013* 1183-1187
- Liu, Z.**, see Zhang, Y., *TED July 2013* 2224-2230
- Liu, Z.**, Gao, X., Zhu, Z., Qiu, Z., Wu, D., Zhang, Z.-B., and Zhang, S.-L., Solution-Processed Logic Gates Based On Nanotube/Polymer Composite; *TED Aug. 2013* 2542-2547
- Liu, Z. J.**, see Huang, T., *TED Oct. 2013* 3019-3024
- Lizzit, D.**, Palestri, P., Esseni, D., Revelant, A., and Selmi, L., Analysis of the Performance of *n*-Type FinFETs With Strained SiGe Channel; *TED June 2013* 1884-1891
- Llobera, A.**, see Gonzalez-Fernandez, A. A., *TED June 2013* 1971-1974
- Lo, C.-L.**, see Luo, W.-C., *TED Nov. 2013* 3760-3766
- Lo, C.-L.**, Hou, T.-H., Chen, M.-C., and Huang, J.-J., Dependence of Read Margin on Pull-Up Schemes in High-Density One Selector-One Resistor Crossbar Array; *TED Jan. 2013* 420-426
- Lo, C.-T.**, see Pan, T.-M., *TED July 2013* 2251-2255
- Lo, G. Q.**, see Fang, Z., *TED March 2013* 1108-1113
- Lo, G. Q.**, see Fang, Z., *TED March 2013* 1272-1275
- Lobo Ploch, N.**, Rodriguez, H., Stollmacker, C., Hoppe, M., Lapeyrade, M., Stellmach, J., Mehnke, F., Wernicke, T., Knauer, A., Kueller, V., Weyers, M., Einfeldt, S., and Kneissl, M., Effective Thermal Management in Ultraviolet Light-Emitting Diodes With Micro-LED Arrays; *TED Feb. 2013* 782-786
- Locci, S.**, see Popescu, B. V., *TED June 2013* 1975-1981
- Lodha, S.**, see Mandapati, R., *TED Oct. 2013* 3385-3392
- Lohmeyer, H.**, see Pfost, M., *TED Feb. 2013* 699-707
- Long, B.**, see Mandal, S., *TED Dec. 2013* 4219-4225
- Long, K. J.**, see Boulais, K. A., *TED Feb. 2013* 793-798
- Long, S.**, see Wang, Y., *TED May 2013* 1600-1606
- Loo, X. S.**, Yeo, K. S., and Chew, K. W. J., THRU-Based Cascade De-embedding Technique for On-Wafer Characterization of RF CMOS Devices; *TED Sept. 2013* 2892-2899
- Lopez, L.**, see Joly, Y., *TED March 2013* 1263-1267
- Lopez, P.**, see Blanco-Filgueira, B., *TED Oct. 2013* 3459-3464
- Lophitis, N.**, Antoniou, M., Udrea, F., Bauer, F. D., Nistor, I., Arnold, M., Wikstrom, T., and Vobecky, J., The Destruction Mechanism in GCTs; *TED Feb. 2013* 819-826
- Lorenz, M.**, see Klupfel, F. J., *TED June 2013* 1828-1833
- Lorenzi, P.**, Rao, R., and Irrera, F., Forming Kinetics in HfO<sub>2</sub> -Based RRAM Cells; *TED Jan. 2013* 438-443
- Low, K. L.**, see Yang, Y., *TED Dec. 2013* 4048-4056
- Low, T.**, see Grassi, R., *TED Jan. 2013* 140-146
- Lowry, M. S.**, see Boulais, K. A., *TED Feb. 2013* 793-798
- Lu, B.**, see Mاتيoli, E., *TED Oct. 2013* 3365-3370
- Lu, C.-Y.**, see Wang, Z.-S., *TED Jan. 2013* 254-259
- Lu, D.**, see Muralidhar, R., *TED March 2013* 1276-1278
- Lu, W.**, see Oh, S.-I., *TED Aug. 2013* 2537-2541
- Lu, W.**, see Lu, X., *TED Aug. 2013* 2640-2647
- Lu, X.**, Sundara-Rajan, K., Lu, W., and Mamishev, A. V., Transfer Function of Interfacial Stress Sensor for Artificial Skin Applications; *TED Aug. 2013* 2640-2647
- Lu, X.**, see Huang, T., *TED Oct. 2013* 3019-3024
- Lu, Y.**, see Liu, L., *TED Dec. 2013* 4133-4139
- Lu, Y.**, see Lin, S., *TED Nov. 2013* 3775-3779
- Lu, Y.**, see Zhu, L., *TED Nov. 2013* 3753-3759
- Lu, Y.**, see Wu, B., *TED Jan. 2013* 241-245
- Lu, Y.**, see Hou, Y., *TED Oct. 2013* 3474-3477
- Lu, Y.**, see Liu, L., *TED Aug. 2013* 2598-2603
- Lu, Z.**, see Wang, Z., *TED Jan. 2013* 471-477
- Luc, Q. H.**, see Trinh, H. D., *TED May 2013* 1555-1560

- Lucas, K.**, see Hsu, Y.-Y., *TED July 2013 2338-2345*  
**Lugani, L.**, see Tirelli, S., *TED Oct. 2013 3091-3098*  
**Lugli, P.**, see Popescu, B. V., *TED June 2013 1975-1981*  
**Lugli, P.**, see Arca, F., *TED May 2013 1663-1667*  
**Luhmann, N. C.**, see Shi, Z., *TED Sept. 2013 2912-2917*  
**Luisier, M.**, see Szabo, A., *TED July 2013 2353-2360*  
**Luisier, M.**, and Schenk, O., Gate-Stack Engineering in n-Type Ultrascaled Si Nanowire Field-Effect Transistors; *TED Oct. 2013 3325-3329*  
**Lukin, K.**, see Sattorov, M., *TED Jan. 2013 458-463*  
**Lundstrom, M.**, see Ganapathi, K., *TED March 2013 958-964*  
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**Luo, G.-L.**, see Chen, C.-W., *TED April 2013 1334-1341*  
**Luo, G.-L.**, see Chung, C.-T., *TED June 2013 1878-1883*  
**Luo, J.**, Wei, L., Lee, C.-S., Franklin, A. D., Guan, X., Pop, E., Antoniadis, D. A., and Wong, H.-S. P., Compact Model for Carbon Nanotube Field-Effect Transistors Including Nonidealities and Calibrated With Experimental Data Down to 9-nm Gate Length; *TED June 2013 1834-1843*  
**Luo, J.**, see He, F., *TED Oct. 2013 3576-3583*  
**Luo, W.-C.**, Liu, J.-C., Lin, Y.-C., Lo, C.-L., Huang, J.-J., Lin, K.-L., and Hou, T.-H., Statistical Model and Rapid Prediction of RRAM SET Speed-Disturb Dilemma; *TED Nov. 2013 3760-3766*  
**Luo, X. R.**, Cai, J. Y., Fan, Y., Fan, Y. H., Wang, X. W., Wei, J., Jang, Y. H., Zhou, K., Yin, C., Zhang, B., Li, Z. J., and Hu, G., Novel Low-Resistance Current Path UMOS With High-K Dielectric Pillars; *TED Sept. 2013 2840-2846*  
**Luo, Y.**, see Brox-Nilsen, C., *TED Oct. 2013 3424-3429*  
**Lupo, D.**, see Heljo, P. S., *TED Feb. 2013 870-874*  
**Lutz, J.**, see Baburske, R., *TED July 2013 2308-2317*  
**Lv, P.**, see Chen, J., *TED June 2013 1958-1964*  
**Lv, W.**, see Peng, Y., *TED March 2013 1208-1212*  
**Lyu, X.**, and Chen, X., An Ultralow Specific ON-Resistance LDMOST Using Charge Balance by Split p-Gate and n-Drift Regions; *TED Nov. 2013 3821-3826*  
**Lyu, X.**, and Chen, X., Vertical Power Hk-MOSFET of Hexagonal Layout; *TED May 2013 1709-1715*

## M

- Ma, F.**, see Fan, J., *TED May 2013 1536-1539*  
**Ma, J.**, see Huang, T., *TED Oct. 2013 3019-3024*  
**Maconi, A.**, Compagnoni, C. M., Spinelli, A. S., and Lacaita, A. L., New Erase Constraint for the Junction-Less Charge-Trap Memory Array in Cylindrical Geometry; *TED July 2013 2203-2208*  
**Madhian, M.**, see Hu, S., *TED March 2013 1282-1287*  
**Maffini-Alvaro, V.**, see Coquand, R., *TED Feb. 2013 727-732*  
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**Mahapatra, S.**, see Ghosh, R. K., *TED Jan. 2013 274-279*  
**Mahapatra, S.**, see Verma, R., *TED Oct. 2013 3548-3554*  
**Mahapatra, S.**, Goel, N., Desai, S., Gupta, S., Jose, B., Mukhopadhyay, S., Joshi, K., Jain, A., Islam, A. E., and Alam, M. A., A Comparative Study of Different Physics-Based NBTI Models; *TED March 2013 901-916*  
**Mahapatra, S.**, see Chaudhary, A., *TED July 2013 2096-2103*  
**Mahapatra, S.**, see Abraham, A., *TED Jan. 2013 498-501*  
**Mahapatra, S.**, see Sengupta, A., *TED Sept. 2013 2782-2787*  
**Mahapatra, S.**, see Verma, R., *TED Jan. 2013 502-505*  
**Mahapatra, S.**, see Jandhyala, S., *TED Jan. 2013 518*  
**Mahapatra, S.**, see Verma, R., *TED Aug. 2013 2695-2698*  
**Maharjan, P. P.**, see Adhikary, P., *TED May 2013 1763-1768*  
**Mahata, C.**, see Dalapati, G. K., *TED Jan. 2013 192-199*  
**Maheshwaram, S.**, Manhas, S. K., Kaushal, G., Anand, B., and Singh, N., Vertical Nanowire CMOS Parasitic Modeling and its Performance Analysis; *TED Sept. 2013 2943-2950*  
**Mahmud, M. I.**, Celik-Butler, Z., Hao, P., Srinivasan, P., Hou, F.-C., Cheng, X., Amey, B. L., and Pendharkar, S., A Physics-Based Analytical 1/f Noise Model for RESURF LDMOS Transistors; *TED Feb. 2013 677-683*  
**Mahon, S. J.**, see Sevimli, O., *TED May 2013 1632-1639*  
**Mahon, S. J.**, see Schwitter, B. K., *TED Oct. 2013 3358-3364*  
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**Majumdar, H. S.**, see Heljo, P. S., *TED Feb. 2013 870-874*  
**Makovejev, S.**, Olsen, S. H., Kilchyska, V., and Raskin, J.-P., Time and Frequency Domain Characterization of Transistor Self-Heating; *TED June 2013 1844-1851*  
**Makris, N.**, see Antonopoulos, A., *TED Nov. 2013 3726-3733*  
**Mallik, A.**, see Tewari, S., *TED May 2013 1584-1589*  
**Mallik, A.**, Chattopadhyay, A., Guin, S., and Karmakar, A., Impact of a Spacer-Drain Overlap on the Characteristics of a Silicon Tunnel Field-Effect Transistor Based on Vertical Tunneling; *TED March 2013 935-943*  
**Mamishhev, A. V.**, see Lu, X., *TED Aug. 2013 2640-2647*  
**Mandal, S.**, Long, B., and Jha, R., Study of Synaptic Behavior in Doped Transition Metal Oxide-Based Reconfigurable Devices; *TED Dec. 2013 4219-4225*  
**Mandapati, R.**, Borkar, A. S., Srinivasan, V. S. S., Bafna, P., Karkare, P., Lodha, S., and Ganguly, U., The Impact of n-p-n Selector-Based Bipolar RRAM Cross-Point on Array Performance; *TED Oct. 2013 3385-3392*  
**Maneux, C.**, see Kone, G. A., *TED March 2013 1068-1074*  
**Manhas, S. K.**, see Maheshwaram, S., *TED Sept. 2013 2943-2950*  
**Manthooth, H. A.**, see Mudholkar, M., *TED June 2013 1923-1930*  
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**Mavredakis, N.**, Bucher, M., Friedrich, R., Bazigos, A., Krummenacher, F., Sallse, J.-M., Gneiting, T., Pflanzl, W., and Seebacher, E., Measurement and Compact Modeling of 1/f Noise in HV-MOSFETs; *TED Feb. 2013 670-676*  
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- Menicanin, A. B.**, Zivanov, L. D., Damjanovic, M. S., and Maric, A. M., Low-Cost CPW Meander Inductors Utilizing Ink-Jet Printing on Flexible Substrate for High-Frequency Applications; *TED Feb. 2013 827-832*
- Menicanin, A. B.**, Zivanov, L. D., Stojanovic, G. M., Samardzic, N. M., and Randjelovic, D. V., Transport Parameters of Inkjet Printed Nanoparticle Silver on Polyimide Substrate Measured at Room and Liquid Nitrogen Temperatures; *TED Sept. 2013 2963-2967*
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- Miura-Mattausch, M.**, Arora, N. D., Seebacher, E., and Saha, S. K., Special Issue on Advanced Modeling of Power Devices and Their Applications; *TED Feb. 2013 525-527*
- Miura-Mattausch, M.**, see Mattausch, H. J., *TED Feb. 2013 653-661*
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- Miyake, M.**, see Iizuka, T., *TED Feb. 2013 684-690*
- Miyake, M.**, see Mattausch, H. J., *TED Feb. 2013 653-661*
- Miyake, M.**, Ueno, M., Feldmann, U., and Mattausch, H. J., Modeling of SiC IGBT Turn-Off Behavior Valid for Over 5-kV Circuit Simulation; *TED Feb. 2013 622-629*
- Miyake, M.**, Navarro, D., Feldmann, U., Mattausch, H. J., Kojima, T., Ogawa, T., and Ueta, T., HiSIM-IGBT: A Compact Si-IGBT Model for Power Electronic Circuit Design; *TED Feb. 2013 571-579*
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- Miyoshi, T.**, Tominari, T., Hayashi, Y., Yoshinaga, M., Oshima, T., Wada, S., and Noguchi, J., Design of Novel 300-V Field-MOS FETs With Low on-Resistance for Analog Switch Circuits; *TED Jan. 2013 354-359*
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- Mori, S.**, Morioka, N., Suda, J., and Kimoto, T., Orientation and Shape Effects on Ballistic Transport Properties in Gate-All-Around Rectangular Germanium Nanowire nFETs; *TED March 2013 944-950*
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- Mueller, S.**, Muller, J., Hoffmann, R., Yurchuk, E., Schlosser, T., Boschke, R., Paul, J., Goldbach, M., Herrmann, T., Zaka, A., Schroder, U., and Mikolajick, T., From MFM Capacitors Toward Ferroelectric Transistors: Endurance and Disturb Characteristics of HfO<sub>2</sub>-Based FeFET Devices; *TED Dec. 2013 4199-4205*
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- Munzenrieder, N.**, Petti, L., Zysset, C., Kinkeldei, T., Salvatore, G. A., and Troster, G., Flexible Self-Aligned Amorphous InGaZnO Thin-Film Transistors With Submicrometer Channel Length and a Transit Frequency of 135 MHz; *TED Sept. 2013 2815-2820*
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## N

- Na, K.-Y.**, Baek, K.-J., Lee, G.-W., and Kim, Y.-S., High-Voltage LDMOS Transistor With Split-Gate Structure for Improved Electrical Performance; *TED Oct. 2013 3515-3520*
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- Najam, F.**, Yu, Y. S., Cho, K. H., Yeo, K. H., Kim, D.-W., Hwang, J. S., Kim, S., and Hwang, S. W., Interface Trap Density of Gate-All-Around Silicon Nanowire Field-Effect Transistors With TiN Gate: Extraction and Compact Model; *TED Aug. 2013 2457-2463*
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- Nanjo, T.**, Imai, A., Suzuki, Y., Abe, Y., Oishi, T., Suita, M., Yagyu, E., and Tokuda, Y., AlGaIn Channel HEMT With Extremely High Breakdown Voltage; *TED March 2013 1046-1053*
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- Nemirovsky, Y.**, see Leitner, T., *TED June 2013 1982-1988*
- Neve, C. R.**, see Ali, K. B., *TED Oct. 2013 3478-3484*
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- Nguyen, H. Q.**, Trinh, H. D., Chang, E. Y., Lee, C. T., Wang, S. Y., Yu, H. W., Hsu, C. H., and Nguyen, C. L., In<sub>0.5</sub>Ga<sub>0.5</sub>As-Based Metal - Oxide - Semiconductor Capacitor on GaAs Substrate Using Metal - Organic Chemical Vapor Deposition; *TED Jan. 2013 235-240*
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- Nsele, S. D.**, Escotte, L., Tartarin, J.-G., Piotrowicz, S., and Delage, S. L., Broadband Frequency Dispersion Small-Signal Modeling of the Output Conductance and Transconductance in AlInN/GaN HEMTs; *TED April 2013 1372-1378*
- Numata, T.**, Uno, S., Hattori, J., Mil'nikov, G., Kamakura, Y., Mori, N., and Nakazato, K., A Self-Consistent Compact Model of Ballistic Nanowire MOSFET With Rectangular Cross Section; *TED Feb. 2013 856-862*
- Numata, T.**, see Tanaka, C., *TED April 2013 1451-1456*

## O

- O'Connell, D.**, see Shayesteh, M., *TED July 2013 2178-2185*
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- Oh, S.-I.**, Choi, G., Hwang, H., Lu, W., and Jang, J.-H., Hydrogenated IGZO Thin-Film Transistors Using High-Pressure Hydrogen Annealing; *TED Aug. 2013 2537-2541*
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- Ohi, K.**, Asubar, J. T., Nishiguchi, K., and Hashizume, T., Current Stability in Multi-Mesa-Channel AlGaIn/GaN HEMTs; *TED Oct. 2013 2997-3004*
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- Okoro, C.**, Kabos, P., Obrzut, J., Hummler, K., and Obeng, Y. S., Accelerated Stress Test Assessment of Through-Silicon Via Using RF Signals; *TED June 2013 2015-2021*
- Okumura, H.**, see Hatakeyama, T., *TED Feb. 2013 613-621*
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- Orfanidou, C. M.**, and Giapintzakis, J., Heat Channeling in Extremely Thin Silicon-on-Insulator Devices: A Simulation Study; *TED Oct. 2013* 3330-3334
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- Pan, T.-M.**, Yen, L.-C., Huang, S.-H., Lo, C.-T., and Chao, T.-S., High- $\kappa$   $Eu_2O_3$  and  $Y_2O_3$  Poly-Si Thin-Film Transistor Nonvolatile Memory Devices; *TED July 2013* 2251-2255
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- Park, S.**, see Aritome, S., *TED April 2013* 1327-1333
- Park, S.**, Cho, E. N., and Yun, I., Channel Length-Dependent Charge Detrapping on Threshold Voltage Shift of Amorphous InGaZnO TFTs Under Dynamic Bias Stress; *TED May 2013* 1689-1694
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- Peng, L.**, Zhang, L., Li, H. Y., and Tan, C. S., Cu-Cu Bond Quality Enhancement Through the Inclusion of a Hermetic Seal for 3-D IC; *TED April 2013* 1444-1450
- Peng, Y.**, Lv, W., Yao, B., Xie, J., Yang, T., Fan, G., Chen, D., Gao, P., Zhou, M., and Wang, Y., Improved Performance of Photosensitive Field-Effect Transistors Based on Palladium Phthalocyanine by Utilizing Al as Source and Drain Electrodes; *TED March 2013* 1208-1212
- Peng, Z.**, see Yin, S., *TED Dec. 2013* 4258-4262
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- Perpina, X.**, Cortes, I., Urresti-Ibanez, J., Jorda, X., and Rebollo, J., Layout Role in Failure Physics of IGBTs Under Overloading Clamped Inductive Turnoff; *TED Feb. 2013* 598-605
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- Piemonte, C.**, Ferri, A., Gola, A., Pro, T., Serra, N., Tarolli, A., and Zorzi, N., Characterization of the First FBK High-Density Cell Silicon Photomultiplier Technology; *TED Aug. 2013* 2567-2573
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- Popescu, B. V.**, Popescu, D. H., Lugli, P., Locci, S., Arca, F., Tedde, S. F., Sramek, M., and Hayden, O., Modeling and Simulation of Organic Photodetectors for Low Light Intensity Applications; *TED June 2013 1975-1981*
- Popescu, D. H.**, see Popescu, B. V., *TED June 2013 1975-1981*
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- Rajendran, B.**, Liu, Y., Seo, J.-S., Gopalakrishnan, K., Chang, L., Friedman, D. J., and Ritter, M. B., Specifications of Nanoscale Devices and Circuits for Neuromorphic Computational Systems; *TED Jan. 2013 246-253*
- Rajoriya, A.**, Shrivastava, M., Gossner, H., Schulz, T., and Rao, V. R., Sub 0.5 V Operation of Performance Driven Mobile Systems Based on Area Scaled Tunnel FET Devices; *TED Aug. 2013 2626-2633*
- Rajwade, S. R.**, Naoi, T. A., Auluck, K., Jayant, K., Van Dover, R. B., and Kan, E. C., Ferroelectric-Assisted Dual-Switching Speed DRAM-Flash Hybrid Memory; *TED June 2013 1944-1950*
- Rajwade, S. R.**, Auluck, K., Naoi, T. A., Jayant, K., and Kan, E. C., Dynamic Modeling of Dual Speed Ferroelectric and Charge Hybrid Memory; *TED Oct. 2013 3378-3384*
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- Reggiani, S.**, Barone, G., Poli, S., Gnani, E., Gnudi, A., Baccarani, G., Chuang, M.-Y., Tian, W., and Wise, R., TCAD Simulation of Hot-Carrier and Thermal Degradation in STI-LDMOS Transistors; *TED Feb. 2013 691-698*
- Reggiani, S.**, see Gnudi, A., *TED April 2013 1342-1348*
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- Rennesson, S.**, Lecourt, F., Defrance, N., Chmielowska, M., Chenot, S., Lesecq, M., Hoel, V., Okada, E., Cordier, Y., and De Jaeger, J.-C., Optimization of Al<sub>0.29</sub>Ga<sub>0.71</sub>N/GaN High Electron Mobility Heterostructures for High-Power/Frequency Performances; *TED Oct. 2013 3105-3111*
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- Rha, S. H.**, Kim, U. K., Jung, J., Kim, H. K., Jung, Y. S., Hwang, E. S., Chung, Y. J., Lee, M., Choi, J.-H., and Hwang, C. S., The Electrical Properties of Asymmetric Schottky Contact Thin-Film Transistors with Amorphous-In<sub>2</sub>Ga<sub>2</sub>ZnO<sub>7</sub>; *TED March 2013 1128-1135*
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- Rodriguez, M. P. B.**, see Gonzalez-Iglesias, D., *TED Aug. 2013 2664-2670*
- Rodriguez, S. S.**, Tinoco, J. C., Martinez-Lopez, A. G., Alvarado, J., and Raskin, J.-P., Parasitic Gate Capacitance Model for Triple-Gate FinFETs; *TED Nov. 2013 3710-3717*
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## S

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 Saunier, P., Schuette, M. L., Chou, T. M., Tserng, H. Q., Ketterson, A., Beam, E., Pilla, M., and Gao, X., InAlN Barrier Scaled Devices for Very High  $f_T$  and for Low-Voltage RF Applications; *TED Oct. 2013 3099-3104*  
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- Shayesteh, M.**, Huet, K., Toque-Tresonne, I., Negro, R., Daunt, C. L. M., Kelly, N., O'Connell, D., Yu, R., Djara, V., Carolan, P. B., Petkov, N., and Duffy, R., Atomically Flat Low-Resistive Germanide Contacts Formed by Laser Thermal Anneal; *TED July 2013* 2178-2185
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- Srivastava, P.**, Das, J., Mertens, R. P., and Borghs, G., Silicon Substrate Engineered High-Voltage High-Temperature GaN-DHFETs; *TED July 2013* 2217-2223



- Srivastava, V.**, see Panda, P. C., *TED Sept. 2013 2918-2923*
- Starzak, L.**, Zubert, M., Janicki, M., Torzewicz, T., Napieralski, M., Jablonski, G., and Napieralski, A., Behavioral Approach to SiC MPS Diode Electrothermal Model Generation; *TED Feb. 2013 630-638*
- Stecher, M.**, see Pfost, M., *TED Feb. 2013 699-707*
- Stefanov, K. D.**, Zhang, Z., Damerell, C., Burt, D., and Kar-Roy, A., Performance of Deep-Depletion Buried-Channel *n*-MOSFETs for CMOS Image Sensors; *TED Dec. 2013 4173-4179*
- Stellmach, J.**, see Lobo Ploch, N., *TED Feb. 2013 782-786*
- Stephenson, R. J.**, see Damrongplisit, N., *TED May 2013 1790-1793*
- Studel, S.**, see Chasin, A., *TED Oct. 2013 3407-3412*
- Stewart, M. D.**, see Koppinen, P. J., *TED Jan. 2013 78-83*
- Stivala, S.**, see Adamo, G., *TED Nov. 2013 3718-3725*
- Stoffels, S.**, see Marcon, D., *TED Oct. 2013 3132-3141*
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- Stolyarova, S.**, see Nemirovsky, Y., *TED May 2013 1575-1583*
- Stoppa, D.**, see Pancheri, L., *TED Oct. 2013 3442-3449*
- Strachan, J. P.**, Torrezan, A. C., Miao, F., Pickett, M. D., Yang, J. J., Yi, W., Medeiros-Ribeiro, G., and Williams, R. S., State Dynamics and Modeling of Tantalum Oxide Memristors; *TED July 2013 2194-2202*
- Strukov, D. B.**, see Ramu, A. T., *TED June 2013 1938-1943*
- Sturm, J. C.**, see Li, J.-Y., *TED Aug. 2013 2479-2484*
- Su, P.**, see Chen, Y.-N., *TED March 2013 1092-1098*
- Su, P.**, see Hu, V. P.-H., *TED Oct. 2013 3596-3600*
- Su, P.**, see Chou, S.-H., *TED April 2013 1485-1489*
- Su, P.**, see Hu, V. P.-H., *TED Jan. 2013 147-152*
- Su, P.**, see Fan, M.-L., *TED June 2013 2038-2044*
- Su, R.-Y.**, see Yang, F.-J., *TED Nov. 2013 3835-3841*
- Su, R.-Y.**, see Yang, F.-J., *TED Sept. 2013 2847-2853*
- Su, S.**, see Gong, X., *TED May 2013 1640-1648*
- Subirats, A.**, Garros, X., Husseini, J. E., Royer, C. L., Reimbold, G., and Ghibaudo, G., Impact of Single Charge Trapping on the Variability of Ultrascaled Planar and Trigate FDSOI MOSFETs: Experiment Versus Simulation; *TED Aug. 2013 2604-2610*
- Suda, J.**, see Nanen, Y., *TED March 2013 1260-1262*
- Suda, J.**, see Miyake, H., *TED Sept. 2013 2768-2775*
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- Sugano, T.**, see Yamada, T., *TED Jan. 2013 260-267*
- Sugano, T.**, see Yamada, T., *TED Dec. 2013 3996-4001*
- Sugano, T.**, see Yamada, T., *TED Dec. 2013 4281-4283*
- Sugawa, S.**, see Watanabe, T., *TED June 2013 1916-1922*
- Sugawa, S.**, see Kuroda, R., *TED Oct. 2013 3555-3561*
- Suita, M.**, see Nanjo, T., *TED March 2013 1046-1053*
- Sumathy, M.**, Augustin, D., Datta, S. K., Christie, L., and Kumar, L., Design and RF Characterization of W-band Meander-Line and Folded-Waveguide Slow-Wave Structures for TWTs; *TED May 2013 1769-1775*
- Sun, G.**, see Wu, K. Y., *TED April 2013 1298-1301*
- Sun, J.**, see Li, X., *TED Sept. 2013 2931-2935*
- Sun, J.**, see Song, W., *TED Jan. 2013 494-497*
- Sun, J. Y.-C.**, see Xie, Q., *TED June 2013 1814-1819*
- Sun, M.**, see Zhang, Y., *TED July 2013 2224-2230*
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- Sun, W.**, see Shi, L., *TED Jan. 2013 346-353*
- Sun, X.**, see Ho, B., *TED Jan. 2013 28-33*
- Sun, X. W.**, see Liu, W. J., *TED Aug. 2013 2682-2686*
- Sun, Y.**, Jaffray, D. A., and Yeow, J. T. W., The Design and Fabrication of Carbon-Nanotube-Based Field Emission X-Ray Cathode With Ballast Resistor; *TED Jan. 2013 464-470*
- Sun, Z.**, Zhang, M., Huo, Z., Li, S., Yang, Y., Qiu, S., Wu, H., and Liu, M., Effect of Damage in Source and Drain on the Endurance of a 65-nm-Node NOR Flash Memory; *TED Dec. 2013 3989-3995*
- Sunar, S. H. B.**, see Tan, C. C., *TED Oct. 2013 3541-3547*
- Sundara-Rajan, K.**, see Lu, X., *TED Aug. 2013 2640-2647*
- Suri, M.**, Querlioz, D., Bichler, O., Palma, G., Vianello, E., Vuillaume, D., Gamrat, C., and DeSalvo, B., Bio-Inspired Stochastic Computing Using Binary CBRAM Synapses; *TED July 2013 2402-2409*
- Sutaria, K. B.**, see Velamala, J. B., *TED Nov. 2013 3645-3654*
- Suzuki, D.**, see Futagawa, M., *TED Aug. 2013 2634-2639*
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- Svensson, J.**, see Persson, K.-M., *TED Sept. 2013 2761-2767*
- Svetlitzka, A.**, see Nemirovsky, Y., *TED May 2013 1575-1583*
- Swain, P. S.**, Shrivastava, M., Gossner, H., and Baghini, M. S., Device-Circuit Co-design for Beyond 1 GHz 5 V Level Shifter Using DeMOS Transistors; *TED Nov. 2013 3827-3834*
- Swandono, S.**, see Penumatcha, A. V., *TED March 2013 923-926*
- Syamal, B.**, see Koley, K., *TED Jan. 2013 63-69*
- Szabo, A.**, and Luisier, M., Under-the-Barrier Model: An Extension of the Top-of-the-Barrier Model to Efficiently and Accurately Simulate Ultrascaled Nanowire Transistors; *TED July 2013 2353-2360*

## T

- Tabatabaei, S. M.**, see Khaliji, K., *TED Aug. 2013 2464-2470*
- Tabone, C.**, see Villalon, A., *TED May 2013 1568-1574*
- Tabone, C.**, see Villalon, A., *TED Dec. 2013 4079-4084*
- Tabrizian, R.**, Casinovi, G., and Ayazi, F., Temperature-Stable Silicon Oxide (SiLOx) Micromechanical Resonators; *TED Aug. 2013 2656-2663*
- Tada, M.**, Sakamoto, T., Banno, N., Okamoto, K., Iguchi, N., Hada, H., and Miyamura, M., Improved ON-State Reliability of Atom Switch Using Alloy Electrodes; *TED Oct. 2013 3534-3540*
- Tadjar, M. J.**, see Wang, A., *TED Oct. 2013 3149-3156*
- Tadjar, M. J.**, see Martin-Horcajo, S., *TED Dec. 2013 4105-4111*
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- Takagi, S.**, see Kim, S., *TED Oct. 2013 3342-3350*
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- Takahashi, S.**, see Ando, Y., *TED Sept. 2013 2788-2794*
- Takao, K.**, see Nakajima, A., *TED Feb. 2013 646-652*
- Takao, K.**, and Ohashi, H., Accurate Power Circuit Loss Estimation Method for Power Converters With Si-IGBT and SiC-Diode Hybrid Pair; *TED Feb. 2013 606-612*
- Takashima, S.**, Li, Z., and Chow, T. P., Sidewall Dominated Characteristics on Fin-Gate AlGaN/GaN MOS-Channel-HEMTs; *TED Oct. 2013 3025-3031*
- Takenaka, I.**, see Ando, Y., *TED Sept. 2013 2788-2794*
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- Takizawa, T.**, see Umeda, H., *TED Feb. 2013 771-775*
- Talghader, J. J.**, see Gawarikar, A. S., *TED Aug. 2013 2586-2591*
- Talukder, S.**, Kumar, P., and Pratap, R., Electric Current-Induced Mass Flow in Very Thin Infinite Metallic Films; *TED Sept. 2013 2877-2883*
- Tan, C. C.**, Ong, V. K. S., and Radhakrishnan, K., Investigation on the Direct Method for the Extraction of Semiconductor Material Parameters Using the EBIC Line Scan: Planar-Collector Configuration; *TED July 2013 2346-2352*
- Tan, C. C.**, see Dalapati, G. K., *TED Jan. 2013 192-199*
- Tan, C. C.**, Ong, V. K. S., Radhakrishnan, K., and Sunar, S. H. B., Determination of Diffusion Length for the Finite Thickness Normal-Collector Configuration Using EBIC Technique; *TED Oct. 2013 3541-3547*
- Tan, C. S.**, see Peng, L., *TED April 2013 1444-1450*
- Tan, C. S.**, see Tan, Y. H., *TED Jan. 2013 56-62*
- Tan, H. R.**, see Dalapati, G. K., *TED Jan. 2013 192-199*
- Tan, Y. H.**, Yew, K. S., Lee, K. H., Chang, Y.-J., Chen, K.-N., Ang, D. S., Fitzgerald, E. A., and Tan, C. S., Al<sub>2</sub>O<sub>3</sub> Interface Engineering of Germanium Epitaxial Layer Grown Directly on Silicon; *TED Jan. 2013 56-62*
- Tan, Z.**, see Chen, Q., *TED April 2013 1421-1426*
- Tanaka, A.**, see Izuka, T., *TED Feb. 2013 684-690*
- Tanaka, C.**, Saitoh, M., Ota, K., Uchida, K., and Numata, T., SPICE-Based Performance Analysis of Trigate Silicon Nanowire CMOS Circuits; *TED April 2013 1451-1456*
- Tanaka, T.**, see Ishida, M., *TED Oct. 2013 3053-3059*
- Tanaka, T.**, see Umeda, H., *TED Feb. 2013 771-775*
- Tanaka, T.**, see Lee, K.-W., *TED Nov. 2013 3842-3848*
- Tang, B.**, Robinson, C., Zhang, W. D., Zhang, J. F., Degraeve, R., Blomme, P., Toledano-Luque, M., Van den bosch, G., Govoreanu, B., and Van Houdt, J., Read and Pass Disturbance in the Programmed States of Floating Gate

- Flash Memory Cells With High- $\kappa$  Interpoly Gate Dielectric Stacks; *TED July 2013 2261-2267*
- Tang, C. W.**, see Li, Q., *TED Dec. 2013 4112-4118*
- Tang, F.**, Chen, D. G., Wang, B., and Bermak, A., Low-Power CMOS Image Sensor Based on Column-Parallel Single-Slope/SAR Quantization Scheme; *TED Aug. 2013 2561-2566*
- Tang, T.-A.**, see Hu, G., *TED July 2013 2410-2414*
- Tang, Y.**, see Li, Z.-T., *TED April 2013 1397-1403*
- Tang, Y.**, see Shinohara, K., *TED Oct. 2013 2982-2996*
- Tao, X.**, and Zhang, D., Thermal Parameter Extraction Method for Light-Emitting Diode (LED) Systems; *TED June 2013 1931-1937*
- Taoka, N.**, see Zhang, R., *TED March 2013 927-934*
- Taoka, N.**, see Kim, S., *TED Aug. 2013 2512-2517*
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- Tedde, S. F.**, see Popescu, B. V., *TED June 2013 1975-1981*
- Tedde, S. F.**, see Arca, F., *TED May 2013 1663-1667*
- Tee, E. K. C.**, Antoniou, M., Udrea, F., Holke, A., Pilkington, S. J., Pal, D. K., Yew, N. L., and Abidin, W. A. B. W. Z., 200 V Superjunction N-Type Lateral Insulated-Gate Bipolar Transistor With Improved Latch-Up Characteristics; *TED April 2013 1412-1415*
- Teng, Y.**, see Liu, K., *TED Feb. 2013 875-879*
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- Teramoto, A.**, see Kuroda, R., *TED Oct. 2013 3555-3561*
- Teramoto, A.**, see Watanabe, T., *TED June 2013 1916-1922*
- Tewari, S.**, Biswas, A., and Mallik, A., Impact of Different Barrier Layers and Indium Content of the Channel on the Analog Performance of InGaAs MOSFETs; *TED May 2013 1584-1589*
- Thakur, P. K.**, see Abraham, A., *TED Jan. 2013 498-501*
- Thanigaivelan, T.**, see Zhou, Q., *TED April 2013 1310-1317*
- Thapa, A.**, Zhao, Y., Poudel, P., Elbohy, H., Vaagensmith, B., Zhang, Z., Fong, H., and Qiao, Q., Evaluation of Counter Electrodes Composed by Carbon Nanofibers and Nanoparticles in Dye-Sensitized Solar Cells; *TED Nov. 2013 3883-3887*
- Thean, A.**, see Lee, J. W., *TED Sept. 2013 2960-2962*
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- Tillack, B.**, see Kraemer, T., *TED July 2013 2209-2216*
- Tinoco, J. C.**, see Rodriguez, S. S., *TED Nov. 2013 3710-3717*
- Tirelli, S.**, Lugani, L., Marti, D., Carlin, J.-F., Grandjean, N., and Bolognesi, C. R., AllnN-Based HEMTs for Large-Signal Operation at 40 GHz; *TED Oct. 2013 3091-3098*
- Tochigi, Y.**, see Kuroda, R., *TED Oct. 2013 3555-3561*
- Toffoli, A.**, see Hubert, Q., *TED July 2013 2268-2275*
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- Tolner, H.**, see Chen, Y., *TED Oct. 2013 3485-3492*
- Tominari, T.**, see Miyoshi, T., *TED Jan. 2013 354-359*
- Tong, Y.**, Han, G., Liu, B., Yang, Y., Wang, L., Wang, W., and Ye, Y.-C., Ni(Ge<sub>1-x</sub>Sn<sub>x</sub>) Ohmic Contact Formation on N-Type Ge<sub>1-x</sub>Sn<sub>x</sub> Using Selenium or Sulfur Implant and Segregation; *TED Feb. 2013 746-752*
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- Torricelli, F.**, Milani, L., Richelli, A., Colalongo, L., Pasotti, M., and Kovacs-Vajna, Z. M., Half-MOS Single-Poly EEPROM Cell in Standard CMOS Process; *TED June 2013 1892-1897*
- Tortorelli, I.**, see Zuliani, P., *TED Dec. 2013 4020-4026*
- Torzewicz, T.**, see Starzak, L., *TED Feb. 2013 630-638*
- Toulon, G.**, Bourennane, A., and Isoird, K., Analysis and Optimization of a Thyristor Structure Using Backside Schottky Contacts Suited for the High Temperature; *TED Nov. 2013 3814-3820*
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- Tran, V.**, see Ho, B., *TED Jan. 2013 153-158*
- Tran, X. A.**, see Liu, W. J., *TED Aug. 2013 2682-2686*
- Tran, X. A.**, Zhu, W., Liu, W. J., Ye, Y. C., Nguyen, B. Y., and Yu, H. Y., Self-Selection Unipolar HfO<sub>2</sub>-Based RRAM; *TED Jan. 2013 391-395*
- Travish, G.**, see Guo, G., *TED Nov. 2013 3895-3900*
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- Trinh, H. D.**, Lin, Y. C., Chang, E. Y., Lee, C.-T., Wang, S.-Y., Nguyen, H. Q., Chiu, Y. S., Luc, Q. H., Chang, H.-C., Lin, C.-H., Jang, S., and Diaz, C. H., Electrical Characteristics of Al<sub>2</sub>O<sub>3</sub>/InSb MOSCAPs and the Effect of Postdeposition Annealing Temperatures; *TED May 2013 1555-1560*
- Trinh, H. D.**, see Nguyen, H. Q., *TED Jan. 2013 235-240*
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- Tsai, C.-L.**, see Yang, F.-J., *TED Sept. 2013 2847-2853*
- Tsai, C.-N.**, and Kirkici, H., Field-Emission Characteristics of Selectively Grown CNTs; *TED Jan. 2013 478-481*
- Tsai, H.-Y.**, see Wang, T.-P., *TED May 2013 1738-1744*
- Tsai, J.-H.**, see Liou, J.-K., *TED July 2013 2282-2289*
- Tsai, M.-Y.**, Huang, P.-S., Huang, C.-Y., Jao, H., Huang, B., Wu, B., Lin, Y.-Y., Liao, W., Huang, J., Huang, L., Shih, S., and Lin, J. P., Investigation on Cu TSV-Induced KOZ in Silicon Chips: Simulations and Experiments; *TED July 2013 2331-2337*
- Tsai, M.-Y.**, see Hsieh, T.-Y., *TED May 2013 1681-1688*
- Tsai, T.-H.**, and Hornsey, R., A Quad-Sampling Wide-Dynamic-Range Pulse-Frequency Modulation Pixel; *TED Feb. 2013 805-811*
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- Tu, H. T. C.**, see Tue, P. T., *TED Jan. 2013 320-326*
- Tu, H. T. C.**, Inoue, S., Tue, P. T., Miyasako, T., and Shimoda, T., Investigation of Polysilazane-Based SiO<sub>2</sub> Gate Insulator for Oxide Semiconductor Thin-Film Transistors; *TED March 2013 1149-1153*
- Tuan, H.-C.**, see Yang, F.-J., *TED Sept. 2013 2847-2853*
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- Tue, P. T.**, Miyasako, T., Li, J., Tu, H. T. C., Inoue, S., Tokumitsu, E., and Shimoda, T., High-Performance Solution-Processed ZnInZnO Thin-Film Transistors; *TED Jan. 2013 320-326*
- Tue, P. T.**, see Tu, H. T. C., *TED March 2013 1149-1153*
- Turchetta, R.**, see Leitner, T., *TED June 2013 1982-1988*
- Turuvekere, S.**, Karumuri, N., Rahman, A. A., Bhattacharya, A., DasGupta, A., and DasGupta, N., Gate Leakage Mechanisms in AlGaIn/GaN and AllnN/GaN HEMTs: Comparison and Modeling; *TED Oct. 2013 3157-3165*
- Tutuc, E.**, see Liu, E.-S., *TED Dec. 2013 4027-4033*
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**Umana-Membreno, G. A.**, Klein, B., Smith, E. P. G., Antoszewski, J., Plis, E., Johnson, S. M., Krishna, S., Rhiger, D. R., and Faraone, L., Electron Transport in InAsSb-Based nBn Photodetector Structures; *TED Jan. 2013* 510-512  
**Umeda, H.**, Takizawa, T., Anda, Y., Ueda, T., and Tanaka, T., High-Voltage Isolation Technique Using Fe Ion Implantation for Monolithic Integration of AlGaIn/GaN Transistors; *TED Feb. 2013* 771-775  
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## V

- Vaagensmith, B.**, *see* Thapa, A., *TED Nov. 2013* 3883-3887  
**van Dal, M. J. H.**, *see* van Hemert, T., *TED March 2013* 1005-1010  
**van den Bosch, G.**, *see* Tang, B., *TED July 2013* 2261-2267  
**van der Toorn, R.**, *see* Vitale, F., *TED Nov. 2013* 3870-3876  
**Van Dover, R. B.**, *see* Rajwade, S. R., *TED June 2013* 1944-1950  
**van Hemert, T.**, Kaleli, B., Hueting, R. J. E., Esseni, D., van Dal, M. J. H., and Schmitz, J., Strain and Conduction-Band Offset in Narrow n-type FinFETs; *TED March 2013* 1005-1010  
**van Hemert, T.**, and Hueting, R. J. E., Piezoelectric Strain Modulation in FETs; *TED Oct. 2013* 3265-3270  
**Van Houdt, J.**, *see* Tang, B., *TED July 2013* 2261-2267  
**Van Hove, M.**, Kang, X., Stoffels, S., Wellekens, D., Ronchi, N., Venegas, R., Geens, K., and Decoutere, S., Fabrication and Performance of Au-Free AlGaIn/GaN-on-Silicon Power Devices With Al<sub>2</sub>O<sub>3</sub> and Si<sub>3</sub>N<sub>4</sub>/Al<sub>2</sub>O<sub>3</sub> Gate Dielectrics; *TED Oct. 2013* 3071-3078  
**van Kuijk, H.**, *see* Arai, T., *TED Oct. 2013* 3450-3458  
**Van Zeghbroeck, B.**, *see* Marks, Z. D., *TED Jan. 2013* 200-205  
**Vandelli, L.**, Padovani, A., Larcher, L., and Bersuker, G., Microscopic Modeling of Electrical Stress-Induced Breakdown in Poly-Crystalline Hafnium Oxide Dielectrics; *TED May 2013* 1754-1762  
**Vandenbergh, W. G.**, *see* Walke, A. M., *TED March 2013* 1019-1027  
**Vandenbergh, W. G.**, *see* Verreck, D., *TED July 2013* 2128-2134  
**Vandenbergh, W. G.**, *see* Verreck, D., *TED Oct. 2013* 3605  
**Vandenbergh, W. G.**, *see* Fischetti, M. V., *TED Nov. 2013* 3862-3869  
**Vandenbergh, W. G.**, *see* Kao, K.-H., *TED Jan. 2013* 6-12  
**Vandooren, A.**, *see* Der Agopian, P. G., *TED Aug. 2013* 2493-2497  
**Vandooren, A.**, *see* Walke, A. M., *TED Dec. 2013* 4057-4064  
**Vandooren, A.**, *see* Walke, A. M., *TED March 2013* 1019-1027  
**Vandooren, A.**, *see* Walke, A. M., *TED Dec. 2013* 4065-4072  
**Varesi, E.**, *see* Zuliani, P., *TED Dec. 2013* 4020-4026  
**Veksler, D.**, Bersuker, G., Koudymov, A., and Liehr, M., Analysis of Charge-Pumping Data for Identification of Dielectric Defects; *TED May 2013* 1514-1522  
**Velamala, J. B.**, Sutaria, K. B., Shimizu, H., Awano, H., Sato, T., Wirth, G., and Cao, Y., Compact Modeling of Statistical BTI Under Trapping/De trapping; *TED Nov. 2013* 3645-3654  
**Veloso, A.**, *see* dos Santos, S. D., *TED Jan. 2013* 444-450  
**Veloso, A.**, *see* Lee, J. W., *TED Sept. 2013* 2960-2962  
**Veloso, A.**, *see* Simoen, E., *TED Nov. 2013* 3849-3855  
**Vemuri, R. N. P.**, Marrs, M. A., and Alford, T. L., Kinetic Stress Testing and the Influence of Long-Time Anneals on the Behavior of IZO Thin Film Transistors; *TED May 2013* 1656-1662  
**Vendrame, L.**, *see* Ghetti, A., *TED Oct. 2013* 3291-3297  
**Venegas, R.**, *see* Van Hove, M., *TED Oct. 2013* 3071-3078  
**Venkatesan, S.**, *see* Adhikary, P., *TED May 2013* 1763-1768  
**Venkatesan, S.**, *see* Ngo, E., *TED July 2013* 2372-2378  
**Venugopalan, S.**, Karim, M. A., Salahuddin, S., Niknejad, A. M., and Hu, C. C., Phenomenological Compact Model for QM Charge Centroid in Multigate FETs; *TED April 2013* 1480-1484  
**Verhulst, A. S.**, *see* Walke, A. M., *TED Dec. 2013* 4057-4064

- Verhulst, A. S.**, *see* Verreck, D., *TED Oct. 2013* 3605  
**Verhulst, A. S.**, *see* Verreck, D., *TED July 2013* 2128-2134  
**Verhulst, A. S.**, *see* Walke, A. M., *TED Dec. 2013* 4065-4072  
**Verhulst, A. S.**, *see* Kao, K.-H., *TED Jan. 2013* 6-12  
**Verma, M.**, *see* Kang, Y., *TED April 2013* 1476-1479  
**Verma, R.**, Bhattacharya, S., and Mahapatra, S., Solution of Time Dependent Joule Heat Equation for a Graphene Sheet Under Thomson Effect; *TED Oct. 2013* 3548-3554  
**Verma, R.**, Bhattacharya, S., and Mahapatra, S., Thermoelectric Performance of a Single-Layer Graphene Sheet for Energy Harvesting; *TED June 2013* 2064-2070  
**Verma, R.**, Bhattacharya, S., and Mahapatra, S., Physics-Based Solution for Electrical Resistance of Graphene Under Self-Heating Effect; *TED Jan. 2013* 502-505  
**Verma, R.**, Bhattacharya, S., and Mahapatra, S., Modeling of Temperature and Field-Dependent Electron Mobility in a Single-Layer Graphene Sheet; *TED Aug. 2013* 2695-2698  
**Verreck, D.**, *see* Walke, A. M., *TED Dec. 2013* 4057-4064  
**Verreck, D.**, Verhulst, A. S., Kao, K.-H., Vandenbergh, W. G., De Meyer, K., and Groeseneken, G., Quantum Mechanical Performance Predictions of p-n-i-n Versus Pocketed Line Tunnel Field-Effect Transistors; *TED July 2013* 2128-2134  
**Verreck, D.**, Verhulst, A. S., Kao, K.-H., Vandenbergh, W. G., De Meyer, K., and Groeseneken, G., Corrections to "Quantum Mechanical Performance Predictions of p-n-i-n Versus Pocketed Line Tunnel Field-Effect Transistors" [Jul 13 2128-2134]; *TED Oct. 2013* 3605  
**Vescan, A.**, *see* Hahn, H., *TED Oct. 2013* 3005-3011  
**Vetury, R.**, *see* Choi, S., *TED Jan. 2013* 159-162  
**Vetury, R.**, *see* Choi, S., *TED June 2013* 1898-1904  
**Veytizou, C.**, *see* Liu, B., *TED June 2013* 1852-1860  
**Veytizou, C.**, *see* Liu, B., *TED July 2013* 2135-2141  
**Vianello, E.**, *see* Suri, M., *TED July 2013* 2402-2409  
**Villalon, A.**, Le Royer, C., Casse, M., Cooper, D., Hartmann, J.-M., Allain, F., Tabone, C., Andrieu, F., and Cristoloveanu, S., Experimental Investigation of the Tunneling Injection Boosters for Enhanced  $I_{ON}$  ETSOI Tunnel FET; *TED Dec. 2013* 4079-4084  
**Villalon, A.**, Le Royer, C., Cristoloveanu, S., Casse, M., Cooper, D., Mazurier, J., Previtali, B., Tabone, C., Perreau, P., Hartmann, J.-M., Scheiblin, P., Allain, F., Andrieu, F., Weber, O., and Faynot, O., High-Performance Ultrathin Body c-SiGe Channel FDSOI pMOSFETs Featuring SiGe Source and Drain:  $V_{th}$  Tuning, Variability, Access Resistance, and Mobility Issues; *TED May 2013* 1568-1574  
**Visokolov, G.**, *see* Leitner, T., *TED June 2013* 1982-1988  
**Vitale, F.**, and van der Toorn, R., Lumped Models for Assessment and Optimization of Bipolar Device RF Noise Performance; *TED Nov. 2013* 3870-3876  
**Vizzotto, W. D.**, *see* Bender, V. C., *TED Nov. 2013* 3799-3806  
**Vlasov, A. N.**, *see* Antonsen, T. M., *TED Sept. 2013* 2906-2911  
**Vobecky, J.**, *see* Lophitis, N., *TED Feb. 2013* 819-826  
**Vohra, A.**, *see* Panda, P. C., *TED Sept. 2013* 2918-2923  
**Vollebregt, S.**, Banerjee, S., Beenakker, K., and Ishihara, R., Size-Dependent Effects on the Temperature Coefficient of Resistance of Carbon Nanotube Vias; *TED Dec. 2013* 4085-4089  
**von Hauff, P. A.**, *see* Bothe, K. M., *TED Dec. 2013* 4119-4124  
**von Wenckstern, H.**, *see* Klupfel, F. J., *TED June 2013* 1828-1833  
**Vuillaume, D.**, *see* Suri, M., *TED July 2013* 2402-2409

## W

- Wada, M.**, *see* Hayashi, Y., *TED Jan. 2013* 42-48  
**Wada, S.**, *see* Miyoshi, T., *TED Jan. 2013* 354-359  
**Wada, S.**, *see* Shimamoto, S., *TED Jan. 2013* 360-365  
**Wadefalk, N.**, *see* Schlee, J., *TED Jan. 2013* 206-212  
**Wadefalk, N.**, *see* Rodilla, H., *TED May 2013* 1625-1631  
**Wakejima, A.**, Wilson, A. F., Mase, S., Joka, T., and Egawa, T., Evaluation of Electron Trapping Speed of AlGaIn/GaN HEMT With Real-Time Electroluminescence and Pulsed  $I-V$  Measurements; *TED Oct. 2013* 3183-3189  
**Walke, A. M.**, Vandooren, A., Kaczer, B., Verhulst, A. S., Rooyackers, R., Simoen, E., Heyns, M. M., Rao, V. R., Groeseneken, G., Collaert, N., and Thean, A. V.-Y., Part II: Investigation of Subthreshold Swing in Line Tunnel FETs Using Bias Stress Measurements; *TED Dec. 2013* 4065-4072  
**Walke, A. M.**, Vandenbergh, W. G., Kao, K.-H., Vandooren, A., and Groeseneken, G., A Simulation Study on Process Sensitivity of a Line Tunnel Field-Effect Transistor; *TED March 2013* 1019-1027

- Walke, A. M.,** Verhulst, A. S., Vandooren, A., Verreck, D., Simoen, E., Rao, V. R., Groeseneken, G., Collaert, N., and Thean, A. V. Y., Part I: Impact of Field-Induced Quantum Confinement on the Subthreshold Swing Behavior of Line TFETs; *IED Dec. 2013 4057-4064*
- Wan, Q.,** see Jiang, J., *IED June 2013 1951-1957*
- Wang, A.,** see Martin-Horcajo, S., *IED Dec. 2013 4105-4111*
- Wang, A.,** see Ni, Z., *IED April 2013 1427-1435*
- Wang, A.,** Tadjer, M. J., Anderson, T. J., Baranyai, R., Pomeroy, J. W., Feygelson, T. I., Hobart, K. D., Pate, B. B., Calle, F., and Kuball, M., Impact of Intrinsic Stress in Diamond Capping Layers on the Electrical Behavior of AlGaIn/GaN HEMTs; *IED Oct. 2013 3149-3156*
- Wang, B.,** see Tang, F., *IED Aug. 2013 2561-2566*
- Wang, B.,** Zhang, T., Liu, K., and Qiu, J., Characteristics of the GaAs Photoconductive Semiconductor Switch Operated in Linear-Alike Mode; *IED Aug. 2013 2580-2585*
- Wang, B.-Z.,** see Liang, F., *IED Aug. 2013 2498-2504*
- Wang, C.-L.,** see Chien, F.-T., *IED Feb. 2013 799-804*
- Wang, C.-P.,** Chen, T.-T., Fu, H.-K., Chang, T.-L., and Chou, P.-T., Transient Analysis of Partial Thermal Characteristics of Multistructure Power LEDs; *IED May 2013 1668-1672*
- Wang, C.-P.,** see Chen, T.-T., *IED Nov. 2013 3794-3798*
- Wang, F.,** see Liu, W. J., *IED Aug. 2013 2682-2686*
- Wang, G.,** see Liang, F., *IED Aug. 2013 2498-2504*
- Wang, H.,** see Xu, S. X., *IED Oct. 2013 3570-3575*
- Wang, H.-C.,** see Chiu, H.-C., *IED Nov. 2013 3877-3882*
- Wang, H.-L.,** Chou, P.-H., and Wu, C.-H., Microwave Determination of Quantum-Well Capture and Escape Time in Light-Emitting Transistors; *IED March 2013 1088-1091*
- Wang, J.,** see Zhang, L., *IED Oct. 2013 3527-3533*
- Wang, J.,** see Deng, Y., *IED Feb. 2013 719-726*
- Wang, J.,** see Li, X., *IED Sept. 2013 2931-2935*
- Wang, L.,** see Yang, Y., *IED Dec. 2013 4048-4056*
- Wang, L.,** see Cai, J., *IED July 2013 2432-2435*
- Wang, L.,** see Gong, X., *IED May 2013 1640-1648*
- Wang, L.,** see Hu, G., *IED July 2013 2410-2414*
- Wang, L.,** see Tong, Y., *IED Feb. 2013 746-752*
- Wang, L.,** see Xiao, X., *IED Dec. 2013 4159-4164*
- Wang, L. L.,** Kuo, J. B., and Zhang, S., Analytical Drain Current Model for Poly-Si Thin-Film Transistors Biased in Strong Inversion Considering Degradation of Tail States at Grain Boundary; *IED March 2013 1122-1127*
- Wang, L.-G.,** see Wang, Y., *IED June 2013 2001-2007*
- Wang, M.,** see Chen, J., *IED June 2013 1958-1964*
- Wang, M.,** see Chen, W., *IED Jan. 2013 295-300*
- Wang, M.,** He, R., and Zhang, D., A Unified Physical-Based Model of Series Resistance of Polycrystalline Silicon Thin-Film Transistors With Explicit Analytical Solutions; *IED Sept. 2013 2827-2833*
- Wang, N.-F.,** Tsai, Y.-Z., and Hsu, F.-H., Effect of Surface Texture on Al-Y Codoped ZnO/n-Si Heterojunction Solar Cells; *IED Dec. 2013 4073-4078*
- Wang, P.-Y.,** and Tsui, B.-Y., Si<sub>x</sub>Ge<sub>1-x</sub> Epitaxial Tunnel Layer Structure for P-Channel Tunnel FET Improvement; *IED Dec. 2013 4098-4104*
- Wang, Q.,** see Li, C., *IED March 2013 1183-1187*
- Wang, Q.-H.,** see Li, Z.-T., *IED April 2013 1397-1403*
- Wang, R.,** see Fan, J., *IED Sept. 2013 2747-2753*
- Wang, R.,** see Jiang, X., *IED Nov. 2013 3669-3675*
- Wang, R.,** Jiang, X., Yu, T., Fan, J., Chen, J., Pan, D. Z., and Huang, R., Investigations on Line-Edge Roughness (LER) and Line-Width Roughness (LWR) in Nanoscale CMOS Technology: Part II—Experimental Results and Impacts on Device Variability; *IED Nov. 2013 3676-3682*
- Wang, S.,** Leung, G., Pan, A., Chui, C. O., and Gupta, P., Evaluation of Digital Circuit-Level Variability in Inversion-Mode and Junctionless FinFET Technologies; *IED July 2013 2186-2193*
- Wang, S.,** see Hou, Y., *IED March 2013 1228-1235*
- Wang, S. Y.,** see Nguyen, H. Q., *IED Jan. 2013 235-240*
- Wang, S.-Y.,** see Trinh, H. D., *IED May 2013 1555-1560*
- Wang, T.,** see Chiu, J.-P., *IED March 2013 978-984*
- Wang, T.-P.,** Li, Z.-W., and Tsai, H.-Y., Performance Improvement of a 0.18- $\mu\text{m}$  CMOS Microwave Amplifier Using Micromachined Suspended Inductors: Theory and Experiment; *IED May 2013 1738-1744*
- Wang, W.,** see Tong, Y., *IED Feb. 2013 746-752*
- Wang, W.,** see Liu, D., *IED Dec. 2013 4248-4251*
- Wang, W.,** see Guo, G., *IED Nov. 2013 3895-3900*
- Wang, W.,** Tudor, B., Xi, X., Liu, W., and Lee, F. J., An Accurate and Robust Compact Model for High-Voltage MOS IC Simulation; *IED Feb. 2013 662-669*
- Wang, W.,** see Cai, J., *IED July 2013 2432-2435*
- Wang, W.,** see Yang, Y., *IED Dec. 2013 4048-4056*
- Wang, W.,** see Gong, X., *IED May 2013 1640-1648*
- Wang, X.,** see Shi, W., *IED April 2013 1361-1364*
- Wang, X.,** see Ni, Z., *IED April 2013 1427-1435*
- Wang, X.,** see BenMoussa, A., *IED May 2013 1701-1708*
- Wang, X.,** Cheng, B., Brown, A. R., Millar, C., Kuang, J. B., Nassif, S., and Asenov, A., Interplay Between Process-Induced and Statistical Variability in 14-nm CMOS Technology Double-Gate SOI FinFETs; *IED Aug. 2013 2485-2492*
- Wang, X.,** Adamu-Lema, F., Cheng, B., and Asenov, A., Geometry, Temperature, and Body Bias Dependence of Statistical Variability in 20-nm Bulk CMOS Technology: A Comprehensive Simulation Analysis; *IED May 2013 1547-1554*
- Wang, X. P.,** see Fang, Z., *IED March 2013 1272-1275*
- Wang, X. P.,** see Fang, Z., *IED March 2013 1108-1113*
- Wang, X. W.,** see Luo, X. R., *IED Sept. 2013 2840-2846*
- Wang, Y.,** see Yin, S., *IED Dec. 2013 4258-4262*
- Wang, Y.,** Hu, H.-F., Yu, C.-H., and Lan, H., High-Performance Split-Gate Enhanced UMOSFET With p-Pillar Structure; *IED July 2013 2302-2307*
- Wang, Y.,** see Fan, J., *IED April 2013 1457-1462*
- Wang, Y.,** Yang, L.-A., Mao, W., Long, S., and Hao, Y., Modulation of Multidomain in AlGaIn/GaN HEMT-Like Planar Gunn Diode; *IED May 2013 1600-1606*
- Wang, Y.,** see Zhang, R., *IED July 2013 2395-2401*
- Wang, Y.,** see Cai, J., *IED July 2013 2432-2435*
- Wang, Y.,** Zhang, Y., Wang, L.-G., and Yu, C., Single-Event Burnout Hardening of Power UMOSFETs With Optimized Structure; *IED June 2013 2001-2007*
- Wang, Y.,** Jiao, W.-L., Hu, H.-F., Liu, Y.-T., and Gao, J., Split-Gate-Enhanced Power UMOSFET With Soft Reverse Recovery; *IED June 2013 2084-2089*
- Wang, Y.,** Zhang, Y., and Yu, C., Research of Single-Event Burnout in Power UMOSFETs; *IED Feb. 2013 887-892*
- Wang, Y.,** see Peng, Y., *IED March 2013 1208-1212*
- Wang, Y.,** see Li, K., *IED Dec. 2013 4252-4257*
- Wang, Y.,** see Fan, J., *IED Sept. 2013 2747-2753*
- Wang, Y. J.,** see Huang, P., *IED Dec. 2013 4090-4097*
- Wang, Y.-H.,** see Chang, Y.-C., *IED Dec. 2013 4234-4239*
- Wang, Z.,** see Chen, Q., *IED April 2013 1421-1426*
- Wang, Z.,** see Qin, S., *IED July 2013 2256-2260*
- Wang, Z.,** see Chen, D., *IED Jan. 2013 451-457*
- Wang, Z.,** Zhang, B., Chen, W., and Li, Z., A Closed-Form Charge Control Model for the Threshold Voltage of Depletion- and Enhancement-Mode AlGaIn/GaN Devices; *IED May 2013 1607-1612*
- Wang, Z.,** Gong, Y., Wei, Y., Duan, Z., Zhang, Y., Yue, L., Gong, H., Yin, H., Lu, Z., Xu, J., and Feng, J., High-Power Millimeter-Wave BWO Driven by Sheet Electron Beam; *IED Jan. 2013 471-477*
- Wang, Z.,** see Xia, C., *IED March 2013 1279-1281*
- Wang, Z. G.,** see Sang, L., *IED June 2013 2077-2079*
- Wang, Z. R.,** see Liu, W. J., *IED Aug. 2013 2682-2686*
- Wang, Z.-C.,** see Liu, Q.-L., *IED April 2013 1463-1468*
- Wang, Z.-S.,** Yin, T.-Y., Ying, T.-H., Lee, Y.-J., Lu, C.-Y., Arakawa, H., and Lin, C. J., Impact of Moisture From Passivation on Endurance and Retention of NAND Flash Memory; *IED Jan. 2013 254-259*
- Wann, C.,** see Xie, Q., *IED June 2013 1814-1819*
- Warburton, R. E.,** Intermite, G., Myronov, M., Allred, P., Leadley, D. R., Gallacher, K., Paul, D. J., Pilgrim, N. J., Lever, L. J. M., Ikonik, Z., Kellsall, R. W., Huante-Ceron, E., Knights, A. P., and Buller, G. S., Ge-on-Si Single-Photon Avalanche Diode Detectors: Design, Modeling, Fabrication, and Characterization at Wavelengths 1310 and 1550 nm; *IED Nov. 2013 3807-3813*
- Watanabe, K.,** see Hayashi, Y., *IED Jan. 2013 42-48*
- Watanabe, T.,** Teramoto, A., Nakao, Y., Sugawa, S., and Ohmi, T., Low-Interface-Trap-Density and High-Breakdown-Electric-Field SiN Films on GaN Formed by Plasma Pretreatment Using Microwave-Excited Plasma-Enhanced Chemical Vapor Deposition; *IED June 2013 1916-1922*
- Weber, O.,** see Villalon, A., *IED May 2013 1568-1574*
- Webster, E. A. G.,** Grant, L. A., and Henderson, R. K., Transient Single-Photon Avalanche Diode Operation, Minority Carrier Effects, and Bipolar Latch Up; *IED March 2013 1188-1194*
- Webster, E. A. G.,** and Henderson, R. K., A TCAD and Spectroscopy Study of Dark Count Mechanisms in Single-Photon Avalanche Diodes; *IED Dec. 2013 4014-4019*
- Wegeland, T.,** see Camarchia, V., *IED Oct. 2013 3592-3595*
- Wei, C.-Y.,** see Chang, Y.-C., *IED Dec. 2013 4234-4239*

Wei, H. Y., see Sang, L., *IED June 2013 2077-2079*  
 Wei, J., see Liu, W. J., *IED Aug. 2013 2682-2686*  
 Wei, J., see Si, J., *IED Oct. 2013 3223-3229*  
 Wei, J., see Luo, X. R., *IED Sept. 2013 2840-2846*  
 Wei, K. L., see Huang, P., *IED Dec. 2013 4090-4097*  
 Wei, L., see Luo, J., *IED June 2013 1834-1843*  
 Wei, Y., see Gong, H., *IED Jan. 2013 482-486*  
 Wei, Y., see Wang, Z., *IED Jan. 2013 471-477*  
 Wei, Y., see Guo, G., *IED Nov. 2013 3895-3900*  
 Wei, Y., see Hou, Y., *IED March 2013 1228-1235*  
 Wei, Z., see Ninomiya, T., *IED April 2013 1384-1389*  
 Wellekens, D., see Van Hove, M., *IED Oct. 2013 3071-3078*  
 Wen, C.-Y., Slovin, G., Bain, J. A., Schlesinger, T. E., Pileggi, L. T., and Paramesh, J., A Phase-Change Via-Reconfigurable CMOS LC VCO; *IED Dec. 2013 3979-3988*  
 Wennberg, M., see Cil, K., *IED Jan. 2013 433-437*  
 Wernersson, L.-E., see Persson, K.-M., *IED Sept. 2013 2761-2767*  
 Wernicke, T., see Lobo Ploch, N., *IED Feb. 2013 782-786*  
 Weyers, M., see Lobo Ploch, N., *IED Feb. 2013 782-786*  
 Whang, K.-W., see Lee, T.-H., *IED Jan. 2013 301-304*  
 Wick, P. L., see Boulais, K. A., *IED Feb. 2013 793-798*  
 Wikstrom, T., see Lophitis, N., *IED Nov. 2013 819-826*  
 Williams, N., see Kan'an, N., *IED May 2013 1649-1655*  
 Williams, R. S., see Strachan, J. P., *IED July 2013 2194-2202*  
 Wilson, A. F., see Wakejima, A., *IED Oct. 2013 3183-3189*  
 Wirth, G., see Velamala, J. B., *IED Nov. 2013 3645-3654*  
 Wise, R., see Reggiani, S., *IED Feb. 2013 691-698*  
 Witters, L., see Franco, J., *IED Jan. 2013 396-404*  
 Witters, L., see Franco, J., *IED Jan. 2013 405-412*  
 Wolfs, B., see BenMoussa, A., *IED May 2013 1701-1708*  
 Won, C.-H., see Im, K.-S., *IED Oct. 2013 3012-3018*  
 Wong, H. Y., see Lee, M. C., *IED Oct. 2013 3256-3264*  
 Wong, H.-S. P., see Luo, J., *IED June 2013 1834-1843*  
 Wong, J., Perturbation Theory for Solar Cell Efficiency II—Delineating Series Resistance; *IED March 2013 917-922*  
 Wong, J. C., see Shinohara, K., *IED Oct. 2013 2982-2996*  
 Wong, M., see Zhao, S., *IED June 2013 1965-1970*  
 Wong, M., see Chen, W., *IED Jan. 2013 295-300*  
 Wong, M., see Chen, J., *IED June 2013 1958-1964*  
 Wong, M. H., see Johnson, D. W., *IED Oct. 2013 3197-3203*  
 Woo, J. C. S., see Chang, H.-Y., *IED Jan. 2013 92-96*  
 Woo, J. H., see Gatabi, I. R., *IED March 2013 1082-1087*  
 Woo, J.-H., Choi, J.-M., and Choi, Y.-K., Analytical Threshold Voltage Model of Junctionless Double-Gate MOSFETs With Localized Charges; *IED Sept. 2013 2951-2955*  
 Wood, B., see Ho, B., *IED Jan. 2013 153-158*  
 Wouters, D. J., see Govoreanu, B., *IED Aug. 2013 2471-2478*  
 Wouters, D. J., see Chen, Y. Y., *IED March 2013 1114-1121*  
 Wright, E. L., see Cook, A. M., *IED March 2013 1257-1259*  
 Wu, B., see Lin, S., *IED Nov. 2013 3775-3779*  
 Wu, B., see Tsai, M.-Y., *IED July 2013 2331-2337*  
 Wu, B., Lin, S., Shih, T.-M., Gao, Y., Lu, Y., Zhu, L., Chen, G., and Chen, Z., Junction-Temperature Determination in InGaN Light-Emitting Diodes Using Reverse Current Method; *IED Jan. 2013 241-245*  
 Wu, C.-C., see Chung, C.-T., *IED June 2013 1878-1883*  
 Wu, C.-C., see Liu, S.-H., *IED Oct. 2013 3393-3399*  
 Wu, C.-H., see Wang, H.-L., *IED March 2013 1088-1091*  
 Wu, C.-J., see Wu, J.-L., *IED July 2013 2324-2330*  
 Wu, C.-L., see Liu, H.-Y., *IED July 2013 2231-2237*  
 Wu, D., see Chen, Q., *IED April 2013 1421-1426*  
 Wu, D., see Liu, Z., *IED Aug. 2013 2542-2547*  
 Wu, H., see Sun, Z., *IED Dec. 2013 3989-3995*  
 Wu, J., see Persson, K.-M., *IED Sept. 2013 2761-2767*  
 Wu, J.-L., Chen, Y.-C., Lin, H.-Y., Chu, S.-Y., Chang, C.-C., Wu, C.-J., and Juang, Y.-D., Effect of ZnO Buffer Layer on the Bending Durability of ZnO:Ga Films Grown on Flexible Substrates: Investigation of Surface Energy, Electrical, Optical, and Structural Properties; *IED July 2013 2324-2330*  
 Wu, K. Y., Cheng, H. H., Hung, K. M., and Sun, G., Theoretical Analysis of n-Type Si-Based Resonant Tunneling Diodes Deposited on Either Partially or Fully Relaxed SiGe Buffer Layers; *IED April 2013 1298-1301*  
 Wu, L., see Liu, W. J., *IED Aug. 2013 2682-2686*  
 Wu, R., Sin, J. K. O., and Yue, C. P., High-Q Backside Silicon-Embedded Inductor for Power Applications in /spl mu/H and MHz Range; *IED Jan. 2013 339-345*

Wu, S. L., see Chen, T. P., *IED Jan. 2013 229-234*  
 Wu, T.-L., see Marcon, D., *IED Oct. 2013 3132-3141*  
 Wu, Y.-C., see Han, M.-H., *IED June 2013 1807-1813*  
 Wu, Y.-R., see Chi, K.-L., *IED Sept. 2013 2821-2826*  
 Wurfl, J., see Hilt, O., *IED Oct. 2013 3084-3090*

## X

Xhakoni, A., see Le-Thai, H., *IED Oct. 2013 3601-3604*  
 Xi, X., see Wang, W., *IED Feb. 2013 662-669*  
 Xia, C., Cheng, X., Wang, Z., Cao, D., Jia, T., Yu, Y., and Shen, D., on-Resistance Degradation Induced by Hot-Carrier Injection in SOI SJ-LDMOS; *IED March 2013 1279-1281*  
 Xia, K., and Niu, G., Effect of Boundary Conditions on Thermal Noise of Intrinsic Terminal Currents in Bipolar Transistors Pertinent to Quasi-Ballistic Transport; *IED Dec. 2013 4226-4233*  
 Xiao, L., see Du, C. H., *IED July 2013 2388-2394*  
 Xiao, X., Deng, W., He, X., and Zhang, S., a-IGZO TFTs With Inductively Coupled Plasma Chemical Vapor Deposited SiO<sub>x</sub> Gate Dielectric; *IED Aug. 2013 2687-2690*  
 Xiao, X., Deng, W., Chi, S., Shao, Y., He, X., Wang, L., and Zhang, S., Effect of O<sub>2</sub> Flow Rate During Channel Layer Deposition on Negative Gate Bias Stress-Induced V<sub>th</sub> Shift of a-IGZO TFTs; *IED Dec. 2013 4159-4164*  
 Xie, C., see Xu, Y., *IED June 2013 1867-1871*  
 Xie, J., see Peng, Y., *IED March 2013 1208-1212*  
 Xie, Q., Lee, C.-J., Xu, J., Wann, C., Sun, J. Y.-C., and Taur, Y., Comprehensive Analysis of Short-Channel Effects in Ultrathin SOI MOSFETs; *IED June 2013 1814-1819*  
 Xifeng, L., Enlong, X., and Jianhua, Z., Low-Temperature Solution-Processed Zirconium Oxide Gate Insulators for Thin-Film Transistors; *IED Oct. 2013 3413-3416*  
 Xinjian, N., Chaojun, L., Yinghui, L., and Hongfu, L., A Study on 94 GHz Low-Voltage, Low-Current Gyrotron; *IED Nov. 2013 3907-3912*  
 Xiong, J.-Y., Zheng, S.-W., and Fan, G.-H., Performance Enhancement of Blue InGaN Light-Emitting Diodes With InGaN Barriers and Dip-Shaped Last Barrier; *IED Nov. 2013 3925-3929*  
 Xiong, Y. Z., see Hu, S., *IED March 2013 1282-1287*  
 Xu, A.-Y., see Liu, Q.-L., *IED April 2013 1463-1468*  
 Xu, C., and Banerjee, K., Physical Modeling of the Capacitance and Capacitive Coupling Noise of Through-Oxide Vias in FDSOI-Based Ultra-High Density 3-D ICs; *IED Jan. 2013 123-131*  
 Xu, J., see Hou, Y., *IED March 2013 1228-1235*  
 Xu, J., see Wang, Z., *IED Jan. 2013 471-477*  
 Xu, J., see Gong, H., *IED Jan. 2013 482-486*  
 Xu, J., see Xie, Q., *IED June 2013 1814-1819*  
 Xu, J., see Guo, G., *IED Nov. 2013 3895-3900*  
 Xu, N., see Ho, B., *IED Jan. 2013 153-158*  
 Xu, N., see Damrongplait, N., *IED May 2013 1790-1793*  
 Xu, N., see Zhang, Y., *IED Aug. 2013 2677-2681*  
 Xu, Q., see Fan, J., *IED Sept. 2013 2747-2753*  
 Xu, S., see Li, D., *IED Sept. 2013 2924-2930*  
 Xu, S., see Chen, D., *IED Jan. 2013 451-457*  
 Xu, S. X., see Du, C. H., *IED July 2013 2388-2394*  
 Xu, S. X., Liu, P. K., Liu, G. F., Geng, Z. H., Du, C. H., Shi, S. H., Wang, H., Gu, W., and Zhang, S. C., Design of a High-Harmonic Gyrotron With a Permanent Magnet System; *IED Oct. 2013 3570-3575*  
 Xu, X., see Fan, J., *IED Sept. 2013 2747-2753*  
 Xu, Y., Bai, F., Liu, W., and Xie, C., An Effective Capacitance Model for 28-nm and Beyond Copper Interconnect; *IED June 2013 1867-1871*  
 Xue, C., see Gong, X., *IED May 2013 1640-1648*  
 Xue, C., see Li, C., *IED March 2013 1183-1187*

## Y

Yadav, C., see Khandelwal, S., *IED Oct. 2013 3216-3222*  
 Yadir-Pecht, O., see Spivak, A., *IED Jan. 2013 305-313*  
 Yagy, E., see Nanjo, T., *IED March 2013 1046-1053*  
 Yam, C.-Y., see Huang, J. Z., *IED July 2013 2111-2119*  
 Yamada, R., see Ishida, T., *IED Feb. 2013 863-869*  
 Yamada, T., Nakajima, Y., Hanajiri, T., and Sugano, T., Suppression of Drain-Induced Barrier Lowering in Silicon-on-Insulator MOSFETs Through Source/Drain Engineering for Low-Operating-Power System-on-Chip Applications; *IED Jan. 2013 260-267*

- Yamada, T.**, Abe, S., Nakajima, Y., Hanajiri, T., Toyabe, T., and Sugano, T., Quantitative Extraction of Electric Flux in the Buried-Oxide Layer and Investigation of Its Effects on MOSFET Characteristics; *TED Dec. 2013 3996-4001*
- Yamada, T.**, Nakajima, Y., Hanajiri, T., and Sugano, T., Corrections to "Suppression of Drain-Induced Barrier Lowering in Silicon-on-Insulator MOSFETs Through Source/Drain Engineering for Low-Operating-Power System-on-Chip Applications"; *TED Dec. 2013 4281-4283*
- Yamada, Y.**, see Shimoida, K., *TED Jan. 2013 117-122*
- Yamamoto, M.**, see Hattori, F., *TED Oct. 2013 3249-3255*
- Yamauchi, Y.**, Kamakura, Y., and Matsuoka, T., Scalable Virtual-Ground Multilevel-Cell Floating-Gate Flash Memory; *TED Aug. 2013 2518-2524*
- Yan, C.-R.**, Chen, J. F., Lee, Y.-J., Liao, Y.-J., Lin, C.-Y., Chen, C.-Y., Lin, Y.-C., and Chen, H.-H., Extraction and Analysis of Interface States in 50-nm nand Flash Devices; *TED March 2013 992-997*
- Yan, Y.**, see Liu, D., *TED Dec. 2013 4248-4251*
- Yanagida, Y.**, see Shimamoto, S., *TED Jan. 2013 360-365*
- Yang, C.**, see Ni, Z., *TED April 2013 1427-1435*
- Yang, C.**, see Delker, C. J., *TED Sept. 2013 2900-2905*
- Yang, C.-W.**, see Chiu, H.-C., *TED Nov. 2013 3877-3882*
- Yang, D.**, see Lee, J., *TED June 2013 1989-1994*
- Yang, F.-J.**, Gong, J., Su, R.-Y., Tsai, C.-L., Tuan, H.-C., and Huang, C.-F., RESURF p-n Diode With a Buried Layer, a Comprehensive Study; *TED Nov. 2013 3835-3841*
- Yang, F.-J.**, Gong, J., Su, R.-Y., Huo, K.-H., Tsai, C.-L., Cheng, C.-C., Liou, R.-H., Tuan, H.-C., and Huang, C.-F., A 700-V Device in High-Voltage Power ICs With Low On-State Resistance and Enhanced SOA; *TED Sept. 2013 2847-2853*
- Yang, H.**, see Lee, C.-K., *TED Dec. 2013 4165-4172*
- Yang, J. J.**, see Strachan, J. P., *TED July 2013 2194-2202*
- Yang, K.**, see Lee, J., *TED June 2013 1989-1994*
- Yang, L.-A.**, see Wang, Y., *TED May 2013 1600-1606*
- Yang, M. Y.**, see Kamiya, K., *TED Oct. 2013 3400-3406*
- Yang, S.**, Huang, S., Schnee, M., Zhao, Q.-T., Schubert, J., and Chen, K. J., Fabrication and Characterization of Enhancement-Mode High- $\kappa$ LaLuO<sub>3</sub>-AlGaIn/GaN MIS-HEMTs; *TED Oct. 2013 3040-3046*
- Yang, S. Y.**, see Sang, L., *TED June 2013 2077-2079*
- Yang, S.-R.**, see Lin, C.-L., *TED Nov. 2013 3639-3644*
- Yang, T.**, see Peng, Y., *TED March 2013 1208-1212*
- Yang, T.-Y.**, see Hsiao, C.-H., *TED June 2013 1905-1910*
- Yang, T.-Y.**, see Chang, Y.-C., *TED Dec. 2013 4234-4239*
- Yang, W.-L.**, see Liu, S.-H., *TED Oct. 2013 3393-3399*
- Yang, X.**, see Deng, Y., *TED Feb. 2013 719-726*
- Yang, Y.**, Han, G., Guo, P., Wang, W., Gong, X., Wang, L., Low, K. L., and Yeo, Y.-C., Germanium-Tin P-Channel Tunneling Field-Effect Transistor: Device Design and Technology Demonstration; *TED Dec. 2013 4048-4056*
- Yang, Y.**, see Liu, B., *TED July 2013 2135-2141*
- Yang, Y.**, see Tong, Y., *TED Feb. 2013 746-752*
- Yang, Y.**, see Sun, Z., *TED Dec. 2013 3989-3995*
- Yang, Y.**, see Ni, Z., *TED April 2013 1427-1435*
- Yang, Y.**, Markov, S., Cheng, B., Zain, A. S. M., Liu, X., and Cheng, A., Back-Gate Bias Dependence of the Statistical Variability of FDSOI MOSFETs With Thin BOX; *TED Feb. 2013 739-745*
- Yang, Y.**, see Gong, X., *TED May 2013 1640-1648*
- Yang, Y.-Y.**, see Kang, T.-K., *TED July 2013 2415-2418*
- Yao, B.**, see Peng, Y., *TED March 2013 1208-1212*
- Yasuda, T.**, see Kim, S., *TED Aug. 2013 2512-2517*
- Yasuhara, R.**, see Ninomiya, T., *TED April 2013 1384-1389*
- Ye, D.**, see Hou, Y., *TED Oct. 2013 3474-3477*
- Ye, H.**, see Li, X., *TED Sept. 2013 2931-2935*
- Ye, Z.**, see Pal, A., *TED July 2013 2238-2245*
- Yeh, C.-T.**, and Ker, M.-D., High Area-Efficient ESD Clamp Circuit With Equivalent RC-Based Detection Mechanism in a 65-nm CMOS Process; *TED March 2013 1011-1018*
- Yeh, K.-L.**, and Guo, J.-C., Narrow-Width Effect on High-Frequency Performance and RF Noise of Sub-40-nm Multifinger nMOSFETs and pMOSFETs; *TED Jan. 2013 109-116*
- Yeh, S.-T.**, see Chi, K.-L., *TED Sept. 2013 2821-2826*
- Yeh, W.-K.**, see Lin, C.-L., *TED Nov. 2013 3639-3644*
- Yeh, Y.-H.**, see Chi, K.-L., *TED Sept. 2013 2821-2826*
- Yen, L.-C.**, see Pan, T.-M., *TED July 2013 2251-2255*
- Yeo, S.-H.**, see Chang, J.-Y., *TED Dec. 2013 4140-4145*
- Yeo, K. H.**, see Najam, F., *TED Aug. 2013 2457-2463*
- Yeo, K. S.**, see Loo, X. S., *TED Sept. 2013 2892-2899*
- Yeo, Y. C.**, see Tran, X. A., *TED Jan. 2013 391-395*
- Yeo, Y.-C.**, see Gong, X., *TED May 2013 1640-1648*
- Yeo, Y.-C.**, see Zhou, Q., *TED April 2013 1310-1317*
- Yeo, Y.-C.**, see Liu, B., *TED July 2013 2135-2141*
- Yeo, Y.-C.**, see Yang, Y., *TED Dec. 2013 4048-4056*
- Yeo, Y.-C.**, see Tong, Y., *TED Feb. 2013 746-752*
- Yeo, Y.-C.**, see Liu, B., *TED June 2013 1852-1860*
- Yeo, Y.-C.**, see Ding, Y., *TED Sept. 2013 2703-2711*
- Yeow, J. T. W.**, see Sun, Y., *TED Jan. 2013 464-470*
- Yew, K. S.**, see Tan, Y. H., *TED Jan. 2013 56-62*
- Yew, N. L.**, see Tee, E. K. C., *TED April 2013 1412-1415*
- Yi, W.**, see Strachan, J. P., *TED July 2013 2194-2202*
- Yigletu, F. M.**, Khandelwal, S., Fjeldly, T. A., and Iniguez, B., Compact Charge-Based Physical Models for Current and Capacitances in AlGaIn/GaN HEMTs; *TED Nov. 2013 3746-3752*
- Yin, C.**, see Luo, X. R., *TED Sept. 2013 2840-2846*
- Yin, H.**, see Guo, G., *TED Nov. 2013 3895-3900*
- Yin, H.**, see Wang, Z., *TED Jan. 2013 471-477*
- Yin, O. Z.**, see Mutharasu, D., *TED July 2013 2290-2295*
- Yin, S.**, Zhang, Z., Peng, Z., Zheng, Q., and Wang, Y., A New Impregnated Dispenser Cathode; *TED Dec. 2013 4258-4262*
- Yin, T.-Y.**, see Wang, Z.-S., *TED Jan. 2013 254-259*
- Ying, T.-H.**, see Wang, Z.-S., *TED Jan. 2013 254-259*
- Yinghui, L.**, see Xinjian, N., *TED Nov. 2013 3907-3912*
- Yiptong, A.**, see Damrongplait, N., *TED May 2013 1790-1793*
- Yokoyama, M.**, see Kim, S., *TED Aug. 2013 2512-2517*
- Yokoyama, M.**, see Kim, S., *TED Oct. 2013 3342-3350*
- Yonai, J.**, see Arai, T., *TED Oct. 2013 3450-3458*
- Yonezawa, A.**, see Kuroda, R., *TED Oct. 2013 3555-3561*
- Yoo, H.**, see Aritome, S., *TED April 2013 1327-1333*
- Yoo, S.-W.**, Son, Y., and Shin, H., Capture Cross Section of Traps Causing Random Telegraph Noise in Gate-Induced Drain Leakage Current; *TED March 2013 1268-1271*
- Yoon, Y.**, see Ganapathi, K., *TED March 2013 958-964*
- Yoshinaga, M.**, see Miyoshi, T., *TED Jan. 2013 354-359*
- You, P.-L.**, and Huang, T.-H., A Switched Inductor Topology Using a Switchable Artificial Grounded Metal Guard Ring for Wide-FTR MMW VCO Applications; *TED Feb. 2013 759-766*
- Young, C. D.**, see Rojas, J. P., *TED Oct. 2013 3305-3309*
- Young, S. J.**, see Chen, T. P., *TED Jan. 2013 229-234*
- Young, S.-J.**, see Hsiao, C.-H., *TED June 2013 1905-1910*
- Young, S.-J.**, see Chang, S.-J., *TED Nov. 2013 3901-3906*
- Yu, B.**, see Gao, B., *TED April 2013 1379-1383*
- Yu, C.**, see Wang, Y., *TED Feb. 2013 887-892*
- Yu, C.**, see Wang, Y., *TED June 2013 2001-2007*
- Yu, C.-H.**, see Wang, Y., *TED July 2013 2302-2307*
- Yu, H.**, see Gao, B., *TED April 2013 1379-1383*
- Yu, H. W.**, see Nguyen, H. Q., *TED Jan. 2013 235-240*
- Yu, H. Y.**, see Tran, X. A., *TED Jan. 2013 391-395*
- Yu, H. Y.**, see Fang, Z., *TED March 2013 1272-1275*
- Yu, H. Y.**, see Liu, W. J., *TED Aug. 2013 2682-2686*
- Yu, M.-Y.**, see Chen, C. H., *TED Feb. 2013 767-770*
- Yu, R.**, see Shayesteh, M., *TED July 2013 2178-2185*
- Yu, T.**, see Wang, R., *TED Nov. 2013 3676-3682*
- Yu, T.**, see Jiang, X., *TED Nov. 2013 3669-3675*
- Yu, Y.**, see Xia, C., *TED March 2013 1279-1281*
- Yu, Y. S.**, see Najam, F., *TED Aug. 2013 2457-2463*
- Yuan, L.**, see Chiah, S. B., *TED July 2013 2164-2170*
- Yue, C. P.**, see Wu, R., *TED Jan. 2013 339-345*
- Yue, L.**, see Wang, Z., *TED Jan. 2013 471-477*
- Yue, L.**, see Guo, G., *TED Nov. 2013 3895-3900*
- Yue, L.**, see Hou, Y., *TED March 2013 1228-1235*
- Yun, I.**, see Park, S., *TED May 2013 1689-1694*
- Yurchuk, E.**, see Mueller, S., *TED Dec. 2013 4199-4205*

## Z

- Zahid, F.**, see Zhang, L., *TED Oct. 2013 3527-3533*
- Zaidi, Z. H.**, and Houston, P. A., Highly Sensitive UV Detection Mechanism in AlGaIn/GaN HEMTs; *TED Sept. 2013 2776-2781*
- Zain, A. S. M.**, see Yang, Y., *TED Feb. 2013 739-745*
- Zaka, A.**, see Mueller, S., *TED Dec. 2013 4199-4205*
- Zanoni, E.**, see Marcon, D., *TED Oct. 2013 3132-3141*

- Zanoni, E., Meneghini, M., Chini, A., Marcon, D., and Meneghesso, G., AlGaIn/GaN-Based HEMTs Failure Physics and Reliability: Mechanisms Affecting Gate Edge and Schottky Junction; *TED Oct. 2013 3119-3131*
- Zanoni, E., see Chini, A., *TED Oct. 2013 3176-3182*
- Zanoni, E., see Bisi, D., *TED Oct. 2013 3166-3175*
- Zarate-Rincon, F., Alvarez-Botero, G. A., Torres-Torres, R., Murphy-Arteaga, R. S., and Decoutere, S., Characterization of RF-MOSFETs in Common-Source Configuration at Different Source-to-Bulk Voltages From S-Parameters; *TED Aug. 2013 2450-2456*
- Zebrev, G. I., Tselykovskiy, A. A., Batmanova, D. K., and Melnik, E. V., Small-Signal Capacitance and Current Parameter Modeling in Large-Scale High-Frequency Graphene Field-Effect Transistors; *TED June 2013 1799-1806*
- Zeng, F., see Zhu, L., *TED Nov. 2013 3753-3759*
- Zeng, L., see Huang, P., *TED Dec. 2013 4090-4097*
- Zeng, L., see Deng, Y., *TED Feb. 2013 719-726*
- Zhan, C., see Liu, B., *TED July 2013 2135-2141*
- Zhan, C., see Liu, B., *TED June 2013 1852-1860*
- Zhan, J., see Ni, Z., *TED April 2013 1427-1435*
- Zhang, B., see Zhou, Q., *TED March 2013 1075-1081*
- Zhang, B., see Wang, Z., *TED May 2013 1607-1612*
- Zhang, B., see Si, J., *TED Oct. 2013 3223-3229*
- Zhang, B., see Luo, X. R., *TED Sept. 2013 2840-2846*
- Zhang, C., see Chen, D., *TED Jan. 2013 451-457*
- Zhang, C., see Liu, S., *TED Nov. 2013 3632-3638*
- Zhang, C. X., Shen, X., Zhang, E. X., Fleetwood, D. M., Schrimpf, R. D., Francis, S. A., Roy, T., Dhar, S., Ryu, S.-H., and Pantelides, S. T., Temperature Dependence and Postirradiation Annealing Response of the 1/f Noise of 4H-SiC MOSFETs; *TED July 2013 2361-2367*
- Zhang, D., see Tao, X., *TED June 2013 1931-1937*
- Zhang, D., see Wang, M., *TED Sept. 2013 2827-2833*
- Zhang, D., see Chen, J., *TED June 2013 1958-1964*
- Zhang, E. X., see Zhang, C. X., *TED July 2013 2361-2367*
- Zhang, F., see Gao, B., *TED April 2013 1379-1383*
- Zhang, J., see Chen, D., *TED Jan. 2013 451-457*
- Zhang, J., see Lin, S., *TED Nov. 2013 3775-3779*
- Zhang, J. F., see Liu, W. J., *TED Aug. 2013 2682-2686*
- Zhang, J. F., see Hatta, S. W. M., *TED May 2013 1745-1753*
- Zhang, J. F., see Tang, B., *TED July 2013 2261-2267*
- Zhang, J. F., see Duan, M., *TED Aug. 2013 2505-2511*
- Zhang, J. F., see Duan, M., *TED Jan. 2013 413-419*
- Zhang, K., see Shen, M., *TED Sept. 2013 2854-2861*
- Zhang, L., see Li, X., *TED Sept. 2013 2931-2935*
- Zhang, L., see Li, X., *TED Sept. 2013 2931-2935*
- Zhang, L., Zahid, F., Zhu, Y., Liu, L., Wang, J., Guo, H., Chan, P. C. H., and Chan, M., First Principles Simulations of Nanoscale Silicon Devices With Uniaxial Strain; *TED Oct. 2013 3527-3533*
- Zhang, L., see Peng, L., *TED April 2013 1444-1450*
- Zhang, M., see Sun, Z., *TED Dec. 2013 3989-3995*
- Zhang, M., see Guo, G., *TED Nov. 2013 3895-3900*
- Zhang, N., Deng, Z., and Sen, F., CPW Tunable Band-Stop Filter Using Hybrid Resonator and Employing RF MEMS Capacitors; *TED Aug. 2013 2648-2655*
- Zhang, Q., see Jiang, J., *TED June 2013 1951-1957*
- Zhang, R., and Wang, Y., Six-Beam Gun Design for a High Power Multiple-Beam Klystron; *TED July 2013 2395-2401*
- Zhang, R., Huang, P.-C., Lin, J.-C., Taoka, N., Takenaka, M., and Takagi, S., High-Mobility Ge p- and n-MOSFETs With 0.7-nm EOT Using HfO<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub>/GeO<sub>x</sub>/Ge Gate Stacks Fabricated by Plasma Postoxidation; *TED March 2013 927-934*
- Zhang, S., see Xiao, X., *TED Aug. 2013 2687-2690*
- Zhang, S., see Cai, J., *TED July 2013 2432-2435*
- Zhang, S., see Xiao, X., *TED Dec. 2013 4159-4164*
- Zhang, S., see Wang, L. L., *TED March 2013 1122-1127*
- Zhang, S. C., see Xu, S. X., *TED Oct. 2013 3570-3575*
- Zhang, S.-L., see Liu, Z., *TED Aug. 2013 2542-2547*
- Zhang, T., see Wang, B., *TED Aug. 2013 2580-2585*
- Zhang, W., see Li, G., *TED July 2013 2379-2387*
- Zhang, W. D., see Hatta, S. W. M., *TED May 2013 1745-1753*
- Zhang, W. D., see Duan, M., *TED Aug. 2013 2505-2511*
- Zhang, W. D., see Tang, B., *TED July 2013 2261-2267*
- Zhang, W. D., see Duan, M., *TED Jan. 2013 413-419*
- Zhang, X., see Huang, P., *TED Dec. 2013 4090-4097*
- Zhang, X., see Hu, S., *TED March 2013 1282-1287*
- Zhang, X., see Song, W., *TED Jan. 2013 494-497*
- Zhang, Y., Sun, M., Liu, Z., Piedra, D., Lee, H.-S., Gao, F., Fujishima, T., and Palacios, T., Electrothermal Simulation and Thermal Performance Study of GaN Vertical and Lateral Power Transistors; *TED July 2013 2224-2230*
- Zhang, Y., Deng, S., Du, J., Lai, X., Chen, J., and Xu, N., Effects of Pulsewidth and Area of Carbon Nanotube Films on Their Pulsed Field Emission Characteristics; *TED Aug. 2013 2677-2681*
- Zhang, Y., see Wang, Y., *TED June 2013 2001-2007*
- Zhang, Y., see Li, X., *TED Sept. 2013 2931-2935*
- Zhang, Y., see Fan, J., *TED April 2013 1457-1462*
- Zhang, Y., see Wang, Y., *TED Feb. 2013 887-892*
- Zhang, Y., see Wang, Z., *TED Jan. 2013 471-477*
- Zhang, Y. P., see Deng, T., *TED Jan. 2013 20-27*
- Zhang, Z., and Liao, X., Micromachined Passive Bandpass Filters Based on GaAs Monolithic-Microwave-Integrated-Circuit Technology; *TED Jan. 2013 221-228*
- Zhang, Z., see Stefanov, K. D., *TED Dec. 2013 4173-4179*
- Zhang, Z., see Yin, S., *TED Dec. 2013 4258-4262*
- Zhang, Z., see Thapa, A., *TED Nov. 2013 3883-3887*
- Zhang, Z.-B., see Liu, Z., *TED Aug. 2013 2542-2547*
- Zhao, C., Aditya, S., and Chua, C., Analysis of Coupled Planar Helices with Straight-Edge Connections for Application in Millimeter-Wave TWTs; *TED March 2013 1244-1250*
- Zhao, D., see Hu, S., *TED March 2013 1282-1287*
- Zhao, D., see Liang, F., *TED Aug. 2013 2498-2504*
- Zhao, G. J., see Sang, L., *TED June 2013 2077-2079*
- Zhao, P., Feenstra, R. M., Gu, G., and Jena, D., SymFET: A Proposed Symmetric Graphene Tunneling Field-Effect Transistor; *TED March 2013 951-957*
- Zhao, Q.-T., see Yang, S., *TED Oct. 2013 3040-3046*
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Measurements and Simulations of Low Dark Count Rate Single Photon Avalanche Diode Device in a Low Voltage 180-nm CMOS Image Sensor Technology. *Leitner, T.*, +, *IED June 2013 1982-1988*

On-Chip FPN Calibration for a Linear-Logarithmic APS Using Two-Step Charge Transfer. *Lee, J.*, +, *IED June 2013 1989-1994*

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Investigations on Line-Edge Roughness (LER) and Line-Width Roughness (LWR) in Nanoscale CMOS Technology: Part I—Modeling and Simulation Method. *Jiang, X.*, +, *IED Nov. 2013 3669-3675*

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Power-Rail ESD Clamp Circuit With Diode-String ESD Detection to Overcome the Gate Leakage Current in a 40-nm CMOS Process. *Altoguirre, F. A.*, +, *IED Oct. 2013 3500-3507*

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 Device and Circuit Performance Estimation of Junctionless Bulk FinFETs. *Han, M.-H.*, +, *IED* June 2013 1807-1813  
 Electric Field Distribution Around Drain-Side Gate Edge in AlGaIn/GaN HEMTs: Analytical Approach. *Si, J.*, +, *IED* Oct. 2013 3223-3229  
 Modulation of Multidomain in AlGaIn/GaN HEMT-Like Planar Gunn Diode. *Wang, Y.*, +, *IED* May 2013 1600-1606

#### Electric impedance

Modeling and Design Guidelines for P<sup>+</sup> Guard Rings in Lightly Doped CMOS Substrates. *Shen, M.*, +, *IED* Sept. 2013 2854-2861  
 Theory, Simulations, and Experiments of the Dispersion and Interaction Impedance for the Double-Slot Coupled-Cavity Slow Wave Structure in TWT. *He, F.*, +, *IED* Oct. 2013 3576-3583

#### Electric potential

Corrections to “Suppression of Drain-Induced Barrier Lowering in Silicon-on-Insulator MOSFETs Through Source/Drain Engineering for Low-Operating-Power System-on-Chip Applications”. *Yamada, T.*, +, *IED* Dec. 2013 4281-4283  
 Energy Landscape Model of Conduction and Phase Transition in Phase Change Memories. *Rizzi, M.*, +, *IED* Nov. 2013 3618-3624  
 Performance of Deep-Depletion Buried-Channel n-MOSFETs for CMOS Image Sensors. *Stefanov, K. D.*, +, *IED* Dec. 2013 4173-4179  
 RESURF p-n Diode With a Buried Layer, a Comprehensive Study. *Yang, F.-J.*, +, *IED* Nov. 2013 3835-3841  
 Split-Gate-Enhanced Power UMOSFET With Soft Reverse Recovery. *Wang, Y.*, +, *IED* June 2013 2084-2089  
 Subthreshold Behavior Models for Nanoscale Short-Channel Junctionless Cylindrical Surrounding-Gate MOSFETs. *Li, C.*, +, *IED* Nov. 2013 3655-3662  
 Trans-Capacitance Modeling in Junctionless Symmetric Double-Gate MOSFETs. *Jazaeri, F.*, +, *IED* Dec. 2013 4034-4040

#### Electric properties

Electrical Resistivity of Liquid Ge<sub>2</sub>Sb<sub>2</sub>Te<sub>5</sub> Based on Thin-Film and Nanoscale Device Measurements. *Cil, K.*, +, *IED* Jan. 2013 433-437

#### Electric resistance

A Unified Physical-Based Model of Series Resistance of Polycrystalline Silicon Thin-Film Transistors With Explicit Analytical Solutions. *Wang, M.*, +, *IED* Sept. 2013 2827-2833  
 Experimental Detection and Numerical Validation of Different Failure Mechanisms in IGBTs During Unclamped Inductive Switching. *Breglio, G.*, +, *IED* Feb. 2013 563-570  
 Frequency and Voltage Dependence of the Capacitance of MIS Structures Fabricated With Polymeric Materials. *Estrada, M.*, +, *IED* June 2013 2057-2063  
 On the Origin of Kink Effect in Current–Voltage Characteristics of AlGaIn/GaN High Electron Mobility Transistors. *Kaushik, J. K.*, +, *IED* Oct. 2013 3351-3357  
 Physics-Based Solution for Electrical Resistance of Graphene Under Self-Heating Effect. *Verma, R.*, +, *IED* Jan. 2013 502-505

#### Electrical conductivity

Small-Signal Capacitance and Current Parameter Modeling in Large-Scale High-Frequency Graphene Field-Effect Transistors. *Zebrev, G. I.*, +, *IED* June 2013 1799-1806  
 Transport Gap in Dual-Gated Graphene Bilayers Using Oxides as Dielectrics. *Lee, K.*, +, *IED* Jan. 2013 103-108

#### Electrical contacts

Atomically Flat Low-Resistive Germanide Contacts Formed by Laser Thermal Anneal. *Shayesteh, M.*, +, *IED* July 2013 2178-2185  
 Cu–Cu Bond Quality Enhancement Through the Inclusion of a Hermetic Seal for 3-D IC. *Peng, L.*, +, *IED* April 2013 1444-1450

#### Electrical resistance measurement

Size-Dependent Effects on the Temperature Coefficient of Resistance of Carbon Nanotube Vias. *Vollebregt, S.*, +, *IED* Dec. 2013 4085-4089

#### Electrical resistivity

Electrical Resistivity of Liquid Ge<sub>2</sub>Sb<sub>2</sub>Te<sub>5</sub> Based on Thin-Film and Nanoscale Device Measurements. *Cil, K.*, +, *IED* Jan. 2013 433-437  
 Epitaxial Germanium on SOI Substrate and Its Application of Fabricating High I<sub>ON</sub>/I<sub>OFF</sub> Ratio Ge FinFETs. *Chung, C.-T.*, +, *IED* June 2013 1878-1883  
 Thermoelectric Performance of a Single-Layer Graphene Sheet for Energy Harvesting. *Verma, R.*, +, *IED* June 2013 2064-2070  
 Transport Parameters of Inkjet Printed Nanoparticle Silver on Polyimide Substrate Measured at Room and Liquid Nitrogen Temperatures. *Menicanin, A. B.*, +, *IED* Sept. 2013 2963-2967

#### Electrochemical devices

Fast-Switching Printed Organic Electrochemical Transistors Including Electronic Vias Through Plastic and Paper Substrates. *Kawahara, J.*, +, *IED* June 2013 2052-2056

#### Electrochemical electrodes

Application of MgCaO Cathode Layer to Plasma Display Panel for High Luminous Efficacy. *Lee, T.-H.*, +, *IED* Jan. 2013 301-304  
 Exoemission Properties of PDP Protective Layers. *Chen, Y.*, +, *IED* Oct. 2013 3485-3492  
 Self-Selection Unipolar HfO<sub>x</sub>-Based RRAM. *Tran, X. A.*, +, *IED* Jan. 2013 391-395  
 Split-Gate-Enhanced Power UMOSFET With Soft Reverse Recovery. *Wang, Y.*, +, *IED* June 2013 2084-2089  
 Ultralow Leakage Current AlGaIn/GaN Schottky Diodes With 3-D Anode Structure. *Matioli, E.*, +, *IED* Oct. 2013 3365-3370  
 Vertical Diamond Schottky Barrier Diode Fabricated on Insulating Diamond Substrate Using Deep Etching Technique. *Nagase, M.*, +, *IED* April 2013 1416-1420

#### Electrochemical impedance spectroscopy

Comparison of Interfacial and Bulk Ionic Motion in Analog Memristors. *Greenlee, J. D.*, +, *IED* Jan. 2013 427-432

#### Electrodes

A Physics-Based Compact Model of Metal-Oxide-Based RRAM DC and AC Operations. *Huang, P.*, +, *IED* Dec. 2013 4090-4097  
 Achieving High Performance Oxide TFT-Based Inverters by Use of Dual-Gate Configurations With Floating and Biased Secondary Gates. *Seok, M. J.*, +, *IED* Nov. 2013 3787-3793  
 An Ultralow Specific ON-Resistance LDMOST Using Charge Balance by Split p-Gate and n-Drift Regions. *Lyu, X.*, +, *IED* Nov. 2013 3821-3826  
 Counterdoped Pocket Thickness Optimization of Gate-on-Source-Only Tunnel FETs. *Kao, K.-H.*, +, *IED* Jan. 2013 6-12  
 Evaluation of Counter Electrodes Composed by Carbon Nanofibers and Nanoparticles in Dye-Sensitized Solar Cells. *Thapa, A.*, +, *IED* Nov. 2013 3883-3887  
 Flexible Self-Aligned Amorphous InGaZnO Thin-Film Transistors With Submicrometer Channel Length and a Transit Frequency of 135 MHz. *Munzenrieder, N.*, +, *IED* Sept. 2013 2815-2820  
 Improved ON-State Reliability of Atom Switch Using Alloy Electrodes. *Tada, M.*, +, *IED* Oct. 2013 3534-3540  
 Improved Performance of Photosensitive Field-Effect Transistors Based on Palladium Phthalocyanine by Utilizing Al as Source and Drain Electrodes. *Peng, Y.*, +, *IED* March 2013 1208-1212  
 Modeling and Simulation of Organic Photodetectors for Low Light Intensity Applications. *Popescu, B. V.*, +, *IED* June 2013 1975-1981  
 Parasitic Gate Capacitance Model for Triple-Gate FinFETs. *Rodriguez, S. S.*, +, *IED* Nov. 2013 3710-3717  
 Pulse Operation of a Floating-Electrode Memristive Device. *Kang, Y.*, +, *IED* April 2013 1476-1479  
 Six-Beam Gun Design for a High Power Multiple-Beam Klystron. *Zhang, R.*, +, *IED* July 2013 2395-2401  
 The Impact of Bias Conditions on Self-Heating in AlGaIn/GaN HEMTs. *Choi, S.*, +, *IED* Jan. 2013 159-162  
 Universal Resonant and Pull-in Characteristics of Tunable-Gap Electro-mechanical Actuators. *Jain, A.*, +, *IED* Dec. 2013 4240-4247

**Electroforming**

Forming Kinetics in HfO<sub>2</sub>-Based RRAM Cells. *Lorenzi, P.*, +, *TED Jan. 2013 438-443*

**Electroluminescence**

Evaluation of Electron Trapping Speed of AlGaIn/GaN HEMT With Real-Time Electroluminescence and Pulsed  $I-V$  Measurements. *Wakejima, A.*, +, *TED Oct. 2013 3183-3189*

Influence by Layer Structure on the Output EL of CMOS Compatible Silicon-Based Light Emitters. *Gonzalez-Fernandez, A. A.*, +, *TED June 2013 1971-1974*

**Electrolytes**

Fast-Switching Printed Organic Electrochemical Transistors Including Electronic Vias Through Plastic and Paper Substrates. *Kawahara, J.*, +, *TED June 2013 2052-2056*

Transparent Junctionless Electric-Double-Layer Transistors Gated by a Reinforced Chitosan-Based Biopolymer Electrolyte. *Jiang, J.*, +, *TED June 2013 1951-1957*

**Electromagnetic compatibility**

Wideband Impedance Model for Coaxial Through-Silicon Vias in 3-D Integration. *Liang, F.*, +, *TED Aug. 2013 2498-2504*

**Electromagnetic wave polarization**

Contact-Induced Negative Differential Resistance in Short-Channel Graphene FETs. *Grassi, R.*, +, *TED Jan. 2013 140-146*

**Electromagnetic wave scattering**

Coupled Electro-Thermal Simulation for Self-Heating Effects in Graphene Transistors. *Liu, L.*, +, *TED Aug. 2013 2598-2603*

**Electromagnetic waveguides**

Design and RF Characterization of W-band Meander-Line and Folded-Waveguide Slow-Wave Structures for TWTs. *Sumathy, M.*, +, *TED May 2013 1769-1775*

**Electromigration**

Control of Resistance by Oxide on the Surface of Cu Interconnects With CuSiN and Ti-based Barrier Metal. *Hayashi, Y.*, +, *TED Jan. 2013 42-48*

Electric Current-Induced Mass Flow in Very Thin Infinite Metallic Films. *Talukder, S.*, +, *TED Sept. 2013 2877-2883*

**Electron beams**

A Study on 94 GHz Low-Voltage, Low-Current Gyrotron. *Xinjian, N.*, +, *TED Nov. 2013 3907-3912*

Dispersion Characteristics of Two-Beam Folded Waveguide for Terahertz Radiation. *Li, K.*, +, *TED Dec. 2013 4252-4257*

Improved Efficiency of Backward-Wave Oscillator With an Inclined Electron Beam. *Sattorov, M.*, +, *TED Jan. 2013 458-463*

Novel Folded Frame Slow-Wave Structure for Millimeter-Wave Traveling-Wave Tube. *Guo, G.*, +, *TED Nov. 2013 3895-3900*

Staggered Closed PCM for Stable Rectangular Sheet Electron Beam Transport. *Panda, P. C.*, +, *TED Sept. 2013 2918-2923*

**Electron density**

Dislocation Scattering in ZnMgO/ZnO Heterostructures. *Sang, L.*, +, *TED June 2013 2077-2079*

Exoemission Properties of PDP Protective Layers. *Chen, Y.*, +, *TED Oct. 2013 3485-3492*

Extraction and Analysis of Interface States in 50-nm nand Flash Devices. *Yan, C.-R.*, +, *TED March 2013 992-997*

**Electron emission**

Modification of a Driving Waveform in an AC Plasma Display Panel With Sc-doped MgO Protecting Layer. *Kim, J. K.*, +, *TED Aug. 2013 2556-2560*

**Electron energy loss spectra**

Fabrication and Characterization of High-Mobility Solution-Based Chalco-genide Thin-Film Transistors. *Mejia, I.*, +, *TED Jan. 2013 327-332*

Low-Interface-Trap-Density and High-Breakdown-Electric-Field SiN Films on GaN Formed by Plasma Pretreatment Using Microwave-Excited Plasma-Enhanced Chemical Vapor Deposition. *Watanabe, T.*, +, *TED June 2013 1916-1922*

**Electron field emission**

The Design and Fabrication of Carbon-Nanotube-Based Field Emission X-Ray Cathode With Ballast Resistor. *Sun, Y.*, +, *TED Jan. 2013 464-470*

**Electron guns**

A THz Backward-Wave Oscillator Based on a Double-Grating Rectangular Waveguide. *Liu, Q.-L.*, +, *TED April 2013 1463-1468*

Design of a W-band Gyro-TWT Amplifier With a Lossy Ceramic-Loaded Circuit. *Du, C. H.*, +, *TED July 2013 2388-2394*

Six-Beam Gun Design for a High Power Multiple-Beam Klystron. *Zhang, R.*, +, *TED July 2013 2395-2401*

**Electron holography**

Doping Process for 3-D N-Type Trench Transistors-2-D Cross-Sectional Doping Profiling Study. *Qin, S.*, +, *TED July 2013 2256-2260*

**Electron mobility**

AlGaIn/GaN Three-Terminal Junction Devices for Rectification and Transistor Applications on 3C-SiC/Si Pseudosubstrates. *Hiller, L.*, +, *TED Oct. 2013 3047-3052*

Dislocation Scattering in ZnMgO/ZnO Heterostructures. *Sang, L.*, +, *TED June 2013 2077-2079*

High-Mobility Ge p- and n-MOSFETs With 0.7-nm EOT Using HfO<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub>/GeO<sub>x</sub>/Ge Gate Stacks Fabricated by Plasma Postoxidation. *Zhang, R.*, +, *TED March 2013 927-934*

High-Performance Solution-Processed ZrInZnO Thin-Film Transistors. *Tue, P. T.*, +, *TED Jan. 2013 320-326*

Modeling of Temperature and Field-Dependent Electron Mobility in a Single-Layer Graphene Sheet. *Verma, R.*, +, *TED Aug. 2013 2695-2698*

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Analysis of Charge-Pumping Data for Identification of Dielectric Defects. *Veksler, D.*, +, *TED May 2013 1514-1522*

Comparison of Bulk-Oxide Trap Models: Lumped Versus Distributed Circuit. *Chen, H.-P.*, +, *TED Nov. 2013 3920-3924*

Effect of Damage in Source and Drain on the Endurance of a 65-nm-Node NOR Flash Memory. *Sun, Z.*, +, *TED Dec. 2013 3989-3995*

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Evaluation of Electron Trapping Speed of AlGaIn/GaN HEMT With Real-Time Electroluminescence and Pulsed  $I-V$  Measurements. *Wakejima, A.*, +, *TED Oct. 2013 3183-3189*

High-Performance Solution-Processed ZrInZnO Thin-Film Transistors. *Tue, P. T.*, +, *TED Jan. 2013 320-326*

Interface Trap Density of Gate-All-Around Silicon Nanowire Field-Effect Transistors With TiN Gate: Extraction and Compact Model. *Najam, F.*, +, *TED Aug. 2013 2457-2463*

Low Frequency Noise Analysis for Post-Treatment of Replacement Metal Gate. *Lee, J. W.*, +, *TED Sept. 2013 2960-2962*

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Threshold Voltage Shift Due to Charge Trapping in Dielectric-Gated AlGaIn/GaN High Electron Mobility Transistors Examined in Au-Free Technology. *Johnson, D. W.*, +, *TED Oct. 2013 3197-3203*

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Measuring the Thermal Resistance in Light Emitting Diodes Using a Transient Thermal Analysis Technique. *Natarajan, S.*, +, *TED Aug. 2013 2548-2555*

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High Area-Efficient ESD Clamp Circuit With Equivalent  $RC$ -Based Detection Mechanism in a 65-nm CMOS Process. *Yeh, C.-T.*, +, *TED March 2013 1011-1018*

Power-Rail ESD Clamp Circuit With Diode-String ESD Detection to Overcome the Gate Leakage Current in a 40-nm CMOS Process. *Altalaguirre, F. A.*, +, *TED Oct. 2013 3500-3507*

Working 225 V Over-Voltage Protection Cell With Tunable Trigger and Holding Voltages for Latch-Up Immunity. *Coyne, E. J.*, +, *TED Sept. 2013 2834-2839*

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Low-Frequency Noise Analysis of Electrostatic Discharge Tolerance of InGaN Light-Emitting Diodes. *Chen, T.-T.*, +, *TED Nov. 2013 3794-3798*

Robust ESD Protection Design for 40-Gb/s Transceiver in 65-nm CMOS Process. *Lin, C.-Y.*, +, *TED Nov. 2013 3625-3631*

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Accuracy and Issues of the Spectroscopic Analysis of RTN Traps in Nanoscale MOSFETs. *Adamu-Lema, F.*, +, *TED Feb. 2013 833-839*

Comparative Simulation Analysis of Process-Induced Variability in Nanoscale SOI and Bulk Trigate FinFETs. *Brown, A. R.*, +, *TED Nov. 2013 3611-3617*

Design and Analysis of Analog Performance of Dual-k Spacer Underlap N/P-FinFET at 12 nm Gate Length. *Nandi, A.*, +, *TED May 2013 1529-1535*

Impact of Precisely Positioned Dopants on the Performance of an Ultimate Silicon Nanowire Transistor: A Full Three-Dimensional NEGF Simulation Study. *Georgiev, V. P.*, +, *TED March 2013 965-971*

Performance Enhancement of Blue InGaN Light-Emitting Diodes With InGaN Barriers and Dip-Shaped Last Barrier. *Xiong, J.-Y.*, +, *TED Nov. 2013 3925-3929*

Physics-Based Solution for Electrical Resistance of Graphene Under Self-Heating Effect. *Verma, R.*, +, *TED Jan. 2013 502-505*

Small-Signal Capacitance and Current Parameter Modeling in Large-Scale High-Frequency Graphene Field-Effect Transistors. *Zebrev, G. I.*, +, *TED June 2013 1799-1806*

Sub-60-nm Extremely Thin Body  $\text{In}_x\text{Ga}_{1-x}\text{As}$ -On-Insulator MOSFETs on Si With Ni-InGaAs Metal S/D and MOS Interface Buffer Engineering and Its Scalability. *Kim, S.*, +, *TED Aug. 2013 2512-2517*

Subthreshold Behavior Models for Nanoscale Short-Channel Junctionless Cylindrical Surrounding-Gate MOSFETs. *Li, C.*, +, *TED Nov. 2013 3655-3662*

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A Preliminary Study on the Environmental Dependences of Avalanche Propagation in Silicon. *Fishburn, M. W.*, +, *TED March 2013 1028-1033*

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Accurate Power Circuit Loss Estimation Method for Power Converters With Si-IGBT and SiC-Diode Hybrid Pair. *Takao, K.*, +, *TED Feb. 2013 606-612*

Analytical Drain Current Model for Poly-Si Thin-Film Transistors Biased in Strong Inversion Considering Degradation of Tail States at Grain Boundary. *Wang, L. L.*, +, *TED March 2013 1122-1127*

Annealing Effects of Ti/Au Contact on n-MgZnO/p-Si Ultraviolet-B Photodetectors. *Hou, Y.*, +, *TED Oct. 2013 3474-3477*

Area-Dependent Photodetection Frequency Response Characterization of Silicon Avalanche Photodetectors Fabricated With Standard CMOS Technology. *Lee, M.-J.*, +, *TED March 2013 998-1004*

Back-Gate Bias Dependence of the Statistical Variability of FDSOI MOS-FETs With Thin BOX. *Yang, Y.*, +, *TED Feb. 2013 739-745*

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Channel Width Splitting Effect on Driving Characteristics of Silicide Seed-Induced Laterally Crystallized Poly-Si Thin-Film Transistors. *Byun, C.-W.*, +, *TED April 2013 1390-1396*

Characteristics of Planar Junctionless Poly-Si Thin-Film Transistors With Various Channel Thickness. *Lin, H.-C.*, +, *TED March 2013 1142-1148*

Characterization of the First FBK High-Density Cell Silicon Photomultiplier Technology. *Piemonte, C.*, +, *TED Aug. 2013 2567-2573*

Comparative Leakage Analysis of GeOI FinFET and Ge Bulk FinFET. *Hu, V. P.-H.*, +, *TED Oct. 2013 3596-3600*

Degradation of Polycrystalline Silicon TFT CMOS Inverters under AC Operation. *Chen, W.*, +, *TED Jan. 2013 295-300*

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Doping-Less Tunnel Field Effect Transistor: Design and Investigation. *Kumar, M. J.*, +, *TED Oct. 2013 3285-3290*

Electrical Characterization of GaP-Silicon Interface for Memory and Transistor Applications. *Pal, A.*, +, *TED July 2013 2238-2245*

Epitaxial Germanium on SOI Substrate and Its Application of Fabricating High  $I_{\text{ON}}/I_{\text{OFF}}$  Ratio Ge FinFETs. *Chung, C.-T.*, +, *TED June 2013 1878-1883*

Exoemission Properties of PDP Protective Layers. *Chen, Y.*, +, *TED Oct. 2013 3485-3492*

Fabrication and Electrical Characterization of Fully CMOS-Compatible Si Single-Electron Devices. *Koppinen, P. J.*, +, *TED Jan. 2013 78-83*

Fabrication and Performance of Au-Free AlGaIn/GaN-on-Silicon Power Devices With  $\text{Al}_2\text{O}_3$  and  $\text{Si}_3\text{N}_4/\text{Al}_2\text{O}_3$  Gate Dielectrics. *Van Hove, M.*, +, *TED Oct. 2013 3071-3078*

First Principles Simulations of Nanoscale Silicon Devices With Uniaxial Strain. *Zhang, L.*, +, *TED Oct. 2013 3527-3533*

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High-Bandwidth and High-Responsivity Top-Illuminated Germanium Photodiodes for Optical Interconnection. *Li, C.*, +, *TED March 2013 1183-1187*

High-Mobility Ge p- and n-MOSFETs With 0.7-nm EOT Using  $\text{HfO}_2/\text{Al}_2\text{O}_3/\text{GeO}_x/\text{Ge}$  Gate Stacks Fabricated by Plasma Postoxidation. *Zhang, R.*, +, *TED March 2013 927-934*

High-Performance Double-Layer Nickel Nanocrystal Memory by Ion Bombardment Technique. *Liu, S.-H.*, +, *TED Oct. 2013 3393-3399*

High-Performance Silicon Nanotube Tunneling FET for Ultralow-Power Logic Applications. *Fahad, H. M.*, +, *TED March 2013 1034-1039*

High-Q Backside Silicon-Embedded Inductor for Power Applications in /spl mu/H and MHz Range. *Wu, R.*, +, *TED Jan. 2013 339-345*

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Hot Carrier Injection Effects in the Ultrashallow Body SONOS Gate Power MOSFET. *Zhou, X.*, +, *TED June 2013 2008-2014*

Impact of a Spacer-Drain Overlap on the Characteristics of a Silicon Tunnel Field-Effect Transistor Based on Vertical Tunneling. *Mallik, A.*, +, *TED March 2013 935-943*

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Measurements of Silicon Photomultipliers Responsivity in Continuous Wave Regime. *Adamo, G.*, +, *TED Nov. 2013 3718-3725*

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High-Power Tunable Terahertz Radiation by High-Order Harmonic Generation. *Gong, H.*, +, *TED Jan. 2013 482-486*

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Area-Dependent Photodetection Frequency Response Characterization of Silicon Avalanche Photodetectors Fabricated With Standard CMOS Technology. *Lee, M.-J.*, +, *TED March 2013 998-1004*

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Circuit Analysis of Photosensitive Capacitance in Semi-Insulating GaAs. *Boulais, K. A.*, +, *TED Feb. 2013 793-798*

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Impact of Different Barrier Layers and Indium Content of the Channel on the Analog Performance of InGaAs MOSFETs. *Tewari, S.*, +, *TED May 2013 1584-1589*

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Minority Carrier Transport and Their Lifetime in InGaAs/GaAsP Multiple Quantum Well Structures. *Carlin, C. Z.*, +, *TED Aug. 2013 2532-2536*

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Nonparabolic Multivalley Quantum Correction Model for InGaAs Double-Gate Structures. *Penzin, O.*, +, *TED July 2013 2246-2250*

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AlGaIn Channel HEMT With Extremely High Breakdown Voltage. *Nanjo, T.*, +, *TED March 2013 1046-1053*

AlGaIn/GaN HEMT Degradation: An Electro-Thermo-Mechanical Simulation. *der Maur, M. A.*, +, *TED Oct. 2013 3142-3148*

AlGaIn/GaN Three-Terminal Junction Devices for Rectification and Transistor Applications on 3C-SiC/Si Pseudosubstrates. *Hiller, L.*, +, *TED Oct. 2013 3047-3052*

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Analysis of Contributing Factors for Determining the Reliability Characteristics of GaN-Based White Light-Emitting Diodes With Dual Degradation Kinetics. *Jung, E.*, +, *TED Jan. 2013 186-191*

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DC and RF Performance of Gate-Last AlN/GaN MOSHEMTs on Si With Regrown Source/Drain. *Huang, T.*, +, *TED Oct. 2013 3019-3024*

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- Effects of the Use of an Aluminum Reflecting and an SiO<sub>2</sub> Insulating Layers (RIL) on the Performance of a GaN-Based Light-Emitting Diode With the Naturally Textured p-GaN Surface. *Liou, J.-K.*, +, *TED July 2013* 2282-2289
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- The Electrical Properties of Asymmetric Schottky Contact Thin-Film Transistors with Amorphous-In<sub>2</sub>Ga<sub>2</sub>ZnO<sub>7</sub>. *Rha, S. H.*, +, *TED March 2013* 1128-1135
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Fabrication of Si<sub>1-x</sub>Ge<sub>x</sub>/Si pMOSFETs Using Corrugated Substrates for Improved I<sub>ON</sub> and Reduced Layout-Width Dependence. *Ho, B.*, +, *TED Jan. 2013 153-158*

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SiGe Channel Technology: Superior Reliability Toward Ultra-Thin EOT Devices—Part II: Time-Dependent Variability in Nanoscaled Devices and Other Reliability Issues. *Franco, J.*, +, *TED Jan. 2013 405-412*

SiGe Channel Technology: Superior Reliability Toward Ultrathin EOT Devices—Part I: NBTI. *Franco, J.*, +, *TED Jan. 2013 396-404*

The Effect of Germanium Fraction on High-Field Band-to-Band Tunneling in p<sup>+</sup>-SiGe/n<sup>+</sup>-SiGe Junctions in Forward and Reverse Biases. *Li, J.-Y.*, +, *TED Aug. 2013 2479-2484*

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Germanium Multiple-Gate Field-Effect Transistors Formed on Germanium-on-Insulator Substrate. *Liu, B.*, +, *TED June 2013 1852-1860*

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High-Mobility Ge p- and n-MOSFETs With 0.7-nm EOT Using HfO<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub>/GeO<sub>x</sub>/Ge Gate Stacks Fabricated by Plasma Postoxidation. *Zhang, R.*, +, *TED March 2013 927-934*

Impact of Buffer Layer on Atomic Layer Deposited TiAlO Alloy Dielectric Quality for Epitaxial-GaAs/Ge Device Application. *Dalapati, G. K.*, +, *TED Jan. 2013 192-199*

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Monte Carlo Simulation of Hot Carrier Transport in Heterogeneous Ge/Al<sub>x</sub>Ga<sub>1-x</sub>As (0 ≤ x ≤ 0.8) Multilayer Avalanche Photodiodes. *Chia, C. K.*, +, *TED Oct. 2013 3435-3441*

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### Germanium compounds

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High-Mobility Ge p- and n-MOSFETs With 0.7-nm EOT Using HfO<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub>/GeO<sub>x</sub>/Ge Gate Stacks Fabricated by Plasma Postoxidation. *Zhang, R.*, +, *TED March 2013 927-934*

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Annealing Effects of Ti/Au Contact on n-MgZnO/p-Si Ultraviolet-B Photodetectors. *Hou, Y.*, +, *TED Oct. 2013 3474-3477*

Detection of Deep-Levels in Doped Silicon Nanowires Using Low-Frequency Noise Spectroscopy. *Sharma, D.*, +, *TED Dec. 2013 4206-4212*

Enhanced Visible Light Sensitivity by Gold Line-and-Space Grating Gate Electrode in Thin Silicon-On-Insulator p-n Junction Photodiode. *Satoh, H.*, +, *TED Feb. 2013 812-818*

Temperature Dependence of Annealed and Nonannealed HEMT Ohmic Contacts Between 5 and 350 K. *Alt, A. R.*, +, *TED Feb. 2013 787-792*

### Grain boundaries

Analytical Drain Current Model for Poly-Si Thin-Film Transistors Biased in Strong Inversion Considering Degradation of Tail States at Grain Boundary. *Wang, L. L.*, +, *TED March 2013 1122-1127*

Control of Resistance by Oxide on the Surface of Cu Interconnects With CuSiN and Ti-based Barrier Metal. *Hayashi, Y.*, +, *TED Jan. 2013 42-48*

Surface Potential-Based Polycrystalline-Silicon Thin-Film Transistors Compact Model by Nonequilibrium Approach. *Ikeda, H.*, +, *TED Oct. 2013 3417-3423*

### Graphene

Atomistic Study of the Lattice Thermal Conductivity of Rough Graphene Nanoribbons. *Karamitaheri, H.*, +, *TED July 2013 2142-2147*

Ballistic I-V Characteristics of Short-Channel Graphene Field-Effect Transistors: Analysis and Optimization for Analog and RF Applications. *Ganapathi, K.*, +, *TED March 2013 958-964*

Contact-Induced Negative Differential Resistance in Short-Channel Graphene FETs. *Grassi, R.*, +, *TED Jan. 2013 140-146*

Coupled Electro-Thermal Simulation for Self-Heating Effects in Graphene Transistors. *Liu, L.*, +, *TED Aug. 2013 2598-2603*

Direct Band-to-Band Tunneling in Reverse Biased MoS<sub>2</sub> Nanoribbon p-n Junctions. *Ghosh, R. K.*, +, *TED Jan. 2013 274-279*

Graphene Base Transistors: A Simulation Study of DC and Small-Signal Operation. *Di Lecce, V.*, +, *TED Oct. 2013 3584-3591*

Graphene-Base Heterojunction Transistor: An Attractive Device for Terahertz Operation. *Di Lecce, V.*, +, *TED Dec. 2013 4263-4268*

Modeling of Temperature and Field-Dependent Electron Mobility in a Single-Layer Graphene Sheet. *Verma, R.*, +, *TED Aug. 2013 2695-2698*

Observation of the Ambient Effect in BTI Characteristics of Back-Gated Single Layer Graphene Field Effect Transistors. *Liu, W. J.*, +, *TED Aug. 2013 2682-2686*

Physics-Based Solution for Electrical Resistance of Graphene Under Self-Heating Effect. *Verma, R.*, +, *TED Jan. 2013 502-505*

Pseudosaturation and Negative Differential Conductance in Graphene Field-Effect Transistors. *Alarcon, A.*, +, *TED March 2013 985-991*

Quasi-Ballistic Transport Model for Graphene Field-Effect Transistor. *Hu, G.*, +, *TED July 2013 2410-2414*

Small-Signal Capacitance and Current Parameter Modeling in Large-Scale High-Frequency Graphene Field-Effect Transistors. *Zebrev, G. I.*, +, *TED June 2013 1799-1806*

Solution of Time Dependent Joule Heat Equation for a Graphene Sheet Under Thomson Effect. *Verma, R.*, +, *TED Oct. 2013 3548-3554*

Spin Transport in Bilayer Graphene Armchair Nanoribbon: A Monte Carlo Simulation Study. *Salimath, A.*, +, *TED Nov. 2013 3734-3740*

SymFET: A Proposed Symmetric Graphene Tunneling Field-Effect Transistor. *Zhao, P.*, +, *IED March 2013 951-957*  
 Thermoelectric Performance of a Single-Layer Graphene Sheet for Energy Harvesting. *Verma, R.*, +, *IED June 2013 2064-2070*  
 Transport Gap in Dual-Gated Graphene Bilayers Using Oxides as Dielectrics. *Lee, K.*, +, *IED Jan. 2013 103-108*  
 Very Large Current Modulation in Vertical Heterostructure Graphene/hBN Transistors. *Fiori, G.*, +, *IED Jan. 2013 268-273*

#### Green's function methods

A Self-Consistent Compact Model of Ballistic Nanowire MOSFET With Rectangular Cross Section. *Numata, T.*, +, *IED Feb. 2013 856-862*  
 Atomistic Study of the Lattice Thermal Conductivity of Rough Graphene Nanoribbons. *Karamitaheri, H.*, +, *IED July 2013 2142-2147*  
 Contact-Induced Negative Differential Resistance in Short-Channel Graphene FETs. *Grassi, R.*, +, *IED Jan. 2013 140-146*  
 Coupled Electro-Thermal Simulation for Self-Heating Effects in Graphene Transistors. *Liu, L.*, +, *IED Aug. 2013 2598-2603*  
 Effect of Boundary Conditions on Thermal Noise of Intrinsic Terminal Currents in Bipolar Transistors Pertinent to Quasi-Ballistic Transport. *Xia, K.*, +, *IED Dec. 2013 4226-4233*  
 First Principles Simulations of Nanoscale Silicon Devices With Uniaxial Strain. *Zhang, L.*, +, *IED Oct. 2013 3527-3533*  
 Impact of Precisely Positioned Dopants on the Performance of an Ultimate Silicon Nanowire Transistor: A Full Three-Dimensional NEGF Simulation Study. *Georgiev, V. P.*, +, *IED March 2013 965-971*  
 Interface Traps in InAs Nanowire Tunnel-FETs and MOSFETs—Part I: Model Description and Single Trap Analysis in Tunnel-FETs. *Pala, M. G.*, +, *IED Sept. 2013 2795-2801*  
 Model Order Reduction for Multiband Quantum Transport Simulations and its Application to p-Type Junctionless Transistors. *Huang, J. Z.*, +, *IED July 2013 2111-2119*  
 Performance Analysis of Strained Monolayer MoS<sub>2</sub> MOSFET. *Sengupta, A.*, +, *IED Sept. 2013 2782-2787*  
 Pseudosaturation and Negative Differential Conductance in Graphene Field-Effect Transistors. *Alarcon, A.*, +, *IED March 2013 985-991*  
 Quantum Confinement and Volume Inversion in MOS<sup>3</sup> Model for Short-Channel Tri-Gate MOSFETs. *Kloes, A.*, +, *IED Aug. 2013 2691-2694*  
 Surface-Roughness-Limited Mean Free Path in Silicon Nanowire Field Effect Transistors. *Jung, H.-E.*, +, *IED June 2013 1861-1866*  
 Theory, Simulations, and Experiments of the Dispersion and Interaction Impedance for the Double-Slot Coupled-Cavity Slow Wave Structure in TWT. *He, F.*, +, *IED Oct. 2013 3576-3583*  
 Tunable Bandgap in Bilayer Armchair Graphene Nanoribbons: Concurrent Influence of Electric Field and Uniaxial Strain. *Khaliji, K.*, +, *IED Aug. 2013 2464-2470*  
 Very Large Current Modulation in Vertical Heterostructure Graphene/hBN Transistors. *Fiori, G.*, +, *IED Jan. 2013 268-273*

#### Gyrotrons

A Study on 94 GHz Low-Voltage, Low-Current Gyrotron. *Xinjian, N.*, +, *IED Nov. 2013 3907-3912*  
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 Design of a W-band Gyro-TWT Amplifier With a Lossy Ceramic-Loaded Circuit. *Du, C. H.*, +, *IED July 2013 2388-2394*  
 Parasitic Oscillations in Coaxial Gyrotron Beam Tunnels. *Moraitou, M. D.*, +, *IED April 2013 1469-1475*  
 Study of a Coaxial Gyrotron Cavity With Improved Mode Selection. *Liu, D.*, +, *IED Dec. 2013 4248-4251*

## H

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Endurance/Retention Trade-off on HfO<sub>2</sub>/Metal Cap 1T1R Bipolar RRAM. *Chen, Y. Y.*, +, *IED March 2013 1114-1121*  
 Influence of Frequency Dependent Time to Breakdown on High-K/Metal Gate Reliability. *Knebel, S.*, +, *IED July 2013 2368-2371*

#### Hafnium compounds

A Novel Defect-Engineering-Based Implementation for High-Performance Multilevel Data Storage in Resistive Switching Memory. *Gao, B.*, +, *IED April 2013 1379-1383*  
 Complementary Role of Field and Temperature in Triggering ON/OFF Switching Mechanisms in Hf/HfO<sub>2</sub> Resistive RAM Cells. *Govreanu, B.*, +, *IED Aug. 2013 2471-2478*

Complementary Switching in Oxide-Based Bipolar Resistive-Switching Random Memory. *Nardi, F.*, +, *IED Jan. 2013 70-77*  
 Detailed Analysis of the Role of Thin-HfO<sub>2</sub> Interfacial Layer in Ge<sub>2</sub>Sb<sub>2</sub>Te<sub>5</sub>-Based PCM. *Hubert, Q.*, +, *IED July 2013 2268-2275*  
 Electrical Comparison of HfO<sub>2</sub> and ZrO<sub>2</sub> Gate Dielectrics on GaN. *Bothe, K. M.*, +, *IED Dec. 2013 4119-4124*  
 Endurance/Retention Trade-off on HfO<sub>2</sub>/Metal Cap 1T1R Bipolar RRAM. *Chen, Y. Y.*, +, *IED March 2013 1114-1121*  
 Extrinsic and Intrinsic Performance of Vertical InAs Nanowire MOSFETs on Si Substrates. *Persson, K.-M.*, +, *IED Sept. 2013 2761-2767*  
 Forming Kinetics in HfO<sub>2</sub>-Based RRAM Cells. *Lorenzi, P.*, +, *IED Jan. 2013 438-443*  
 From MFM Capacitors Toward Ferroelectric Transistors: Endurance and Disturb Characteristics of HfO<sub>2</sub>-Based FeFET Devices. *Mueller, S.*, +, *IED Dec. 2013 4199-4205*  
 Germanium-Tin P-Channel Tunneling Field-Effect Transistor: Device Design and Technology Demonstration. *Yang, Y.*, +, *IED Dec. 2013 4048-4056*  
 High-Mobility Ge p- and n-MOSFETs With 0.7-nm EOT Using HfO<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub>/GeO<sub>x</sub>/Ge Gate Stacks Fabricated by Plasma Postoxidation. *Zhang, R.*, +, *IED March 2013 927-934*  
 Modeling and Characterization of Gate Leakage in High-K Metal Gate Technology-Based Embedded DRAM. *Bajaj, M.*, +, *IED Dec. 2013 4152-4158*  
 On the Oxide Trap Density and Profiles of 1-nm EOT Metal-Gate Last CMOS Transistors Assessed by Low-Frequency Noise. *Simoen, E.*, +, *IED Nov. 2013 3849-3855*  
 Self-Selection Unipolar HfO<sub>x</sub>-Based RRAM. *Tran, X. A.*, +, *IED Jan. 2013 391-395*  
 Statistical Characterization and Modeling of the Temporal Evolutions of  $\Delta V_t$  Distribution in NBTI Recovery in Nanometer MOSFETs. *Chiu, J.-P.*, +, *IED March 2013 978-984*  
 Statistical Model and Rapid Prediction of RRAM SET Speed-Disturb Dilemma. *Luo, W.-C.*, +, *IED Nov. 2013 3760-3766*  
 Study of Synaptic Behavior in Doped Transition Metal Oxide-Based Reconfigurable Devices. *Mandal, S.*, +, *IED Dec. 2013 4219-4225*  
 Theoretical Study of the Gate Leakage Current in Sub-10-nm Field-Effect Transistors. *Fischetti, M. V.*, +, *IED Nov. 2013 3862-3869*

#### Hall effect

Electron Transport in InAsSb-Based nBn Photodetector Structures. *Umana-Membreno, G. A.*, +, *IED Jan. 2013 510-512*

#### Hall effect transducers

Transport Parameters of Inkjet Printed Nanoparticle Silver on Polyimide Substrate Measured at Room and Liquid Nitrogen Temperatures. *Menicanin, A. B.*, +, *IED Sept. 2013 2963-2967*

#### Hall mobility

Hydrogenated IGZO Thin-Film Transistors Using High-Pressure Hydrogen Annealing. *Oh, S.-I.*, +, *IED Aug. 2013 2537-2541*

#### Harmonic generation

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#### Harmonic oscillators (circuits)

Design of a High-Harmonic Gyrotron With a Permanent Magnet System. *Xu, S. X.*, +, *IED Oct. 2013 3570-3575*

#### Heat conduction

Influence of Dopants on the Thermal Conductance of GaN-Sapphire Interface. *Zheng, H.*, +, *IED June 2013 1911-1915*  
 Thermal Modeling of Resistive Switching Devices. *Ramu, A. T.*, +, *IED June 2013 1938-1943*

#### Heat sinks

Performance Testing of 3-W LED Mounted on ZnO Thin Film Coated Al as Heat Sink Using Dual Interface Method. *Mutharasu, D.*, +, *IED July 2013 2290-2295*  
 Thermal Parameter Extraction Method for Light-Emitting Diode (LED) Systems. *Tao, X.*, +, *IED June 2013 1931-1937*

#### Heating

Design Methodology for Light-Emitting Diode Systems by Considering an Electrothermal Model. *Bender, V. C.*, +, *IED Nov. 2013 3799-3806*

#### Helium ions

Position-Dependent Bulk Traps and Carrier Compensation in 4H-SiC Bipolar Junction Transistors. *Usman, M.*, +, *IED Jan. 2013 178-185*

#### HEMTs

A Closed-Form Charge Control Model for the Threshold Voltage of Depletion- and Enhancement-Mode AlGaIn/GaN Devices. *Wang, Z.*, +, *IED May 2013 1607-1612*

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 Compact Charge-Based Physical Models for Current and Capacitances in AlGaIn/GaN HEMTs. *Yigletu, F. M.*, +, *TED Nov. 2013 3746-3752*  
 Guest Editorial Special Issue on GaN Electronic Devices. *Ghione, G.*, +, *TED Oct. 2013 2975-2981*  
 Impact of Epi-Layer Quality on Reliability of GaN/AlGaIn/GaN Heterostructure Field-Effect Transistors on Si Substrate. *Ando, Y.*, +, *TED Dec. 2013 4125-4132*  
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#### Hermetic seals

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#### Heterojunction bipolar transistors

AlGaIn/SiC Heterojunction Bipolar Transistors Featuring AlN/GaN Short-Period Superlattice Emitter. *Miyake, H.*, +, *TED Sept. 2013 2768-2775*  
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A Closed-Form Charge Control Model for the Threshold Voltage of Depletion- and Enhancement-Mode AlGaIn/GaN Devices. *Wang, Z.*, +, *TED May 2013 1607-1612*

#### High electron mobility transistors

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 AlGaIn/GaN HEMT Degradation: An Electro-Thermo-Mechanical Simulation. *der Maur, M. A.*, +, *TED Oct. 2013 3142-3148*  
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 AlInN-Based HEMTs for Large-Signal Operation at 40 GHz. *Tirelli, S.*, +, *TED Oct. 2013 3091-3098*  
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 Electric Field Distribution Around Drain-Side Gate Edge in AlGaIn/GaN HEMTs: Analytical Approach. *Si, J.*, +, *TED Oct. 2013 3223-3229*  
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 Enhanced AlGaIn/GaN MOS-HEMT Performance by Using Hydrogen Peroxide Oxidation Technique. *Liu, H.-Y.*, +, *TED Jan. 2013 213-220*  
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 Fabrication and Performance of Au-Free AlGaIn/GaN-on-Silicon Power Devices With Al<sub>2</sub>O<sub>3</sub> and Si<sub>3</sub>N<sub>4</sub>/Al<sub>2</sub>O<sub>3</sub> Gate Dielectrics. *Van Hove, M.*, +, *TED Oct. 2013 3071-3078*  
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 High Drain Current Density E-Mode Al<sub>2</sub>O<sub>3</sub>/AlGaIn/GaN MOS-HEMT on Si With Enhanced Power Device Figure-of-Merit ( $4 \times 10^8 \text{ V}^2 \Omega^{-1} \text{ cm}^{-2}$ ). *Freedman, J. J.*, +, *TED Oct. 2013 3079-3083*  
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 Activation Energies ( $E_a$ ) of Failure Mechanisms in Advanced NAND Flash Cells for Different Generations and Cycling. *Lee, K.*, +, *IED March 2013 1099-1107*  
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 Interface Traps in InAs Nanowire Tunnel-FETs and MOSFETs—Part I: Model Description and Single Trap Analysis in Tunnel-FETs. *Pala, M. G.*, +, *IED Sept. 2013 2795-2801*  
 Low-Interface-Trap-Density and High-Breakdown-Electric-Field SiN Films on GaN Formed by Plasma Pretreatment Using Microwave-Excited Plasma-Enhanced Chemical Vapor Deposition. *Watanabe, T.*, +, *IED June 2013 1916-1922*  
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 Simple Noise Margin Model for Optimal Design of Unipolar Thin-Film Transistor Logic Circuits. *Cui, Q.*, +, *IED May 2013 1782-1785*  
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 Ni(Ge<sub>1-x</sub>Sn<sub>x</sub>) Ohmic Contact Formation on N-Type Ge<sub>1-x</sub>Sn<sub>x</sub> Using Selenium or Sulfur Implant and Segregation. *Tong, Y.*, +, *IED Feb. 2013 746-752*  
 High-Voltage Isolation Technique Using Fe Ion Implantation for Monolithic Integration of AlGaIn/GaN Transistors. *Umeda, H.*, +, *IED Feb. 2013 771-775*  
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- Ionization**  
 Dimension Dependence of Unusual HCI-Induced Degradation on N-Channel High-Voltage DEMOSFET. *Chou, H.-L.*, +, *IED May 2013 1723-1729*  
 Temperature Dependence and Postirradiation Annealing Response of the 1/f Noise of 4H-SiC MOSFETs. *Zhang, C. X.*, +, *IED July 2013 2361-2367*
- Iron**  
 Improved Vertical Isolation for Normally-Off High Voltage GaN-HFETs on n-SiC Substrates. *Hilt, O.*, +, *IED Oct. 2013 3084-3090*

Improvement in the Photo-Bias Stability of Zinc Tin Oxide Thin-Film Transistors by Introducing a Thermal Oxidized TiO<sub>2</sub> Film as a Hole Carrier Blocking Layer. *Lee, C.-K.*, +, *TED Dec. 2013 4165-4172*

#### Isolation technology

Doping Process for 3-D N-Type Trench Transistors-2-D Cross-Sectional Doping Profiling Study. *Qin, S.*, +, *TED July 2013 2256-2260*

High-Voltage Isolation Technique Using Fe Ion Implantation for Monolithic Integration of AlGaIn/GaN Transistors. *Umeda, H.*, +, *TED Feb. 2013 771-775*

#### Iterative methods

Investigation of Silicon Nanowire Gate-All-Around Junctionless Transistors Built on a Bulk Substrate. *Moon, D.-I.*, +, *TED April 2013 1355-1360*

#### IV-VI semiconductors

Detailed Analysis of the Role of Thin-HfO<sub>2</sub> Interfacial Layer in Ge<sub>2</sub>Sb<sub>2</sub>Te<sub>5</sub>-Based PCM. *Hubert, Q.*, +, *TED July 2013 2268-2275*

### J

#### JFETs

Thermal Stability of Silicon Carbide Power JFETs. *Buttay, C.*, +, *TED Dec. 2013 4191-4198*

#### Junction gate field effect transistors

Comparison of ZnO-Based JFET, MESFET, and MISFET. *Klupfel, F. J.*, +, *TED June 2013 1828-1833*

Low-Field Behavior of Source-Gated Transistors. *Shannon, J. M.*, +, *TED Aug. 2013 2444-2449*

Modeling of the Steady State and Switching Characteristics of a Normally Off 4H-SiC Trench Bipolar-Mode FET. *Pezzimenti, F.*, +, *TED April 2013 1404-1411*

#### Junctions

Corrections to "Quantum Mechanical Performance Predictions of p-n-i-n Versus Pocketed Line Tunnel Field-Effect Transistors" [Jul 13 2128-2134]. *Verreck, D.*, +, *TED Oct. 2013 3605*

Design Methodology for Light-Emitting Diode Systems by Considering an Electrothermal Model. *Bender, V. C.*, +, *TED Nov. 2013 3799-3806*

Determining Junction Temperature in InGaIn Light-Emitting Diodes Using Low Forward Currents. *Lin, S.*, +, *TED Nov. 2013 3775-3779*

Effect of Damage in Source and Drain on the Endurance of a 65-nm-Node NOR Flash Memory. *Sun, Z.*, +, *TED Dec. 2013 3989-3995*

Germanium-Tin P-Channel Tunneling Field-Effect Transistor: Device Design and Technology Demonstration. *Yang, Y.*, +, *TED Dec. 2013 4048-4056*

Thermal Stability of Silicon Carbide Power JFETs. *Buttay, C.*, +, *TED Dec. 2013 4191-4198*

### K

#### K.p calculations

Effect of Strained  $k \cdot p$  Deformation Potentials on Hole Inversion-Layer Mobility. *Chen, M.-J.*, +, *TED April 2013 1365-1371*

Interface Traps in InAs Nanowire Tunnel-FETs and MOSFETs—Part I: Model Description and Single Trap Analysis in Tunnel-FETs. *Pala, M. G.*, +, *TED Sept. 2013 2795-2801*

#### Kinetics

Evidence for Non-Arrhenius Kinetics of Crystallization in Phase Change Memory Devices. *Ciocchini, N.*, +, *TED Nov. 2013 3767-3774*

#### Klystrons

3-D Simulations and Design of Multistage Depressed Collectors for Sheet Beam Millimeter Wave Vacuum Electron Devices. *Shi, Z.*, +, *TED Sept. 2013 2912-2917*

A 30-kW High-Power X-band to Ku-band Klystron Frequency Multiplier. *Fan, J.*, +, *TED April 2013 1457-1462*

Automatic Optimization of a Klystron Interaction Structure. *Lingwood, C. J.*, +, *TED Aug. 2013 2671-2676*

Six-Beam Gun Design for a High Power Multiple-Beam Klystron. *Zhang, R.*, +, *TED July 2013 2395-2401*

### L

#### Lanthanum compounds

Fabrication and Characterization of Enhancement-Mode High- $\kappa$ LaLuO<sub>3</sub>-AlGaIn/GaN MIS-HEMTs. *Yang, S.*, +, *TED Oct. 2013 3040-3046*

Heat Channeling in Extremely Thin Silicon-on-Insulator Devices: A Simulation Study. *Orfanidou, C. M.*, +, *TED Oct. 2013 3330-3334*

#### Laplace equations

Electric Field Distribution Around Drain-Side Gate Edge in AlGaIn/GaN HEMTs: Analytical Approach. *Si, J.*, +, *TED Oct. 2013 3223-3229*

#### Laplace transforms

Measuring the Thermal Resistance in Light Emitting Diodes Using a Transient Thermal Analysis Technique. *Natarajan, S.*, +, *TED Aug. 2013 2548-2555*

#### Laser ablation

Fast-Switching Printed Organic Electrochemical Transistors Including Electronic Vias Through Plastic and Paper Substrates. *Kawahara, J.*, +, *TED June 2013 2052-2056*

#### Laser beam annealing

Atomically Flat Low-Resistive Germanide Contacts Formed by Laser Thermal Anneal. *Shayesteh, M.*, +, *TED July 2013 2178-2185*

Bridged-Grain Polycrystalline Silicon Thin-Film Transistors. *Zhao, S.*, +, *TED June 2013 1965-1970*

Improved Subthreshold and Output Characteristics of Source-Pocket Si Tunnel FET by the Application of Laser Annealing. *Chang, H.-Y.*, +, *TED Jan. 2013 92-96*

Relaxation of Residual Stress in Bent GaN Film on Sapphire Substrate by Laser Treatment With an Optimized Surface Structure Design. *Chen, C. H.*, +, *TED Feb. 2013 767-770*

#### Laser beam machining

Color-Tunable and Phosphor-Free White-Light Multilayered Light-Emitting Diodes. *Cheung, Y. F.*, +, *TED Jan. 2013 333-338*

#### Laser excitation

Reducing a Piezoelectric Field in InGaIn Active Layers by Varying Pattern Sapphire Substrates. *Lin, C.-F.*, +, *TED Dec. 2013 4180-4184*

#### Latches

Device-Circuit Co-design for Beyond 1 GHz 5 V Level Shifter Using DeMOS Transistors. *Swain, P. S.*, +, *TED Nov. 2013 3827-3834*

#### Layout

Device-Circuit Co-design for Beyond 1 GHz 5 V Level Shifter Using DeMOS Transistors. *Swain, P. S.*, +, *TED Nov. 2013 3827-3834*

#### Lead bonding

Color-Tunable and Phosphor-Free White-Light Multilayered Light-Emitting Diodes. *Cheung, Y. F.*, +, *TED Jan. 2013 333-338*

#### Leakage currents

Al<sub>2</sub>O<sub>3</sub> Interface Engineering of Germanium Epitaxial Layer Grown Directly on Silicon. *Tan, Y. H.*, +, *TED Jan. 2013 56-62*

AlGaIn/GaN-Based Lateral-Type Schottky Barrier Diode With Very Low Reverse Recovery Charge at High Temperature. *Lee, J.-H.*, +, *TED Oct. 2013 3032-3039*

Analysis and Optimization of a Thyristor Structure Using Backside Schottky Contacts Suited for the High Temperature. *Toulon, G.*, +, *TED Nov. 2013 3814-3820*

Analysis of Contributing Factors for Determining the Reliability Characteristics of GaN-Based White Light-Emitting Diodes With Dual Degradation Kinetics. *Jung, E.*, +, *TED Jan. 2013 186-191*

Capture Cross Section of Traps Causing Random Telegraph Noise in Gate-Induced Drain Leakage Current. *Yoo, S.-W.*, +, *TED March 2013 1268-1271*

Characterization and Modeling of the Band-to-Band Current Variability of Nanoscale Device Junctions. *Ghetti, A.*, +, *TED Oct. 2013 3291-3297*

Compact Model for Carbon Nanotube Field-Effect Transistors Including Nonidealities and Calibrated With Experimental Data Down to 9-nm Gate Length. *Luo, J.*, +, *TED June 2013 1834-1843*

Comparative Leakage Analysis of GeOI FinFET and Ge Bulk FinFET. *Hu, V. P.-H.*, +, *TED Oct. 2013 3596-3600*

Epitaxial Germanium on SOI Substrate and Its Application of Fabricating High I<sub>ON</sub>/I<sub>OFF</sub> Ratio Ge FinFETs. *Chung, C.-T.*, +, *TED June 2013 1878-1883*

GaN-Based Planar p-i-n Photodetectors With the Be-Implanted Isolation Ring. *Hou, J.-L.*, +, *TED March 2013 1178-1182*

Gate Leakage Mechanisms in AlGaIn/GaN and AlInN/GaN HEMTs: Comparison and Modeling. *Turuvekere, S.*, +, *TED Oct. 2013 3157-3165*

Gate-Stack Engineering in n-Type Ultrascaled Si Nanowire Field-Effect Transistors. *Luisier, M.*, +, *TED Oct. 2013 3325-3329*

High Drain Current Density E-Mode Al<sub>2</sub>O<sub>3</sub>/AlGaIn/GaN MOS-HEMT on Si With Enhanced Power Device Figure-of-Merit ( $4 \times 10^8 \text{ V}^2 \Omega^{-1} \text{ cm}^{-2}$ ). *Freedman, J. J.*, +, *TED Oct. 2013 3079-3083*

Impact of Buffer Layer on Atomic Layer Deposited TiAlO Alloy Dielectric Quality for Epitaxial-GaAs/Ge Device Application. *Dalapati, G. K.*, +, *TED Jan. 2013 192-199*

- Influence of Frequency Dependent Time to Breakdown on High-K/Metal Gate Reliability. *Knebel, S.*, +, *IED July 2013 2368-2371*
- Intrinsic Time Zero Dielectric Breakdown Characteristics of HfAlO Alloys. *Kim, J. J.*, +, *IED Nov. 2013 3683-3689*
- Investigation of Polysilazane-Based SiO<sub>2</sub> Gate Insulator for Oxide Semiconductor Thin-Film Transistors. *Tu, H. T. C.*, +, *IED March 2013 1149-1153*
- Power-Rail ESD Clamp Circuit With Diode-String ESD Detection to Overcome the Gate Leakage Current in a 40-nm CMOS Process. *Altalaguirre, F. A.*, +, *IED Oct. 2013 3500-3507*
- Performance and Reliability of Gd<sub>2</sub>O<sub>3</sub> and Stacked Gd<sub>2</sub>O<sub>3</sub>-Eu<sub>2</sub>O<sub>3</sub> Metal-Insulator-Metal Capacitors. *Padmanabhan, R.*, +, *IED May 2013 1523-1528*
- Reliability Analysis of Permanent Degradations on AlGaIn/GaN HEMTs. *Marcon, D.*, +, *IED Oct. 2013 3132-3141*
- Split-Gate-Enhanced Power UMOFET With Soft Reverse Recovery. *Wang, Y.*, +, *IED June 2013 2084-2089*
- Stochastic Variability in Silicon Double-Gate Lateral Tunnel Field-Effect Transistors. *Leung, G.*, +, *IED Jan. 2013 84-91*
- Study of Gate Junction Temperature in GaAs pHEMTs Using Gate Metal Resistance Thermometry. *Schwitzer, B. K.*, +, *IED Oct. 2013 3358-3364*
- Surface Potential-Based Polycrystalline-Silicon Thin-Film Transistors Compact Model by Nonequilibrium Approach. *Ikeda, H.*, +, *IED Oct. 2013 3417-3423*
- Theoretical Study of the Gate Leakage Current in Sub-10-nm Field-Effect Transistors. *Fischetti, M. V.*, +, *IED Nov. 2013 3862-3869*
- Ultralow Leakage Current AlGaIn/GaN Schottky Diodes With 3-D Anode Structure. *Maioli, E.*, +, *IED Oct. 2013 3365-3370*
- Learning (artificial intelligence)**
- Bio-Inspired Stochastic Computing Using Binary CBRAM Synapses. *Suri, M.*, +, *IED July 2013 2402-2409*
- Lenses**
- Low Cell Gap Polymeric Liquid Crystal Lens for 2-D/3-D Switchable Auto-Stereoscopic Display. *Mun, B.-J.*, +, *IED Oct. 2013 3430-3434*
- Life testing**
- Accelerated Stress Test Assessment of Through-Silicon Via Using RF Signals. *Okoro, C.*, +, *IED June 2013 2015-2021*
- Activation Energies ( $E_a$ ) of Failure Mechanisms in Advanced NAND Flash Cells for Different Generations and Cycling. *Lee, K.*, +, *IED March 2013 1099-1107*
- The Impact of Bias Conditions on Self-Heating in AlGaIn/GaN HEMTs. *Choi, S.*, +, *IED Jan. 2013 159-162*
- LIGA**
- Design and Realization Aspects of 1-THz Cascade Backward Wave Amplifier Based on Double Corrugated Waveguide. *Paoloni, C.*, +, *IED March 2013 1236-1243*
- High-Power Copper Gratings for a Sheet-Beam Traveling-Wave Amplifier at G-band. *Joye, C. D.*, +, *IED Jan. 2013 506-509*
- Light absorption**
- High Detectivity Uncooled Thermal Detectors With Resonant Cavity Coupled Absorption in the Long-Wave Infrared. *Gawarikar, A. S.*, +, *IED Aug. 2013 2586-2591*
- Light emitting devices**
- Influence by Layer Structure on the Output EL of CMOS Compatible Silicon-Based Light Emitters. *Gonzalez-Fernandez, A. A.*, +, *IED June 2013 1971-1974*
- Microwave Determination of Quantum-Well Capture and Escape Time in Light-Emitting Transistors. *Wang, H.-L.*, +, *IED March 2013 1088-1091*
- Light emitting diodes**
- A Parametric Study of InGaIn/GaN Nanorod Core-Shell LEDs. *Auf der Maur, M.*, +, *IED Jan. 2013 171-177*
- Analysis of Contributing Factors for Determining the Reliability Characteristics of GaN-Based White Light-Emitting Diodes With Dual Degradation Kinetics. *Jung, E.*, +, *IED Jan. 2013 186-191*
- Color-Tunable and Phosphor-Free White-Light Multilayered Light-Emitting Diodes. *Cheung, Y. F.*, +, *IED Jan. 2013 333-338*
- Design Methodology for Light-Emitting Diode Systems by Considering an Electrothermal Model. *Bender, V. C.*, +, *IED Nov. 2013 3799-3806*
- Determining Junction Temperature in InGaIn Light-Emitting Diodes Using Low Forward Currents. *Lin, S.*, +, *IED Nov. 2013 3775-3779*
- Effective Thermal Management in Ultraviolet Light-Emitting Diodes With Micro-LED Arrays. *Lobo Ploch, N.*, +, *IED Feb. 2013 782-786*
- Effects of the Use of an Aluminum Reflecting and an SiO<sub>2</sub> Insulating Layers (RIL) on the Performance of a GaN-Based Light-Emitting Diode With the Naturally Textured p-GaN Surface. *Liou, J.-K.*, +, *IED July 2013 2282-2289*
- GaN-Based Dual-Color LEDs With p-Type Insertion Layer for Controlling the Ratio of Two-Color Intensities. *Chi, K.-L.*, +, *IED Sept. 2013 2821-2826*
- Improved Quantum Efficiency in Semipolar (1 $\bar{1}$ 01) InGaIn/GaN Quantum Wells Grown on GaN Prepared by Lateral Epitaxial Overgrowth. *Zhu, L.*, +, *IED Nov. 2013 3753-3759*
- Junction-Temperature Determination in InGaIn Light-Emitting Diodes Using Reverse Current Method. *Wu, B.*, +, *IED Jan. 2013 241-245*
- Light Extraction Improvement for LED COB Devices by Introducing a Patterned Leadframe Substrate Configuration. *Li, Z.-T.*, +, *IED April 2013 1397-1403*
- Low-Frequency Noise Analysis of Electrostatic Discharge Tolerance of InGaIn Light-Emitting Diodes. *Chen, T.-T.*, +, *IED Nov. 2013 3794-3798*
- Measuring the Thermal Resistance in Light Emitting Diodes Using a Transient Thermal Analysis Technique. *Natarajan, S.*, +, *IED Aug. 2013 2548-2555*
- Performance Enhancement of Blue InGaIn Light-Emitting Diodes With InGaIn Barriers and Dip-Shaped Last Barrier. *Xiong, J.-Y.*, +, *IED Nov. 2013 3925-3929*
- Performance Testing of 3-W LED Mounted on ZnO Thin Film Coated Al as Heat Sink Using Dual Interface Method. *Mutharasu, D.*, +, *IED July 2013 2290-2295*
- Reducing a Piezoelectric Field in InGaIn Active Layers by Varying Pattern Sapphire Substrates. *Lin, C.-F.*, +, *IED Dec. 2013 4180-4184*
- Temperature Dependence of the Component Currents and Internal Quantum Efficiency in Blue Light-Emitting Diodes. *Kang, B.*, +, *IED March 2013 1060-1067*
- Thermal Parameter Extraction Method for Light-Emitting Diode (LED) Systems. *Tao, X.*, +, *IED June 2013 1931-1937*
- Transient Analysis of Partial Thermal Characteristics of Multistrukture Power LEDs. *Wang, C.-P.*, +, *IED May 2013 1668-1672*
- Lighting**
- Design Methodology for Light-Emitting Diode Systems by Considering an Electrothermal Model. *Bender, V. C.*, +, *IED Nov. 2013 3799-3806*
- Modeling and Simulation of Organic Photodetectors for Low Light Intensity Applications. *Popescu, B. V.*, +, *IED June 2013 1975-1981*
- Numerical Investigation of High-Efficiency InGaIn-Based Multijunction Solar Cell. *Chang, J.-Y.*, +, *IED Dec. 2013 4140-4145*
- UV Enhanced Indium-Doped ZnO Nanorod Field Emitter. *Chang, S.-J.*, +, *IED Nov. 2013 3901-3906*
- Linearization techniques**
- Determination of Diffusion Length for the Finite Thickness Normal-Collector Configuration Using EBIC Technique. *Tan, C. C.*, +, *IED Oct. 2013 3541-3547*
- Errata to "Piecewise Linearization Technique for Compact Charge Modeling of Independent DG MOSFET" [Jul 12 1974-1979]. *Jandhyala, S.*, +, *IED Jan. 2013 518*
- Liquid crystal displays**
- A Self-Consistent Electrothermal Model for Analyzing NBTI Effect in p-Type Poly-Si Thin-Film Transistors. *Ho, C.-H.*, +, *IED Jan. 2013 288-294*
- Liquid crystal polymers**
- Low Cell Gap Polymeric Liquid Crystal Lens for 2-D/3-D Switchable Auto-Stereoscopic Display. *Mun, B.-J.*, +, *IED Oct. 2013 3430-3434*
- Liquid phase deposition**
- Investigation of Polysilazane-Based SiO<sub>2</sub> Gate Insulator for Oxide Semiconductor Thin-Film Transistors. *Tu, H. T. C.*, +, *IED March 2013 1149-1153*
- Low-Temperature Solution-Processed Zirconium Oxide Gate Insulators for Thin-Film Transistors. *Xifeng, L.*, +, *IED Oct. 2013 3413-3416*
- Lithium compounds**
- Comparison of Interfacial and Bulk Ionic Motion in Analog Memristors. *Greenlee, J. D.*, +, *IED Jan. 2013 427-432*
- Lithography**
- Low-Resistivity Long-Length Horizontal Carbon Nanotube Bundles for Interconnect Applications—Part I: Process Development. *Li, H.*, +, *IED Sept. 2013 2862-2869*
- Load modeling**
- Simple Noise Margin Model for Optimal Design of Unipolar Thin-Film Transistor Logic Circuits. *Cui, Q.*, +, *IED May 2013 1782-1785*
- Log normal distribution**
- Characterization and Modeling of the Band-to-Band Current Variability of Nanoscale Device Junctions. *Ghetti, A.*, +, *IED Oct. 2013 3291-3297*

**Logic circuits**

- CMOS X-Ray Detector With Column-Parallel 14.3-bit Extended-Counting ADCs. *Shin, M.-S.*, +, *TED March 2013 1169-1177*
- Impact of Transistor Architecture (Bulk Planar, Trigate on Bulk, Ultrathin-Body Planar SOI) and Material (Silicon or III-V Semiconductor) on Variation for Logic and SRAM Applications. *Agrawal, N.*, +, *TED Oct. 2013 3298-3304*

**Logic design**

- Organic Complementary Logic Circuits and Volatile Memories Integrated on Plastic Foils. *Guerin, M.*, +, *TED June 2013 2045-2051*

**Logic gates**

- $\text{Si}_x\text{Ge}_{1-x}$  Epitaxial Tunnel Layer Structure for P-Channel Tunnel FET Improvement. *Wang, P.-Y.*, +, *TED Dec. 2013 4098-4104*
- A Common Core Model for Junctionless Nanowires and Symmetric Double-Gate FETs. *Sallese, J.-M.*, +, *TED Dec. 2013 4277-4280*
- Achieving High Performance Oxide TFT-Based Inverters by Use of Dual-Gate Configurations With Floating and Biased Secondary Gates. *Seok, M. J.*, +, *TED Nov. 2013 3787-3793*
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- An Ultralow Specific ON-Resistance LDMOST Using Charge Balance by Split p-Gate and n-Drift Regions. *Lyu, X.*, +, *TED Nov. 2013 3821-3826*
- Analysis and Comparison of L-Valley Transport in GaAs, GaSb, and Ge Ultrathin-Body Ballistic nMOSFETs. *Alam, K.*, +, *TED Dec. 2013 4213-4218*
- Analysis of Charge-Pumping Data for Identification of Dielectric Defects. *Veksler, D.*, +, *TED May 2013 1514-1522*
- Analytical Modeling of a Double Gate MOSFET Considering Source/Drain Lateral Gaussian Doping Profile. *Nandi, A.*, +, *TED Nov. 2013 3705-3709*
- Channel Hot Carrier Degradation Mechanism in Long/Short Channel  $n$ -FinFETs. *Cho, M.*, +, *TED Dec. 2013 4002-4007*
- Characteristics of AlGaIn/GaN HEMTs With Various Field-Plate and Gate-to-Drain Extensions. *Chiu, H.-C.*, +, *TED Nov. 2013 3877-3882*
- CMOS Small-Signal and Thermal Noise Modeling at High Frequencies. *Antonopoulos, A.*, +, *TED Nov. 2013 3726-3733*
- Compact Charge-Based Physical Models for Current and Capacitances in AlGaIn/GaN HEMTs. *Yigletu, F. M.*, +, *TED Nov. 2013 3746-3752*
- Comparative Simulation Analysis of Process-Induced Variability in Nanoscale SOI and Bulk Trigate FinFETs. *Brown, A. R.*, +, *TED Nov. 2013 3611-3617*
- Corrections to "Suppression of Drain-Induced Barrier Lowering in Silicon-on-Insulator MOSFETs Through Source/Drain Engineering for Low-Operating-Power System-on-Chip Applications". *Yamada, T.*, +, *TED Dec. 2013 4281-4283*
- Cu/Low- $k$  Interconnect Technology Design and Benchmarking for Future Technology Nodes. *Ceyhan, A.*, +, *TED Dec. 2013 4041-4047*
- Design and Analysis of Analog Performance of Dual- $k$  Spacer Underlap N/P-FinFET at 12 nm Gate Length. *Nandi, A.*, +, *TED May 2013 1529-1535*
- Device-Circuit Co-design for Beyond 1 GHz 5 V Level Shifter Using DeMOS Transistors. *Swain, P. S.*, +, *TED Nov. 2013 3827-3834*
- Effect of  $\text{O}_2$  Flow Rate During Channel Layer Deposition on Negative Gate Bias Stress-Induced  $V_{th}$  Shift of a-IGZO TFTs. *Xiao, X.*, +, *TED Dec. 2013 4159-4164*
- Effect of Damage in Source and Drain on the Endurance of a 65-nm-Node NOR Flash Memory. *Sun, Z.*, +, *TED Dec. 2013 3989-3995*
- Effects of Fin Width on Device Performance and Reliability of Double-Gate  $n$ -Type FinFETs. *Lin, C.-L.*, +, *TED Nov. 2013 3639-3644*
- Electrical Comparison of  $\text{HfO}_2$  and  $\text{ZrO}_2$  Gate Dielectrics on GaN. *Bothe, K. M.*, +, *TED Dec. 2013 4119-4124*
- Experimental Investigation of the Tunneling Injection Boosters for Enhanced  $I_{ON}$  ETSOI Tunnel FET. *Villalon, A.*, +, *TED Dec. 2013 4079-4084*
- Ge-on-Si Single-Photon Avalanche Diode Detectors: Design, Modeling, Fabrication, and Characterization at Wavelengths 1310 and 1550 nm. *Warburton, R. E.*, +, *TED Nov. 2013 3807-3813*
- Germanium-Tin P-Channel Tunneling Field-Effect Transistor: Device Design and Technology Demonstration. *Yang, Y.*, +, *TED Dec. 2013 4048-4056*
- High-Mobility Pentacene-Based Thin-Film Transistors With Synthesized Strontium Zirconate Nickelate Gate Insulators. *Chang, Y.-C.*, +, *TED Dec. 2013 4234-4239*
- Impact of Epi-Layer Quality on Reliability of GaN/AlGaIn/GaN Heterostructure Field-Effect Transistors on Si Substrate. *Ando, Y.*, +, *TED Dec. 2013 4125-4132*

- Improvement in the Photo-Bias Stability of Zinc Tin Oxide Thin-Film Transistors by Introducing a Thermal Oxidized  $\text{TiO}_2$  Film as a Hole Carrier Blocking Layer. *Lee, C.-K.*, +, *TED Dec. 2013 4165-4172*
- Investigations on Line-Edge Roughness (LER) and Line-Width Roughness (LWR) in Nanoscale CMOS Technology: Part I—Modeling and Simulation Method. *Jiang, X.*, +, *TED Nov. 2013 3669-3675*
- LTPS AM-OLED Display Consisting of Two-TFTs/One-Capacitor Pixel Circuits for Producing High-Uniformity Images. *Kohno, T.*, +, *TED Nov. 2013 3780-3786*
- Material and Device Characteristics of Metamorphic  $\text{In}_{0.53}\text{Ga}_{0.47}\text{As}$  MOSHEMTs Grown on GaAs and Si Substrates by MOCVD. *Li, Q.*, +, *TED Dec. 2013 4112-4118*
- Micro-TEG Voltage Supplies for Spin Torque Oscillators. *Rozgic, D.*, +, *TED Sept. 2013 2884-2891*
- Modeling and Characterization of Gate Leakage in High-K Metal Gate Technology-Based Embedded DRAM. *Bajaj, M.*, +, *TED Dec. 2013 4152-4158*
- Off-State Stress Degradation Analysis and Optimization for the High-Voltage SOI-pLED MOS With Thick Gate Oxide. *Liu, S.*, +, *TED Nov. 2013 3632-3638*
- On Monolayer  $\text{MoS}_2$  Field-Effect Transistors at the Scaling Limit. *Liu, L.*, +, *TED Dec. 2013 4133-4139*
- On the Oxide Trap Density and Profiles of 1-nm EOT Metal-Gate Last CMOS Transistors Assessed by Low-Frequency Noise. *Simoen, E.*, +, *TED Nov. 2013 3849-3855*
- Organic Complementary Logic Circuits and Volatile Memories Integrated on Plastic Foils. *Guerin, M.*, +, *TED June 2013 2045-2051*
- Parasitic Gate Capacitance Model for Triple-Gate FinFETs. *Rodriguez, S. S.*, +, *TED Nov. 2013 3710-3717*
- Part I: Impact of Field-Induced Quantum Confinement on the Subthreshold Swing Behavior of Line TFETs. *Walke, A. M.*, +, *TED Dec. 2013 4057-4064*
- Part II: Investigation of Subthreshold Swing in Line Tunnel FETs Using Bias Stress Measurements. *Walke, A. M.*, +, *TED Dec. 2013 4065-4072*
- Performance of Deep-Depletion Buried-Channel  $n$ -MOSFETs for CMOS Image Sensors. *Stefanov, K. D.*, +, *TED Dec. 2013 4173-4179*
- Performances of Strained Nanowire Devices: Ballistic Versus Scattering-Limited Currents. *Nguyen, V.-H.*, +, *TED May 2013 1506-1513*
- Prospects of Hysteresis-Free Abrupt Switching (0 mV/decade) in Landau Switches. *Jain, A.*, +, *TED Dec. 2013 4269-4276*
- Quantitative Extraction of Electric Flux in the Buried-Oxide Layer and Investigation of Its Effects on MOSFET Characteristics. *Yamada, T.*, +, *TED Dec. 2013 3996-4001*
- Realization and Scaling of  $\text{Ge-Si}_{1-x}\text{Ge}_x$  Core-Shell Nanowire  $n$ -FETs. *Liu, E.-S.*, +, *TED Dec. 2013 4027-4033*
- Solution-Processed Logic Gates Based On Nanotube/Polymer Composite. *Liu, Z.*, +, *TED Aug. 2013 2542-2547*
- Sub-400°C  $\text{Si}_2\text{H}_6$  Passivation,  $\text{HfO}_2$  Gate Dielectric, and Single TaN Metal Gate: A Common Gate Stack Technology for  $\text{In}_{0.7}\text{Ga}_{0.3}\text{As}$  and  $\text{Ge}_{1-x}\text{Sn}_x$  CMOS. *Gong, X.*, +, *TED May 2013 1640-1648*
- The Impact of Substrate Bias on the Steep Subthreshold Slope in Junctionless MuGFETs. *Lee, S. M.*, +, *TED Nov. 2013 3856-3861*
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First Principles Simulations of Nanoscale Silicon Devices With Uniaxial Strain. *Zhang, L.*, +, *TED Oct. 2013 3527-3533*

SiGe Channel Technology: Superior Reliability Toward Ultra-Thin EOT Devices—Part II: Time-Dependent Variability in Nanoscaled Devices and Other Reliability Issues. *Franco, J.*, +, *TED Jan. 2013 405-412*

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Engineering Nanowire n-MOSFETs at  $L_g < 8$  nm. *Mehrotra, S. R.*, +, *TED July 2013 2171-2177*

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SPICE-Based Performance Analysis of Trigate Silicon Nanowire CMOS Circuits. *Tanaka, C.*, +, *TED April 2013 1451-1456*

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Surface-Roughness-Limited Mean Free Path in Silicon Nanowire Field Effect Transistors. *Jung, H.-E.*, +, *TED June 2013 1861-1866*

Transconductance Linearity Analysis of 1-D, Nanowire FETs in the Quantum Capacitance Limit. *Razavieh, A.*, +, *TED June 2013 2071-2076*

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High-Performance InAs-On-Insulator n-MOSFETs With Ni-InGaAs S/D Realized by Contact Resistance Reduction Technology. *Kim, S.*, +, *TED Oct. 2013 3342-3350*

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Experimental Detection and Numerical Validation of Different Failure Mechanisms in IGBTs During Unclamped Inductive Switching. *Breglio, G.*, +, *TED Feb. 2013 563-570*

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Hot Carrier Injection Effects in the Ultrashallow Body SONOS Gate Power MOSFET. *Zhou, X.*, +, *TED June 2013 2008-2014*

New Planar Junction Edge Termination Technique Using OPTVLD With a Buried Layer. *Cheng, J.*, +, *TED July 2013 2428-2431*

Numerical Evaluation of 10-kV Clustered Insulated Gate Bipolar Transistor in 4H-SiC. *Menon, K. G.*, +, *TED Jan. 2013 366-373*

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Quantum Confinement and Volume Inversion in MOS<sup>3</sup> Model for Short-Channel Tri-Gate MOSFETs. *Kloes, A.*, +, *TED Aug. 2013 2691-2694*

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Split-Gate-Enhanced Power UMOSFET With Soft Reverse Recovery. *Wang, Y.*, +, *TED June 2013 2084-2089*

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Compact Model for Carbon Nanotube Field-Effect Transistors Including Nonidealities and Calibrated With Experimental Data Down to 9-nm Gate Length. *Luo, J.*, +, *TED June 2013 1834-1843*

Contact Resistance Reduction for Strained N-MOSFETs With Silicon-Carbon Source/Drain Utilizing Aluminum Ion Implant and Aluminum Profile Engineering. *Zhou, Q.*, +, *TED April 2013 1310-1317*

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A Compact Model for Organic Field-Effect Transistors With Improved Output Asymptotic Behaviors. *Chang Hyun Kim*, +, *TED March 2013 1136-1141*

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Fast-Switching Printed Organic Electrochemical Transistors Including Electronic Vias Through Plastic and Paper Substrates. *Kawahara, J.*, +, *TED June 2013 2052-2056*

Improved Performance of Photosensitive Field-Effect Transistors Based on Palladium Phthalocyanine by Utilizing Al as Source and Drain Electrodes. *Peng, Y.*, +, *TED March 2013 1208-1212*

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Modeling and Simulation of Organic Photodetectors for Low Light Intensity Applications. *Popescu, B. V.*, +, *TED June 2013 1975-1981*

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- Impact Ionization in Absorption, Grating, Charge, and Multiplication Layers of InP/InGaAs SAGCM APDs With a Thick Charge Layer. *Zhao, Y.*, +, *IEDM Oct. 2013 3493-3499*
- Impact of Intrinsic Stress in Diamond Capping Layers on the Electrical Behavior of AlGaIn/GaN HEMTs. *Wang, A.*, +, *IEDM Oct. 2013 3149-3156*
- Impact of Precisely Positioned Dopants on the Performance of an Ultimate Silicon Nanowire Transistor: A Full Three-Dimensional NEGF Simulation Study. *Georgiev, V. P.*, +, *IEDM March 2013 965-971*
- Interface Trap Density of Gate-All-Around Silicon Nanowire Field-Effect Transistors With TiN Gate: Extraction and Compact Model. *Najam, F.*, +, *IEDM Aug. 2013 2457-2463*
- Interface Traps in InAs Nanowire Tunnel-FETs and MOSFETs—Part I: Model Description and Single Trap Analysis in Tunnel-FETs. *Pala, M. G.*, +, *IEDM Sept. 2013 2795-2801*
- Microwave Determination of Quantum-Well Capture and Escape Time in Light-Emitting Transistors. *Wang, H.-L.*, +, *IEDM March 2013 1088-1091*
- Model Order Reduction for Multiband Quantum Transport Simulations and its Application to p-Type Junctionless Transistors. *Huang, J. Z.*, +, *IEDM July 2013 2111-2119*
- Modeling of SiC IGBT Turn-Off Behavior Valid for Over 5-kV Circuit Simulation. *Miyake, M.*, +, *IEDM Feb. 2013 622-629*
- Modeling of the Impurity-Gradient Effect in High-Voltage Laterally Diffused MOSFETs. *Izuka, T.*, +, *IEDM Feb. 2013 684-690*
- Modeling of the Steady State and Switching Characteristics of a Normally Off 4H-SiC Trench Bipolar-Mode FET. *Pezimenti, F.*, +, *IEDM April 2013 1404-1411*
- Narrow-Width Effect on High-Frequency Performance and RF Noise of Sub-40-nm Multifinger nMOSFETs and pMOSFETs. *Yeh, K.-L.*, +, *IEDM Jan. 2013 109-116*
- New Analysis Method for Time-Dependent Device-To-Device Variation Accounting for Within-Device Fluctuation. *Duan, M.*, +, *IEDM Aug. 2013 2505-2511*
- Nonquasi-Static Charge Model for Common Double-Gate MOSFETs Adapted to Gate Oxide Thickness Asymmetry. *Sharan, N.*, +, *IEDM July 2013 2419-2422*
- Operating Voltage Constraints in 45-nm SOI nMOSFETs and Cascode Cores. *Arora, R.*, +, *IEDM Jan. 2013 132-139*
- Orientation and Shape Effects on Ballistic Transport Properties in Gate-All-Around Rectangular Germanium Nanowire nFETs. *Mori, S.*, +, *IEDM March 2013 944-950*
- Oxygen Annealing Effects on Transport and Charging Characteristics of Al-Ta<sub>2</sub>O<sub>5</sub>/SiO<sub>x</sub>N<sub>y</sub>-Si Structure. *Huang, S.*, +, *IEDM Sept. 2013 2741-2746*
- Parameter Extraction and Comparison of Self-Heating Models for Power MOSFETs Based on Transient Current Measurements. *Koh, R.*, +, *IEDM Feb. 2013 708-713*
- Performance Analysis of Strained Monolayer MoS<sub>2</sub> MOSFET. *Sengupta, A.*, +, *IEDM Sept. 2013 2782-2787*
- Performance Study of a Schottky Barrier Double-Gate MOSFET Using a Two-Dimensional Analytical Model. *Schwarz, M.*, +, *IEDM Feb. 2013 884-886*
- Phenomenological Compact Model for QM Charge Centroid in Multigate FETs. *Venugopalan, S.*, +, *IEDM April 2013 1480-1484*
- Physical Modeling of the Capacitance and Capacitive Coupling Noise of Through-Oxide Vias in FDSOI-Based Ultra-High Density 3-D ICs. *Xu, C.*, +, *IEDM Jan. 2013 123-131*
- Physical Models for SiC and Their Application to Device Simulations of SiC Insulated-Gate Bipolar Transistors. *Hatakeyama, T.*, +, *IEDM Feb. 2013 613-621*
- Position-Dependent Bulk Traps and Carrier Compensation in 4H-SiC Bipolar Junction Transistors. *Usman, M.*, +, *IEDM Jan. 2013 178-185*
- Quantum Analytical Model for Inversion Charge and Threshold Voltage of Short-Channel Dual-Material Double-Gate SON MOSFET. *Naskar, S.*, +, *IEDM Sept. 2013 2734-2740*
- Quantum Confinement and Volume Inversion in MOS<sup>3</sup> Model for Short-Channel Tri-Gate MOSFETs. *Kloes, A.*, +, *IEDM Aug. 2013 2691-2694*
- Quantum Mechanical Study of the Germanium Electron-Hole Bilayer Tunnel FET. *Alper, C.*, +, *IEDM Sept. 2013 2754-2760*
- Quasi-Ballistic Transport Model for Graphene Field-Effect Transistor. *Hu, G.*, +, *IEDM July 2013 2410-2414*
- Reliability Analysis of Permanent Degradations on AlGaIn/GaN HEMTs. *Marcon, D.*, +, *IEDM Oct. 2013 3132-3141*
- Revisited RF Compact Model of Gate Resistance Suitable for High-K/Metal Gate Technology. *Dormieu, B.*, +, *IEDM Jan. 2013 13-19*
- Role of Simulation Technology for the Progress in Power Devices and Their Applications. *Ohashi, H.*, +, *IEDM Feb. 2013 528-534*
- Semianalytical Model of the Subthreshold Current in Short-Channel Junctionless Symmetric Double-Gate Field-Effect Transistors. *Gnudi, A.*, +, *IEDM April 2013 1342-1348*
- SiGe Channel Technology: Superior Reliability Toward Ultrathin EOT Devices—Part I: NBTI. *Franco, J.*, +, *IEDM Jan. 2013 396-404*
- Small-Signal Capacitance and Current Parameter Modeling in Large-Scale High-Frequency Graphene Field-Effect Transistors. *Zebrev, G. I.*, +, *IEDM June 2013 1799-1806*
- Statistical Characterization and Modeling of the Temporal Evolutions of  $\Delta V_t$  Distribution in NBTI Recovery in Nanometer MOSFETs. *Chiu, J.-P.*, +, *IEDM March 2013 978-984*
- Strain and Conduction-Band Offset in Narrow n-type FinFETs. *van Hemert, T.*, +, *IEDM March 2013 1005-1010*
- Study of Gate Junction Temperature in GaAs pHEMTs Using Gate Metal Resistance Thermometry. *Schwitzer, B. K.*, +, *IEDM Oct. 2013 3358-3364*
- Study on a Scaling Length Model for Tapered Tri-Gate FinFET Based on 3-D Simulation and Analytical Analysis. *Ko, M.-D.*, +, *IEDM Sept. 2013 2721-2727*
- Surface Potential-Based Polycrystalline-Silicon Thin-Film Transistors Compact Model by Nonequilibrium Approach. *Ikeda, H.*, +, *IEDM Oct. 2013 3417-3423*
- Surface-Roughness-Limited Mean Free Path in Silicon Nanowire Field-Effect Transistors. *Jung, H.-E.*, +, *IEDM June 2013 1861-1866*
- SymFET: A Proposed Symmetric Graphene Tunneling Field-Effect Transistor. *Zhao, P.*, +, *IEDM March 2013 951-957*
- TCAD Simulation of Hot-Carrier and Thermal Degradation in STI-LDMOS Transistors. *Reggiani, S.*, +, *IEDM Feb. 2013 691-698*
- The Destruction Mechanism in GCTs. *Lophitis, N.*, +, *IEDM Feb. 2013 819-826*
- The Second-Generation of HiSIM HV Compact Models for High-Voltage MOSFETs. *Mattausch, H. J.*, +, *IEDM Feb. 2013 653-661*
- Theoretical Analysis of n-Type Si-Based Resonant Tunneling Diodes Deposited on Either Partially or Fully Relaxed SiGe Buffer Layers. *Wu, K. Y.*, +, *IEDM April 2013 1298-1301*
- Theoretical Investigation of Trigate AlGaIn/GaN HEMTs. *Alsharef, M. A.*, +, *IEDM Oct. 2013 3335-3341*



Under-the-Barrier Model: An Extension of the Top-of-the-Barrier Model to Efficiently and Accurately Simulate Ultrascaled Nanowire Transistors. *Szabo, A.*, +, *TED July 2013 2353-2360*

Vertical Nanowire CMOS Parasitic Modeling and its Performance Analysis. *Maheshwaram, S.*, +, *TED Sept. 2013 2943-2950*

Very Large Current Modulation in Vertical Heterostructure Graphene/hBN Transistors. *Fiori, G.*, +, *TED Jan. 2013 268-273*

#### Semiconductor device noise

Accuracy and Issues of the Spectroscopic Analysis of RTN Traps in Nanoscale MOSFETs. *Adamu-Lema, F.*, +, *TED Feb. 2013 833-839*

Characterization and Modeling of Cryogenic Ultralow-Noise InP HEMTs. *Schleeh, J.*, +, *TED Jan. 2013 206-212*

Dual-Carrier High-Gain Low-Noise Superlattice Avalanche Photodiodes. *Huang, J.*, +, *TED July 2013 2296-2301*

Evaluation of Digital Circuit-Level Variability in Inversion-Mode and Junctionless FinFET Technologies. *Wang, S.*, +, *TED July 2013 2186-2193*

Extrinsic and Intrinsic Performance of Vertical InAs Nanowire MOSFETs on Si Substrates. *Persson, K.-M.*, +, *TED Sept. 2013 2761-2767*

Impact Ionization in Absorption, Grading, Charge, and Multiplication Layers of InP/InGaAs SAGCM APDs With a Thick Charge Layer. *Zhao, Y.*, +, *TED Oct. 2013 3493-3499*

Low Frequency Noise Analysis for Post-Treatment of Replacement Metal Gate. *Lee, J. W.*, +, *TED Sept. 2013 2960-2962*

Low-Frequency Noise Contributions From Channel and Contacts in InAs Nanowire Transistors. *Delker, C. J.*, +, *TED Sept. 2013 2900-2905*

Measurement and Compact Modeling of 1/f Noise in HV-MOSFETs. *Mavredakis, N.*, +, *TED Feb. 2013 670-676*

Narrow-Width Effect on High-Frequency Performance and RF Noise of Sub-40-nm Multifinger nMOSFETs and pMOSFETs. *Yeh, K.-L.*, +, *TED Jan. 2013 109-116*

On the Variability of the Front-/Back-Channel LF Noise in UTBOX SOI nMOSFETs. *dos Santos, S. D.*, +, *TED Jan. 2013 444-450*

Physical Modeling of the Capacitance and Capacitive Coupling Noise of Through-Oxide Vias in FDSOI-Based Ultra-High Density 3-D ICs. *Xu, C.*, +, *TED Jan. 2013 123-131*

Scaling of GaN HEMTs and Schottky Diodes for Submillimeter-Wave MMIC Applications. *Shinohara, K.*, +, *TED Oct. 2013 2982-2996*

#### Semiconductor device packaging

Analysis of Contributing Factors for Determining the Reliability Characteristics of GaN-Based White Light-Emitting Diodes With Dual Degradation Kinetics. *Jung, E.*, +, *TED Jan. 2013 186-191*

#### Semiconductor device reliability

AlGaIn/GaN-Based HEMTs Failure Physics and Reliability: Mechanisms Affecting Gate Edge and Schottky Junction. *Zanoni, E.*, +, *TED Oct. 2013 3119-3131*

Analysis of Contributing Factors for Determining the Reliability Characteristics of GaN-Based White Light-Emitting Diodes With Dual Degradation Kinetics. *Jung, E.*, +, *TED Jan. 2013 186-191*

Electric Field Distribution Around Drain-Side Gate Edge in AlGaIn/GaN HEMTs: Analytical Approach. *Si, J.*, +, *TED Oct. 2013 3223-3229*

Electrothermal Simulation of Self-Heating in DMOS Transistors up to Thermal Runaway. *Pfost, M.*, +, *TED Feb. 2013 699-707*

Influence of Frequency Dependent Time to Breakdown on High-K/Metal Gate Reliability. *Knebel, S.*, +, *TED July 2013 2368-2371*

Layout Role in Failure Physics of IGBTs Under Overloading Clamped Inductive Turnoff. *Perpina, X.*, +, *TED Feb. 2013 598-605*

Limiting Factors of the Safe Operating Area for Power Devices. *Schulze, H.-J.*, +, *TED Feb. 2013 551-562*

Low Frequency Noise Analysis for Post-Treatment of Replacement Metal Gate. *Lee, J. W.*, +, *TED Sept. 2013 2960-2962*

New Insights Into Defect Loss, Slowdown, and Device Lifetime Enhancement. *Duan, M.*, +, *TED Jan. 2013 413-419*

On the Distribution of NBTI Time Constants on a Long, Temperature-Accelerated Time Scale. *Pobegen, G.*, +, *TED July 2013 2148-2155*

Operating Voltage Constraints in 45-nm SOI nMOSFETs and Cascode Cores. *Arora, R.*, +, *TED Jan. 2013 132-139*

Reliability Analysis of Permanent Degradations on AlGaIn/GaN HEMTs. *Marcon, D.*, +, *TED Oct. 2013 3132-3141*

Scalable Virtual-Ground Multilevel-Cell Floating-Gate Flash Memory. *Yamauchi, Y.*, +, *TED Aug. 2013 2518-2524*

SiGe Channel Technology: Superior Reliability Toward Ultra-Thin EOT Devices—Part II: Time-Dependent Variability in Nanoscaled Devices and Other Reliability Issues. *Franco, J.*, +, *TED Jan. 2013 405-412*

SiGe Channel Technology: Superior Reliability Toward Ultrathin EOT Devices—Part I: NBTI. *Franco, J.*, +, *TED Jan. 2013 396-404*

Statistical Characterization and Modeling of the Temporal Evolutions of  $\Delta V_t$  Distribution in NBTI Recovery in Nanometer MOSFETs. *Chiu, J.-P.*, +, *TED March 2013 978-984*

Study of Gate Junction Temperature in GaAs pHEMTs Using Gate Metal Resistance Thermometry. *Schwittler, B. K.*, +, *TED Oct. 2013 3358-3364*

Submicrometer InP/InGaAs DHBT Architecture Enhancements Targeting Reliability Improvements. *Kone, G. A.*, +, *TED March 2013 1068-1074*

The Design and Fabrication of Carbon-Nanotube-Based Field Emission X-Ray Cathode With Ballast Resistor. *Sun, Y.*, +, *TED Jan. 2013 464-470*

The Impact of Bias Conditions on Self-Heating in AlGaIn/GaN HEMTs. *Choi, S.*, +, *TED Jan. 2013 159-162*

#### Semiconductor device testing

Characterization of RF-MOSFETs in Common-Source Configuration at Different Source-to-Bulk Voltages From S-Parameters. *Zarate-Rincon, F.*, +, *TED Aug. 2013 2450-2456*

Experimental Detection and Numerical Validation of Different Failure Mechanisms in IGBTs During Unclamped Inductive Switching. *Breglio, G.*, +, *TED Feb. 2013 563-570*

Measurements and Simulations of Low Dark Count Rate Single Photon Avalanche Diode Device in a Low Voltage 180-nm CMOS Image Sensor Technology. *Leitner, T.*, +, *TED June 2013 1982-1988*

Submicrometer InP/InGaAs DHBT Architecture Enhancements Targeting Reliability Improvements. *Kone, G. A.*, +, *TED March 2013 1068-1074*

The Impact of Bias Conditions on Self-Heating in AlGaIn/GaN HEMTs. *Choi, S.*, +, *TED Jan. 2013 159-162*

#### Semiconductor devices

Analytical Gate Capacitance Modeling of III-V Nanowire Transistors. *Marin, E. G.*, +, *TED May 2013 1590-1599*

Dimension Dependence of Unusual HCI-Induced Degradation on N-Channel High-Voltage DEMOSFET. *Chou, H.-L.*, +, *TED May 2013 1723-1729*

#### Semiconductor diodes

A Comprehensive Crossbar Array Model With Solutions for Line Resistance and Nonlinear Device Characteristics. *Chen, A.*, +, *TED April 2013 1318-1326*

Electrical Characterization of GaP-Silicon Interface for Memory and Transistor Applications. *Pal, A.*, +, *TED July 2013 2238-2245*

Large Active Area Organic Photodiodes for Short-Pulse X-Ray Detection. *Arca, F.*, +, *TED May 2013 1663-1667*

Printed Half-Wave and Full-Wave Rectifier Circuits Based on Organic Diodes. *Heljo, P. S.*, +, *TED Feb. 2013 870-874*

RESURF p-n Diode With a Buried Layer, a Comprehensive Study. *Yang, F.-J.*, +, *TED Nov. 2013 3835-3841*

#### Semiconductor doping

A Novel Isolation Method for Half-Bridge Power ICs. *Kong, M.*, +, *TED July 2013 2318-2323*

A Parametric Study of InGaIn/GaN Nanorod Core-Shell LEDs. *Auf der Maur, M.*, +, *TED Jan. 2013 171-177*

A Simulation Study on Process Sensitivity of a Line Tunnel Field-Effect Transistor. *Walke, A. M.*, +, *TED March 2013 1019-1027*

An Investigation on the Optimization and Scaling of Complementary SiGe HBTs. *Chakraborty, P. S.*, +, *TED Jan. 2013 34-41*

Analysis of the GaAs/GaAsBi Material System for Heterojunction Bipolar Transistors. *Marks, Z. D.*, +, *TED Jan. 2013 200-205*

Characterization and Modeling of the Band-to-Band Current Variability of Nanoscale Device Junctions. *Ghetti, A.*, +, *TED Oct. 2013 3291-3297*

Design Optimization of Multigate Bulk MOSFETs. *Ho, B.*, +, *TED Jan. 2013 28-33*

Doping Process for 3-D N-Type Trench Transistors-2-D Cross-Sectional Doping Profiling Study. *Qin, S.*, +, *TED July 2013 2256-2260*

Gate All Around MOSFET With Vacuum Gate Dielectric for Improved Hot Carrier Reliability and RF Performance. *Gautam, R.*, +, *TED June 2013 1820-1827*

Germanium Multiple-Gate Field-Effect Transistor With In Situ Boron-Doped Raised Source/Drain. *Liu, B.*, +, *TED July 2013 2135-2141*

Germanium Multiple-Gate Field-Effect Transistors Formed on Germanium-on-Insulator Substrate. *Liu, B.*, +, *TED June 2013 1852-1860*

Gigahertz Operation of a-IGZO Schottky Diodes. *Chasin, A.*, +, *TED Oct. 2013 3407-3412*

High-Performance and Robust SRAM Cell Based on Asymmetric Dual-K Spacer FinFETs. *Pal, P. K.*, +, *TED Oct. 2013 3371-3377*

High-Performance Split-Gate Enhanced UOMOSFET With p-Pillar Structure. *Wang, Y.*, +, *TED July 2013 2302-2307*

Modeling and Design Guidelines for P<sup>+</sup> Guard Rings in Lightly Doped CMOS Substrates. *Shen, M.*, +, *TED Sept. 2013 2854-2861*

Modeling and Design Space of Junctionless Symmetric DG MOSFETs With Long Channel. *Jazaeri, F.*, +, *TED July 2013 2120-2127*  
 New Planar Junction Edge Termination Technique Using OPTVLD With a Buried Layer. *Cheng, J.*, +, *TED July 2013 2428-2431*

Novel Low-Resistance Current Path UMOS With High-K Dielectric Pillars. *Luo, X. R.*, +, *TED Sept. 2013 2840-2846*

Observation of the Ambient Effect in BTI Characteristics of Back-Gated Single Layer Graphene Field Effect Transistors. *Liu, W. J.*, +, *TED Aug. 2013 2682-2686*

Schottky Barrier Controlled Conduction in Poly-Si TFTs With Metal Source and Drain. *Chen, J.*, +, *TED June 2013 1958-1964*

Simulation of High-Efficiency Crystalline Silicon Solar Cells With Homo-Hetero Junctions. *Zhong, S.*, +, *TED July 2013 2104-2110*

Stochastic Variability in Silicon Double-Gate Lateral Tunnel Field-Effect Transistors. *Leung, G.*, +, *TED Jan. 2013 84-91*

Turnover Temperature Point in Extensional-Mode Highly Doped Silicon Microresonators. *Shahmohammadi, M.*, +, *TED March 2013 1213-1220*

#### Semiconductor epitaxial layers

Al<sub>2</sub>O<sub>3</sub> Interface Engineering of Germanium Epitaxial Layer Grown Directly on Silicon. *Tan, Y. H.*, +, *TED Jan. 2013 56-62*

A Simulation Study on Process Sensitivity of a Line Tunnel Field-Effect Transistor. *Walke, A. M.*, +, *TED March 2013 1019-1027*

Electron Transport in InAsSb-Based nBn Photodetector Structures. *Umana-Membreno, G. A.*, +, *TED Jan. 2013 510-512*

Modified Pulsed MOS Capacitor for Characterization of Ultraclean Thin p/p<sup>+</sup> Silicon Epitaxial Layers. *Elhami Khorasani, A.*, +, *TED Aug. 2013 2592-2597*

#### Semiconductor growth

Al<sub>2</sub>O<sub>3</sub> Interface Engineering of Germanium Epitaxial Layer Grown Directly on Silicon. *Tan, Y. H.*, +, *TED Jan. 2013 56-62*

DC and RF Performance of Gate-Last AlN/GaN MOSHEMTs on Si With Regrown Source/Drain. *Huang, T.*, +, *TED Oct. 2013 3019-3024*

Field-Emission and Photoelectrical Characteristics of Ga-ZnO Nanorods Photodetector. *Hsiao, C.-H.*, +, *TED June 2013 1905-1910*

GaN on Si Technologies for Power Switching Devices. *Ishida, M.*, +, *TED Oct. 2013 3053-3059*

Improved Vertical Isolation for Normally-Off High Voltage GaN-HFETs on n-SiC Substrates. *Hilt, O.*, +, *TED Oct. 2013 3084-3090*

Relaxation of Residual Stress in Bent GaN Film on Sapphire Substrate by Laser Treatment With an Optimized Surface Structure Design. *Chen, C. H.*, +, *TED Feb. 2013 767-770*

#### Semiconductor heterojunctions

AlGaIn/GaN Three-Terminal Junction Devices for Rectification and Transistor Applications on 3C-SiC/Si Pseudosubstrates. *Hiller, L.*, +, *TED Oct. 2013 3047-3052*

AlGaIn/GaN-Based Lateral-Type Schottky Barrier Diode With Very Low Reverse Recovery Charge at High Temperature. *Lee, J.-H.*, +, *TED Oct. 2013 3032-3039*

Annealing Effects of Ti/Au Contact on n-MgZnO/p-Si Ultraviolet-B Photodetectors. *Hou, Y.*, +, *TED Oct. 2013 3474-3477*

Dislocation Scattering in ZnMgO/ZnO Heterostructures. *Sang, L.*, +, *TED June 2013 2077-2079*

PECVD Silicon Nitride Passivation of AlGaIn/GaN Heterostructures. *Gatabi, I. R.*, +, *TED March 2013 1082-1087*

Performance Comparison of Conventional and Inverted Organic Bulk Heterojunction Solar Cells From Optical and Electrical Aspects. *Chen, D.*, +, *TED Jan. 2013 451-457*

Simulation of High-Efficiency Crystalline Silicon Solar Cells With Homo-Hetero Junctions. *Zhong, S.*, +, *TED July 2013 2104-2110*

#### Semiconductor junctions

Quantum Mechanical Performance Predictions of p-n-i-n Versus Pocketed Line Tunnel Field-Effect Transistors. *Verreck, D.*, +, *TED July 2013 2128-2134*

Schottky Barrier Controlled Conduction in Poly-Si TFTs With Metal Source and Drain. *Chen, J.*, +, *TED June 2013 1958-1964*

#### Semiconductor lasers

Characteristics of the GaAs Photoconductive Semiconductor Switch Operated in Linear-Alike Mode. *Wang, B.*, +, *TED Aug. 2013 2580-2585*

#### Semiconductor materials

Counterdoped Pocket Thickness Optimization of Gate-on-Source-Only Tunnel FETs. *Kao, K.-H.*, +, *TED Jan. 2013 6-12*

Fabrication of Si<sub>1-x</sub>Ge<sub>x</sub>/Si pMOSFETs Using Corrugated Substrates for Improved I<sub>ON</sub> and Reduced Layout-Width Dependence. *Ho, B.*, +, *TED Jan. 2013 153-158*

Impact of High-Mobility Materials on the Performance of Near- and Sub-Threshold CMOS Logic Circuits. *Crupi, F.*, +, *TED March 2013 972-977*  
 SiGe Channel Technology: Superior Reliability Toward Ultra-Thin EOT Devices—Part II: Time-Dependent Variability in Nanoscaled Devices and Other Reliability Issues. *Franco, J.*, +, *TED Jan. 2013 405-412*

Transport Gap in Dual-Gated Graphene Bilayers Using Oxides as Dielectrics. *Lee, K.*, +, *TED Jan. 2013 103-108*

#### Semiconductor optical amplifiers

Cathode-Side Current Filaments in High-Voltage Power Diodes Beyond the SOA Limit. *Baburske, R.*, +, *TED July 2013 2308-2317*

#### Semiconductor process modeling

A Common Core Model for Junctionless Nanowires and Symmetric Double-Gate FETs. *Sallese, J.-M.*, +, *TED Dec. 2013 4277-4280*

A TCAD and Spectroscopy Study of Dark Count Mechanisms in Single-Photon Avalanche Diodes. *Webster, E. A. G.*, +, *TED Dec. 2013 4014-4019*

Analytical Modeling of a Double Gate MOSFET Considering Source/Drain Lateral Gaussian Doping Profile. *Nandi, A.*, +, *TED Nov. 2013 3705-3709*

Comparative Study of Uniform Versus Supersteep Retrograde MOSFET Channel Doping and Implications for 6-T SRAM Yield. *Damrongplasit, N.*, +, *TED May 2013 1790-1793*

Effect of Bandgap Narrowing on Performance of Modern Power Devices. *Camuso, G.*, +, *TED Dec. 2013 4185-4190*

Influence of Implantation Damages and Intrinsic Dislocations on Phosphorus Diffusion in Ge. *Ruan, Y.*, +, *TED Nov. 2013 3741-3745*

Lumped Models for Assessment and Optimization of Bipolar Device RF Noise Performance. *Vitale, F.*, +, *TED Nov. 2013 3870-3876*

The Impact of Substrate Bias on the Steep Subthreshold Slope in Junctionless MuGFETs. *Lee, S. M.*, +, *TED Nov. 2013 3856-3861*

#### Semiconductor quantum wells

GaN-Based Dual-Color LEDs With p-Type Insertion Layer for Controlling the Ratio of Two-Color Intensities. *Chi, K.-L.*, +, *TED Sept. 2013 2821-2826*

Microwave Determination of Quantum-Well Capture and Escape Time in Light-Emitting Transistors. *Wang, H.-L.*, +, *TED March 2013 1088-1091*

Minority Carrier Transport and Their Lifetime in InGaAs/GaAsP Multiple Quantum Well Structures. *Carlin, C. Z.*, +, *TED Aug. 2013 2532-2536*

#### Semiconductor quantum wires

Interface Traps in InAs Nanowire Tunnel-FETs and MOSFETs—Part I: Model Description and Single Trap Analysis in Tunnel-FETs. *Pala, M. G.*, +, *TED Sept. 2013 2795-2801*

#### Semiconductor superlattices

AlGaIn/SiC Heterojunction Bipolar Transistors Featuring AlN/GaN Short-Period Superlattice Emitter. *Miyake, H.*, +, *TED Sept. 2013 2768-2775*

Dual-Carrier High-Gain Low-Noise Superlattice Avalanche Photodiodes. *Huang, J.*, +, *TED July 2013 2296-2301*

#### Semiconductor switches

Methodology for the Study of Dynamic ON-Resistance in High-Voltage GaN Field-Effect Transistors. *Jin, D.*, +, *TED Oct. 2013 3190-3196*

#### Semiconductor thin films

Characterization of Thermoelectric Properties of Heavily Doped n-Type Polycrystalline Silicon Carbide Thin Films. *Lei, M. I.*, +, *TED Jan. 2013 513-517*

Doping-Less Tunnel Field Effect Transistor: Design and Investigation. *Kumar, M. J.*, +, *TED Oct. 2013 3285-3290*

Effect of ZnO Buffer Layer on the Bending Durability of ZnO:Ga Films Grown on Flexible Substrates: Investigation of Surface Energy, Electrical, Optical, and Structural Properties. *Wu, J.-L.*, +, *TED July 2013 2324-2330*

Epitaxial Germanium on SOI Substrate and Its Application of Fabricating High I<sub>ON</sub>/I<sub>OFF</sub> Ratio Ge FinFETs. *Chung, C.-T.*, +, *TED June 2013 1878-1883*

Fabrication and Characterization of Enhancement-Mode High-κ-LaLuO<sub>3</sub>-AlGaIn/GaN MIS-HEMTs. *Yang, S.*, +, *TED Oct. 2013 3040-3046*

Fabrication and Characterization of High-Mobility Solution-Based Chalcogenide Thin-Film Transistors. *Mejia, I.*, +, *TED Jan. 2013 327-332*

High-Performance Solution-Processed ZnInZnO Thin-Film Transistors. *Tue, P. T.*, +, *TED Jan. 2013 320-326*

Influence of Dopants on the Thermal Conductance of GaN-Sapphire Interface. *Zheng, H.*, +, *TED June 2013 1911-1915*

Novel Strain Relief Design for Multilayer Thin Film Stretchable Interconnects. *Hsu, Y.-Y.*, +, *TED July 2013 2338-2345*

Performance Testing of 3-W LED Mounted on ZnO Thin Film Coated Al as Heat Sink Using Dual Interface Method. *Mutharasu, D.*, +, *TED July 2013 2290-2295*

**Semiconductor-insulator boundaries**

- Germanium Multiple-Gate Field-Effect Transistor With In Situ Boron-Doped Raised Source/Drain. *Liu, B.*, +, *TED July 2013 2135-2141*
- High-Performance InAs-On-Insulator n-MOSFETs With Ni-InGaAs S/D Realized by Contact Resistance Reduction Technology. *Kim, S.*, +, *TED Oct. 2013 3342-3350*
- Interface Trap Density of Gate-All-Around Silicon Nanowire Field-Effect Transistors With TiN Gate: Extraction and Compact Model. *Najam, F.*, +, *TED Aug. 2013 2457-2463*
- Sub-60-nm Extremely Thin Body  $\text{In}_x\text{Ga}_{1-x}\text{As}$ -On-Insulator MOSFETs on Si With Ni-InGaAs Metal S/D and MOS Interface Buffer Engineering and Its Scalability. *Kim, S.*, +, *TED Aug. 2013 2512-2517*

**Semiconductor-metal boundaries**

- Analytical and Finite-Element Modeling of a Two-Contact Circular Test Structure for Specific Contact Resistivity. *Pan, Y.*, +, *TED March 2013 1202-1207*
- Annealing Effects of Ti/Au Contact on n-MgZnO/p-Si Ultraviolet-B Photodetectors. *Hou, Y.*, +, *TED Oct. 2013 3474-3477*
- High-Performance InAs-On-Insulator n-MOSFETs With Ni-InGaAs S/D Realized by Contact Resistance Reduction Technology. *Kim, S.*, +, *TED Oct. 2013 3342-3350*

**Sensitivity analysis**

- Comparative Simulation Analysis of Process-Induced Variability in Nanoscale SOI and Bulk Trigate FinFETs. *Brown, A. R.*, +, *TED Nov. 2013 3611-3617*
- A THz Backward-Wave Oscillator Based on a Double-Grating Rectangular Waveguide. *Liu, Q.-L.*, +, *TED April 2013 1463-1468*

**Sensor arrays**

- Fixed-Pattern-Noise Correction for an Integrating Wide-Dynamic-Range CMOS Image Sensor. *Das, D.*, +, *TED Jan. 2013 314-319*

**Short-circuit currents**

- Numerical Evaluation of 10-kV Clustered Insulated Gate Bipolar Transistor in 4H-SiC. *Menon, K. G.*, +, *TED Jan. 2013 366-373*

**Shot noise**

- A Gain-Adaptive Column Amplifier for Wide-Dynamic-Range CMOS Image Sensors. *Le-Thai, H.*, +, *TED Oct. 2013 3601-3604*
- SPAD Image Sensor With Analog Counting Pixel for Time-Resolved Fluorescence Detection. *Pancheri, L.*, +, *TED Oct. 2013 3442-3449*

**Signal generators**

- Study on Dual Channel n-p-LDMOS Power Devices With Three Terminals. *Kong, M.*, +, *TED Oct. 2013 3508-3514*

**Silicon**

- $\text{Al}_2\text{O}_3$  Interface Engineering of Germanium Epitaxial Layer Grown Directly on Silicon. *Tan, Y. H.*, +, *TED Jan. 2013 56-62*
- $\text{Si}_x\text{Ge}_{1-x}$  Epitaxial Tunnel Layer Structure for P-Channel Tunnel FET Improvement. *Wang, P.-Y.*, +, *TED Dec. 2013 4098-4104*
- A Common Core Model for Junctionless Nanowires and Symmetric Double-Gate FETs. *Sallese, J.-M.*, +, *TED Dec. 2013 4277-4280*
- A Novel Self-Aligned Double-Channel Polysilicon Thin-Film Transistor. *Chien, F.-T.*, +, *TED Feb. 2013 799-804*
- A Preliminary Study on the Environmental Dependences of Avalanche Propagation in Silicon. *Fishburn, M. W.*, +, *TED March 2013 1028-1033*
- A Self-Consistent Electrothermal Model for Analyzing NBTI Effect in p-Type Poly-Si Thin-Film Transistors. *Ho, C.-H.*, +, *TED Jan. 2013 288-294*
- A Unified Physical-Based Model of Series Resistance of Polycrystalline Silicon Thin-Film Transistors With Explicit Analytical Solutions. *Wang, M.*, +, *TED Sept. 2013 2827-2833*
- Accurate Power Circuit Loss Estimation Method for Power Converters With Si-IGBT and SiC-Diode Hybrid Pair. *Takao, K.*, +, *TED Feb. 2013 606-612*
- Analysis and Comparison of L-Valley Transport in GaAs, GaSb, and Ge Ultrathin-Body Ballistic nMOSFETs. *Alam, K.*, +, *TED Dec. 2013 4213-4218*
- Analytical Drain Current Model for Poly-Si Thin-Film Transistors Biased in Strong Inversion Considering Degradation of Tail States at Grain Boundary. *Wang, L. L.*, +, *TED March 2013 1122-1127*
- Annealing Effects of Ti/Au Contact on n-MgZnO/p-Si Ultraviolet-B Photodetectors. *Hou, Y.*, +, *TED Oct. 2013 3474-3477*
- Area-Dependent Photodetection Frequency Response Characterization of Silicon Avalanche Photodetectors Fabricated With Standard CMOS Technology. *Lee, M.-J.*, +, *TED March 2013 998-1004*
- Capacitor-Less Gate Drive Circuit Capable of High-Efficiency Operation for Non-Insulating-Gate GaN FETs. *Hattori, F.*, +, *TED Oct. 2013 3249-3255*

- Channel Width Splitting Effect on Driving Characteristics of Silicide Seed-Induced Laterally Crystallized Poly-Si Thin-Film Transistors. *Byun, C.-W.*, +, *TED April 2013 1390-1396*
- Characteristics of Planar Junctionless Poly-Si Thin-Film Transistors With Various Channel Thickness. *Lin, H.-C.*, +, *TED March 2013 1142-1148*
- Characterization of the First FBK High-Density Cell Silicon Photomultiplier Technology. *Piemonte, C.*, +, *TED Aug. 2013 2567-2573*
- Contact Resistance Reduction for Strained N-MOSFETs With Silicon-Carbon Source/Drain Utilizing Aluminum Ion Implant and Aluminum Profile Engineering. *Zhou, Q.*, +, *TED April 2013 1310-1317*
- Degradation of Polycrystalline Silicon TFT CMOS Inverters under AC Operation. *Chen, W.*, +, *TED Jan. 2013 295-300*
- Design and Simulation of 5–20-kV GaN Enhancement-Mode Vertical Superjunction HEMT. *Li, Z.*, +, *TED Oct. 2013 3230-3237*
- Detection of Deep-Levels in Doped Silicon Nanowires Using Low-Frequency Noise Spectroscopy. *Sharma, D.*, +, *TED Dec. 2013 4206-4212*
- Die-Level 3-D Integration Technology for Rapid Prototyping of High-Performance Multifunctionality Hetero-Integrated Systems. *Lee, K.-W.*, +, *TED Nov. 2013 3842-3848*
- Dielectric Permittivity of Porous Si for Use as Substrate Material in Si-Integrated RF Devices. *Sarafis, P.*, +, *TED April 2013 1436-1443*
- Doping-Less Tunnel Field Effect Transistor: Design and Investigation. *Kumar, M. J.*, +, *TED Oct. 2013 3285-3290*
- Effects of Fin Width on Device Performance and Reliability of Double-Gate n-Type FinFETs. *Lin, C.-L.*, +, *TED Nov. 2013 3639-3644*
- Electrical Characterization of GaP-Silicon Interface for Memory and Transistor Applications. *Pal, A.*, +, *TED July 2013 2238-2245*
- Exoemission Properties of PDP Protective Layers. *Chen, Y.*, +, *TED Oct. 2013 3485-3492*
- Experimental Investigation of the Tunneling Injection Boosters for Enhanced  $I_{ON}$  ETSOI Tunnel FET. *Villalon, A.*, +, *TED Dec. 2013 4079-4084*
- Fabrication and Electrical Characterization of Fully CMOS-Compatible Si Single-Electron Devices. *Koppinen, P. J.*, +, *TED Jan. 2013 78-83*
- Fabrication and Performance of Au-Free AlGaIn/GaN-on-Silicon Power Devices With  $\text{Al}_2\text{O}_3$  and  $\text{Si}_3\text{N}_4/\text{Al}_2\text{O}_3$  Gate Dielectrics. *Van Hove, M.*, +, *TED Oct. 2013 3071-3078*
- Fabrication of  $\text{Si}_{1-x}\text{Ge}_x$ /Si pMOSFETs Using Corrugated Substrates for Improved  $I_{ON}$  and Reduced Layout-Width Dependence. *Ho, B.*, +, *TED Jan. 2013 153-158*
- First Principles Simulations of Nanoscale Silicon Devices With Uniaxial Strain. *Zhang, L.*, +, *TED Oct. 2013 3527-3533*
- Flexible High- $\kappa$ /Metal Gate Metal/Insulator/Metal Capacitors on Silicon (100) Fabric. *Rojas, J. P.*, +, *TED Oct. 2013 3305-3309*
- From MFM Capacitors Toward Ferroelectric Transistors: Endurance and Disturb Characteristics of  $\text{HfO}_2$ -Based FeFET Devices. *Mueller, S.*, +, *TED Dec. 2013 4199-4205*
- GaN on Si Technologies for Power Switching Devices. *Ishida, M.*, +, *TED Oct. 2013 3053-3059*
- Gate Voltage Matching Investigation for Low-Power Analog Applications. *Joly, Y.*, +, *TED March 2013 1263-1267*
- Ge-on-Si Single-Photon Avalanche Diode Detectors: Design, Modeling, Fabrication, and Characterization at Wavelengths 1310 and 1550 nm. *Warburton, R. E.*, +, *TED Nov. 2013 3807-3813*
- Germanium N and P Multifin Field-Effect Transistors With High-Performance Germanium (Ge)  $p^+/n$  and  $n^+/p$  Heterojunctions Formed on Si Substrate. *Chen, C.-W.*, +, *TED April 2013 1334-1341*
- Germanium-Tin P-Channel Tunneling Field-Effect Transistor: Device Design and Technology Demonstration. *Yang, Y.*, +, *TED Dec. 2013 4048-4056*
- Graphene-Base Heterojunction Transistor: An Attractive Device for Terahertz Operation. *Di Lecce, V.*, +, *TED Dec. 2013 4263-4268*
- High-Bandwidth and High-Responsivity Top-Illuminated Germanium Photodiodes for Optical Interconnection. *Li, C.*, +, *TED March 2013 1183-1187*
- High-Performance Double-Layer Nickel Nanocrystal Memory by Ion Bombardment Technique. *Liu, S.-H.*, +, *TED Oct. 2013 3393-3399*
- High-Performance Silicon Nanotube Tunneling FET for Ultralow-Power Logic Applications. *Fahad, H. M.*, +, *TED March 2013 1034-1039*
- High-Q Backside Silicon-Embedded Inductor for Power Applications in /spl mu/H and MHz Range. *Wu, R.*, +, *TED Jan. 2013 339-345*
- HiSIM-IGBT: A Compact Si-IGBT Model for Power Electronic Circuit Design. *Miyake, M.*, +, *TED Feb. 2013 571-579*
- Hot Carrier Injection Effects in the Ultrashallow Body SONOS Gate Power MOSFET. *Zhou, X.*, +, *TED June 2013 2008-2014*

- Impact of a Spacer–Drain Overlap on the Characteristics of a Silicon Tunnel Field-Effect Transistor Based on Vertical Tunneling. *Mallik, A.*, +, *TED March 2013 935-943*
- Impact of Precisely Positioned Dopants on the Performance of an Ultimate Silicon Nanowire Transistor: A Full Three-Dimensional NEGF Simulation Study. *Georgiev, V. P.*, +, *TED March 2013 965-971*
- Impact of Transistor Architecture (Bulk Planar, Trigate on Bulk, Ultrathin-Body Planar SOI) and Material (Silicon or III–V Semiconductor) on Variation for Logic and SRAM Applications. *Agrawal, N.*, +, *TED Oct. 2013 3298-3304*
- InP-DHBT-on-BiCMOS Technology With  $f_T/f_{\max}$  of 400/350 GHz for Heterogeneous Integrated Millimeter-Wave Sources. *Kraemer, T.*, +, *TED July 2013 2209-2216*
- Interface Trap Density of Gate-All-Around Silicon Nanowire Field-Effect Transistors With TiN Gate: Extraction and Compact Model. *Najam, F.*, +, *TED Aug. 2013 2457-2463*
- Investigation of Silicon Nanowire Gate-All-Around Junctionless Transistors Built on a Bulk Substrate. *Moon, D.-I.*, +, *TED April 2013 1355-1360*
- Material and Device Characteristics of Metamorphic  $\text{In}_{0.53}\text{Ga}_{0.47}\text{As}$  MOSHEMTs Grown on GaAs and Si Substrates by MOCVD. *Li, Q.*, +, *TED Dec. 2013 4112-4118*
- Measurements of Silicon Photomultipliers Responsivity in Continuous Wave Regime. *Adamo, G.*, +, *TED Nov. 2013 3718-3725*
- Model Order Reduction for Multiband Quantum Transport Simulations and its Application to p-Type Junctionless Transistors. *Huang, J. Z.*, +, *TED July 2013 2111-2119*
- Modified Pulsed MOS Capacitor for Characterization of Ultraclean Thin p/p<sup>+</sup> Silicon Epitaxial Layers. *Elhami Khorasani, A.*, +, *TED Aug. 2013 2592-2597*
- More Accurate and Reliable Extraction of Tunneling Resistance in Tunneling FET and Verification in Small-Signal Circuit Operation. *Cho, S.*, +, *TED Oct. 2013 3318-3324*
- On Monolayer  $\text{MoS}_2$  Field-Effect Transistors at the Scaling Limit. *Liu, L.*, +, *TED Dec. 2013 4133-4139*
- On the Oxide Trap Density and Profiles of 1-nm EOT Metal-Gate Last CMOS Transistors Assessed by Low-Frequency Noise. *Simoen, E.*, +, *TED Nov. 2013 3849-3855*
- On the Variability of the Front-/Back-Channel LF Noise in UTBOX SOI nMOSFETs. *dos Santos, S. D.*, +, *TED Jan. 2013 444-450*
- Optimization of  $\text{Al}_{0.29}\text{Ga}_{0.71}\text{N}/\text{GaN}$  High Electron Mobility Heterostructures for High-Power/Frequency Performances. *Rennesson, S.*, +, *TED Oct. 2013 3105-3111*
- Oriental Dependence in Device Performances of InAs and Si Nanowire MOSFETs Under Ballistic Transport. *Shimoida, K.*, +, *TED Jan. 2013 117-122*
- Oxygen Annealing Effects on Transport and Charging Characteristics of  $\text{Al-Ta}_2\text{O}_5/\text{SiO}_x\text{N}_y\text{-Si}$  Structure. *Huang, S.*, +, *TED Sept. 2013 2741-2746*
- Parameterization of Free Carrier Absorption in Highly Doped Silicon for Solar Cells. *Rudiger, M.*, +, *TED July 2013 2156-2163*
- Part II: Investigation of Subthreshold Swing in Line Tunnel FETs Using Bias Stress Measurements. *Walke, A. M.*, +, *TED Dec. 2013 4065-4072*
- Performance Dependence on Width-to-Length Ratio of Si Cap/SiGe Channel MOSFETs. *Chang, W.-T.*, +, *TED Nov. 2013 3663-3668*
- Performances of Strained Nanowire Devices: Ballistic Versus Scattering-Limited Currents. *Nguyen, V.-H.*, +, *TED May 2013 1506-1513*
- Photo-Induced Coplanar Waveguide RF Switch and Optical Crosstalk on High-Resistivity Silicon Trap-Rich Passivated Substrate. *Ali, K. B.*, +, *TED Oct. 2013 3478-3484*
- Poly-Si Nanowire TFT With Raised Source/Drain and Nitride Spacer. *Kang, T.-K.*, +, *TED July 2013 2415-2418*
- Realization and Scaling of  $\text{Ge-Si}_{1-x}\text{Ge}_x$  Core-Shell Nanowire n-FETs. *Liu, E.-S.*, +, *TED Dec. 2013 4027-4033*
- Schottky Barrier Controlled Conduction in Poly-Si TFTs With Metal Source and Drain. *Chen, J.*, +, *TED June 2013 1958-1964*
- Self-Selection Unipolar  $\text{HfO}_x$ -Based RRAM. *Tran, X. A.*, +, *TED Jan. 2013 391-395*
- Silicon Substrate Engineered High-Voltage High-Temperature GaN-DHFETs. *Srivastava, P.*, +, *TED July 2013 2217-2223*
- Simulation of High-Efficiency Crystalline Silicon Solar Cells With Homo–Hetero Junctions. *Zhong, S.*, +, *TED July 2013 2104-2110*
- SPICE-Based Performance Analysis of Trigate Silicon Nanowire CMOS Circuits. *Tanaka, C.*, +, *TED April 2013 1451-1456*
- Stochastic Variability in Silicon Double-Gate Lateral Tunnel Field-Effect Transistors. *Leung, G.*, +, *TED Jan. 2013 84-91*
- Strain-Induced Performance Enhancement of Trigate and Omega-Gate Nanowire FETs Scaled Down to 10-nm Width. *Coquand, R.*, +, *TED Feb. 2013 727-732*
- Surface Potential-Based Polycrystalline-Silicon Thin-Film Transistors Compact Model by Nonequilibrium Approach. *Ikeda, H.*, +, *TED Oct. 2013 3417-3423*
- Theoretical Study of the Gate Leakage Current in Sub-10-nm Field-Effect Transistors. *Fischetti, M. V.*, +, *TED Nov. 2013 3862-3869*
- Three-Side Buttable Integrated Ultrasound Chip With a 16x16 Reconfigurable Transceiver and Capacitive Micromachined Ultrasonic Transducer Array for 3-D Ultrasound Imaging Systems. *Jung, S.-J.*, +, *TED Oct. 2013 3562-3569*
- Threshold Voltage Shift Due to Charge Trapping in Dielectric-Gated AlGaIn/GaN High Electron Mobility Transistors Examined in Au-Free Technology. *Johnson, D. W.*, +, *TED Oct. 2013 3197-3203*
- Turnover Temperature Point in Extensional-Mode Highly Doped Silicon Microresonators. *Shahmohammadi, M.*, +, *TED March 2013 1213-1220*
- Two-Dimensional Self-Limiting Wet Oxidation of Silicon Nanowires: Experiments and Modeling. *Fan, J.*, +, *TED Sept. 2013 2747-2753*
- Wafer-Level Integration of High-Quality Bulk Piezoelectric Ceramics on Silicon. *Aktakka, E. E.*, +, *TED June 2013 2022-2030*
- Silicon carbide**
- A Fully Monolithic 6H-SiC JFET-Based Transimpedance Amplifier for High-Temperature Capacitive Sensing. *Soong, C.-W.*, +, *TED Dec. 2013 4146-4151*
- Thermal Stability of Silicon Carbide Power JFETs. *Buttay, C.*, +, *TED Dec. 2013 4191-4198*
- Silicon compounds**
- A Physical and SPICE Mobility Degradation Analysis for NBTI. *Chaudhary, A.*, +, *TED July 2013 2096-2103*
- a-IGZO TFTs With Inductively Coupled Plasma Chemical Vapor Deposited  $\text{SiO}_x$  Gate Dielectric. *Xiao, X.*, +, *TED Aug. 2013 2687-2690*
- Accurate Power Circuit Loss Estimation Method for Power Converters With Si-IGBT and SiC-Diode Hybrid Pair. *Takao, K.*, +, *TED Feb. 2013 606-612*
- AllInN-Based HEMTs for Large-Signal Operation at 40 GHz. *Tirelli, S.*, +, *TED Oct. 2013 3091-3098*
- Application of MgCaO Cathode Layer to Plasma Display Panel for High Luminous Efficacy. *Lee, T.-H.*, +, *TED Jan. 2013 301-304*
- Behavioral Approach to SiC MPS Diode Electrothermal Model Generation. *Starzak, L.*, +, *TED Feb. 2013 630-638*
- Channel Width Splitting Effect on Driving Characteristics of Silicide Seed-Induced Laterally Crystallized Poly-Si Thin-Film Transistors. *Byun, C.-W.*, +, *TED April 2013 1390-1396*
- Characterization and Modeling of 4H-SiC Lateral MOSFETs for Integrated Circuit Design. *Mudholkar, M.*, +, *TED June 2013 1923-1930*
- Characterization of Thermoelectric Properties of Heavily Doped n-Type Polycrystalline Silicon Carbide Thin Films. *Lei, M. I.*, +, *TED Jan. 2013 513-517*
- Control of Resistance by Oxide on the Surface of Cu Interconnects With CuSiN and Ti-based Barrier Metal. *Hayashi, Y.*, +, *TED Jan. 2013 42-48*
- Effects of Nitridation on 4H-SiC MOSFETs Fabricated on Various Crystal Faces. *Nanen, Y.*, +, *TED March 2013 1260-1262*
- Effects of the Use of an Aluminum Reflecting and an  $\text{SiO}_2$  Insulating Layers (RIL) on the Performance of a GaN-Based Light-Emitting Diode With the Naturally Textured p-GaN Surface. *Liou, J.-K.*, +, *TED July 2013 2282-2289*
- Fabrication and Performance of Au-Free AlGaIn/GaN-on-Silicon Power Devices With  $\text{Al}_2\text{O}_3$  and  $\text{Si}_3\text{N}_4/\text{Al}_2\text{O}_3$  Gate Dielectrics. *Van Hove, M.*, +, *TED Oct. 2013 3071-3078*
- GaN Power Transistor Modeling for High-Speed Converter Circuit Design. *Nakajima, A.*, +, *TED Feb. 2013 646-652*
- Gate All Around MOSFET With Vacuum Gate Dielectric for Improved Hot Carrier Reliability and RF Performance. *Gautam, R.*, +, *TED June 2013 1820-1827*
- Gate-Stack Engineering in n-Type Ultrascaled Si Nanowire Field-Effect Transistors. *Luisier, M.*, +, *TED Oct. 2013 3325-3329*
- Heat Channeling in Extremely Thin Silicon-on-Insulator Devices: A Simulation Study. *Orfanidou, C. M.*, +, *TED Oct. 2013 3330-3334*
- High-Performance Double-Layer Nickel Nanocrystal Memory by Ion Bombardment Technique. *Liu, S.-H.*, +, *TED Oct. 2013 3393-3399*
- Hot Carrier Injection Effects in the Ultrashallow Body SONOS Gate Power MOSFET. *Zhou, X.*, +, *TED June 2013 2008-2014*
- Influence by Layer Structure on the Output EL of CMOS Compatible Silicon-Based Light Emitters. *Gonzalez-Fernandez, A. A.*, +, *TED June 2013 1971-1974*

- Interface Trap Density of Gate-All-Around Silicon Nanowire Field-Effect Transistors With TiN Gate: Extraction and Compact Model. *Najam, F.*, +, *TED Aug. 2013 2457-2463*
- Investigation of Polysilazane-Based SiO<sub>2</sub> Gate Insulator for Oxide Semiconductor Thin-Film Transistors. *Tu, H. T. C.*, +, *TED March 2013 1149-1153*
- Lateral and Vertical Transistors Using the AlGaIn/GaN Heterostructure. *Chowdhury, S.*, +, *TED Oct. 2013 3060-3066*
- Limitations of the High - Low C - V Technique for MOS Interfaces With Large Time Constant Dispersion. *Penumatcha, A. V.*, +, *TED March 2013 923-926*
- Low-Interface-Trap-Density and High-Breakdown-Electric-Field SiN Films on GaN Formed by Plasma Pretreatment Using Microwave-Excited Plasma-Enhanced Chemical Vapor Deposition. *Watanabe, T.*, +, *TED June 2013 1916-1922*
- Modeling of SiC IGBT Turn-Off Behavior Valid for Over 5-kV Circuit Simulation. *Miyake, M.*, +, *TED Feb. 2013 622-629*
- Modeling of the Steady State and Switching Characteristics of a Normally Off 4H-SiC Trench Bipolar-Mode FET. *Pezimenti, F.*, +, *TED April 2013 1404-1411*
- Numerical Evaluation of 10-kV Clustered Insulated Gate Bipolar Transistor in 4H-SiC. *Menon, K. G.*, +, *TED Jan. 2013 366-373*
- Observation of the Ambient Effect in BTI Characteristics of Back-Gated Single Layer Graphene Field Effect Transistors. *Liu, W. J.*, +, *TED Aug. 2013 2682-2686*
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- Oxygen Annealing Effects on Transport and Charging Characteristics of Al-Ta<sub>2</sub>O<sub>5</sub>/SiO<sub>x</sub>N<sub>y</sub>-Si Structure. *Huang, S.*, +, *TED Sept. 2013 2741-2746*
- PECVD Silicon Nitride Passivation of AlGaIn/GaN Heterostructures. *Gatabi, I. R.*, +, *TED March 2013 1082-1087*
- Photocapacitance Decay Technique for Interface Trap Characterization Near Inversion Band in Wide Bandgap MOS Capacitors. *DasGupta, S.*, +, *TED Aug. 2013 2619-2625*
- Physical Models for SiC and Their Application to Device Simulations of SiC Insulated-Gate Bipolar Transistors. *Hatakeyama, T.*, +, *TED Feb. 2013 613-621*
- Position-Dependent Bulk Traps and Carrier Compensation in 4H-SiC Bipolar Junction Transistors. *Usman, M.*, +, *TED Jan. 2013 178-185*
- Statistical Characterization and Modeling of the Temporal Evolutions of  $\Delta V_t$  Distribution in NBTI Recovery in Nanometer MOSFETs. *Chiu, J.-P.*, +, *TED March 2013 978-984*
- Temperature Dependence and Postirradiation Annealing Response of the 1/f Noise of 4H-SiC MOSFETs. *Zhang, C. X.*, +, *TED July 2013 2361-2367*
- Temperature-Stable Silicon Oxide (SiO<sub>x</sub>) Micromechanical Resonators. *Tabrizian, R.*, +, *TED Aug. 2013 2656-2663*
- Thulium Silicate Interfacial Layer for Scalable High-k/Metal Gate Stacks. *Dentoni Litta, E.*, +, *TED Oct. 2013 3271-3276*
- Ultralow-Capacitance Through-Silicon Vias With Annular Air-Gap Insulation Layers. *Chen, Q.*, +, *TED April 2013 1421-1426*
- Silicon germanium**
- Experimental Investigation of the Tunneling Injection Boosters for Enhanced I<sub>ON</sub> ETSOI Tunnel FET. *Villalon, A.*, +, *TED Dec. 2013 4079-4084*
- High-Performance Ultrathin Body c-SiGe Channel FDSOI pMOSFETs Featuring SiGe Source and Drain:  $V_{th}$  Tuning, Variability, Access Resistance, and Mobility Issues. *Villalon, A.*, +, *TED May 2013 1568-1574*
- Performance Dependence on Width-to-Length Ratio of Si Cap/SiGe Channel MOSFETs. *Chang, W.-T.*, +, *TED Nov. 2013 3663-3668*
- Silicon-on-insulator**
- 200 V Superjunction N-Type Lateral Insulated-Gate Bipolar Transistor With Improved Latch-Up Characteristics. *Tee, E. K. C.*, +, *TED April 2013 1412-1415*
- Back-Gate Bias Dependence of the Statistical Variability of FDSOI MOSFETs With Thin BOX. *Yang, Y.*, +, *TED Feb. 2013 739-745*
- Comparison of SRAM Cells for 10-nm SOI FinFETs Under Process and Environmental Variations. *Jaksic, Z.*, +, *TED Jan. 2013 49-55*
- Comprehensive Analysis of Short-Channel Effects in Ultrathin SOI MOSFETs. *Xie, Q.*, +, *TED June 2013 1814-1819*
- Corrections to "Suppression of Drain-Induced Barrier Lowering in Silicon-on-Insulator MOSFETs Through Source/Drain Engineering for Low-Operating-Power System-on-Chip Applications". *Yamada, T.*, +, *TED Dec. 2013 4281-4283*
- Design of Novel 300-V Field-MOS FETs With Low on-Resistance for Analog Switch Circuits. *Miyoshi, T.*, +, *TED Jan. 2013 354-359*
- Electrostatic Modeling and Insights Regarding Multigate Lateral Tunneling Transistors. *Pan, A.*, +, *TED Sept. 2013 2712-2720*
- Enhanced Visible Light Sensitivity by Gold Line-and-Space Grating Gate Electrode in Thin Silicon-On-Insulator p-n Junction Photodiode. *Satoh, H.*, +, *TED Feb. 2013 812-818*
- Epitaxial Germanium on SOI Substrate and Its Application of Fabricating High I<sub>ON</sub>/I<sub>OFF</sub> Ratio Ge FinFETs. *Chung, C.-T.*, +, *TED June 2013 1878-1883*
- Heat Channeling in Extremely Thin Silicon-on-Insulator Devices: A Simulation Study. *Orfanidou, C. M.*, +, *TED Oct. 2013 3330-3334*
- High-Bandwidth and High-Responsivity Top-Illuminated Germanium Photodiodes for Optical Interconnection. *Li, C.*, +, *TED March 2013 1183-1187*
- High-Performance p-Channel LDMOS Transistors and Wide-Range Voltage Platform Technology Using Novel p-Channel Structure. *Shimamoto, S.*, +, *TED Jan. 2013 360-365*
- Impact of Single Charge Trapping on the Variability of Ultrascaled Planar and Trigate FDSOI MOSFETs: Experiment Versus Simulation. *Subirats, A.*, +, *TED Aug. 2013 2604-2610*
- Impact of Transistor Architecture (Bulk Planar, Trigate on Bulk, Ultrathin-Body Planar SOI) and Material (Silicon or III-V Semiconductor) on Variation for Logic and SRAM Applications. *Agrawal, N.*, +, *TED Oct. 2013 3298-3304*
- Improvement of Electrical Properties in a Novel Partially Depleted SOI MOSFET With Emphasizing on the Hysteresis Effect. *Anvarifard, M. K.*, +, *TED Oct. 2013 3310-3317*
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- High-Q Backside Silicon-Embedded Inductor for Power Applications in /spl mu/H and MHz Range. *Wu, R.*, +, *TED Jan. 2013 339-345*
- Investigation on Cu TSV-Induced KOZ in Silicon Chips: Simulations and Experiments. *Tsai, M.-Y.*, +, *TED July 2013 2331-2337*
- Physical Modeling of the Capacitance and Capacitive Coupling Noise of Through-Oxide Vias in FDSOI-Based Ultra-High Density 3-D ICs. *Xu, C.*, +, *TED Jan. 2013 123-131*
- Ultralow-Capacitance Through-Silicon Vias With Annular Air-Gap Insulation Layers. *Chen, Q.*, +, *TED April 2013 1421-1426*
- Wideband Impedance Model for Coaxial Through-Silicon Vias in 3-D Integration. *Liang, F.*, +, *TED Aug. 2013 2498-2504*
- Threshold voltage**
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- A Closed-Form Charge Control Model for the Threshold Voltage of Depletion- and Enhancement-Mode AlGaIn/GaN Devices. *Wang, Z.*, +, *TED May 2013 1607-1612*
- Analytical Modeling of a Double Gate MOSFET Considering Source/Drain Lateral Gaussian Doping Profile. *Nandi, A.*, +, *TED Nov. 2013 3705-3709*
- Corrections to "Suppression of Drain-Induced Barrier Lowering in Silicon-on-Insulator MOSFETs Through Source/Drain Engineering for Low-Operating-Power System-on-Chip Applications". *Yamada, T.*, +, *TED Dec. 2013 4281-4283*
- Effect of O<sub>2</sub> Flow Rate During Channel Layer Deposition on Negative Gate Bias Stress-Induced V<sub>th</sub> Shift of a-IGZO TFTs. *Xiao, X.*, +, *TED Dec. 2013 4159-4164*
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- Effect of Strained *k · p* Deformation Potentials on Hole Inversion-Layer Mobility. *Chen, M.-J.*, +, *TED April 2013 1365-1371*
- Orientation and Shape Effects on Ballistic Transport Properties in Gate-All-Around Rectangular Germanium Nanowire nFETs. *Mori, S.*, +, *TED March 2013 944-950*

Oriental Dependence in Device Performances of InAs and Si Nanowire MOSFETs Under Ballistic Transport. *Shimoda, K.*, +, *TED Jan. 2013 117-122*

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Endurance/Retention Trade-off on HfO<sub>2</sub>/Metal Cap 1T1R Bipolar RRAM. *Chen, Y. Y.*, +, *TED March 2013 1114-1121*

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Temperature Dependence of Annealed and Nonannealed HEMT Ohmic Contacts Between 5 and 350 K. *Alt, A. R.*, +, *TED Feb. 2013 787-792*

The Electrical Properties of Asymmetric Schottky Contact Thin-Film Transistors with Amorphous-In<sub>2</sub>Ga<sub>2</sub>ZnO<sub>7</sub>. *Rha, S. H.*, +, *TED March 2013 1128-1135*

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Photocapacitance Decay Technique for Interface Trap Characterization Near Inversion Band in Wide Bandgap MOS Capacitors. *DasGupta, S.*, +, *TED Aug. 2013 2619-2625*

Transient Analysis of Partial Thermal Characteristics of Multistructure Power LEDs. *Wang, C.-P.*, +, *TED May 2013 1668-1672*

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Vertical Power Hk-MOSFET of Hexagonal Layout. *Lyu, X.*, +, *TED May 2013 1709-1715*

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Channel Length-Dependent Charge Detrapping on Threshold Voltage Shift of Amorphous InGaZnO TFTs Under Dynamic Bias Stress. *Park, S.*, +, *TED May 2013 1689-1694*

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- Schottky Barrier Controlled Conduction in Poly-Si TFTs With Metal Source and Drain. *Chen, J.*, +, *TED June 2013 1958-1964*
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- Counterdoped Pocket Thickness Optimization of Gate-on-Source-Only Tunnel FETs. *Kao, K.-H.*, +, *TED Jan. 2013 6-12*
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