Suman Datta

List of Publications by Year
in descending order

367 papers	15,738 citations	28274 55 h-index	27406 106 g-index
374 all docs	374 docs citations	374 times ranked	11265 citing authors

#	Article	IF	Citations
1	Large Injection Velocities in Highly Scaled, Fully Depleted Silicon on Insulator Transistors. IEEE Electron Device Letters, 2022, 43, 184-187.	3.9	6
2	Efficiency of Ferroelectric Field-Effect Transistors: An Experimental Study. IEEE Transactions on Electron Devices, 2022, 69, 1568-1574.	3.0	5
3	BEOL-Compatible Superlattice FEFET Analog Synapse With Improved Linearity and Symmetry of Weight Update. IEEE Transactions on Electron Devices, 2022, 69, 2094-2100.	3.0	22
4	Logic Compatible High-Performance Ferroelectric Transistor Memory. IEEE Electron Device Letters, 2022, 43, 382-385.	3.9	33
5	First-principles mobility prediction for amorphous semiconductors. Physical Review B, 2022, 105, .	3.2	3
6	Ultrathin ferroic HfO2â€"ZrO2 superlattice gate stack for advanced transistors. Nature, 2022, 604, 65-71.	27.8	108
7	Neural sampling machine with stochastic synapse allows brain-like learning and inference. Nature Communications, 2022, 13, 2571.	12.8	26
8	A Compute-in-Memory Hardware Accelerator Design With Back-End-of-Line (BEOL) Transistor Based Reconfigurable Interconnect. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2022, 12, 445-457.	3.6	5
9	Interlayer Engineering of Band Gap and Hole Mobility in p-Type Oxide SnO. ACS Applied Materials & Interfaces, 2022, 14, 25670-25679.	8.0	8
10	Roadmap on emerging hardware and technology for machine learning. Nanotechnology, 2021, 32, 012002.	2.6	104
11	First Principles Design of High Hole Mobility <i>p</i>-Type Snâ€"Oâ€"<i>X</i> Ternary Oxides: Valence Orbital Engineering of Sn²⁺ in Sn²⁺â€"Oâ€"<i>X</i> by Selection of Appropriate Elements <i>X</i>. Chemistry of Materials, 2021, 33, 212-225.	6.7	24
12	Cardiac Muscle Cellâ€Based Coupled Oscillator Network for Collective Computing. Advanced Intelligent Systems, 2021, 3, 2000253.	6.1	4
13	Experimental Demonstration of Gate-Level Logic Camouflaging and Run-Time Reconfigurability Using Ferroelectric FET for Hardware Security. IEEE Transactions on Electron Devices, 2021, 68, 516-522.	3.0	14
14	Nanoporous Dielectric Resistive Memories Using Sequential Infiltration Synthesis. ACS Nano, 2021, 15, 4155-4164.	14.6	12
15	Cardiac Muscle Cellâ€Based Coupled Oscillator Network for Collective Computing. Advanced Intelligent Systems, 2021, 3, 2170043.	6.1	0
16	CryoMem: A 4K-300K 1.3GHz eDRAM Macro with Hybrid 2T-Gain-Cell in a 28nm Logic Process for Cryogenic Applications. , 2021, , .		15
17	Cryogenic Performance for Compute-in-Memory Based Deep Neural Network Accelerator. , 2021, , .		7
18	An Ising Hamiltonian solver based on coupled stochastic phase-transition nano-oscillators. Nature Electronics, 2021, 4, 502-512.	26.0	57

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19	BEOL Compatible Indium-Tin-Oxide Transistors: Switching of Ultrahigh-Density 2-D Electron Gas Over 0.8 Ã— 10^{14}/cm^2 at Oxide/Oxide Interface by the Change of Ferroelectric Polarization. IEEE Transactions on Electron Devices, 2021, 68, 3195-3199.	3.0	20
20	Scaled Back End of Line Interconnects at Cryogenic Temperatures. IEEE Electron Device Letters, 2021, 42, 1674-1677.	3.9	5
21	CryoMem: A 4â€"300-K 1.3-GHz Hybrid 2T-Gain-Cell-Based eDRAM Macro in 28-nm Logic Process for Cryogenic Applications. IEEE Solid-State Circuits Letters, 2021, 4, 194-197.	2.0	3
22	First-principles investigation of amorphous n-type In$_2$O$_3$ for BEOL transistor. , 2021, , .		1
23	Intermixing reduction in ultra-thin titanium nitride/hafnium oxide film stacks grown on oxygen-inserted silicon and associated reduction of the interface charge dipole. Journal of Applied Physics, 2021, 130, 185303.	2.5	1
24	BEOL Compatible Superlattice FerroFET-based High Precision Analog Weight Cell with Superior Linearity and Symmetry. , 2021, , .		18
25	Power Performance Analysis of Digital Standard Cells for 28 nm Bulk CMOS at Cryogenic Temperature Using BSIM Models. IEEE Journal on Exploratory Solid-State Computational Devices and Circuits, 2021, 7, 193-200.	1.5	6
26	Characterization and Modeling of 22 nm FDSOI Cryogenic RF CMOS. IEEE Journal on Exploratory Solid-State Computational Devices and Circuits, 2021, 7, 184-192.	1.5	10
27	The Impact of Ferroelectric FETs on Digital and Analog Circuits and Architectures. IEEE Design and Test, 2020, 37, 79-99.	1.2	13
28	Ferroelectric Polarization Switching Behavior of Hf 0.5 Zr 0.5 O 2 Gate Dielectrics on Gallium Nitride Highâ€Electronâ€Mobilityâ€Transistor Heterostructures. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900717.	1.8	6
29	Hf$_{0.5}$Zr$_{0.5}$O$_2$-Based Ferroelectric Gate HEMTs With Large Threshold Voltage Tuning Range. IEEE Electron Device Letters, 2020, 41, 337-340.	3.9	26
30	The future of ferroelectric field-effect transistor technology. Nature Electronics, 2020, 3, 588-597.	26.0	398
31	Hot Carrier Degradation in Cryo-CMOS. , 2020, , .		5
32	Investigating Ferroelectric Minor Loop Dynamics and History Effectâ€"Part I: Device Characterization. IEEE Transactions on Electron Devices, 2020, 67, 3592-3597.	3.0	18
33	FerroElectronics for Edge Intelligence. IEEE Micro, 2020, 40, 33-48.	1.8	46
34	A Hybrid FeMFET-CMOS Analog Synapse Circuit for Neural Network Training and Inference. , 2020, , .		8
35	Indiumâ€"Tin-Oxide Transistors with One Nanometer Thick Channel and Ferroelectric Gating. ACS Nano, 2020, 14, 11542-11547.	14.6	75
36	Ferroelectrics: From Memory to Computing. , 2020, , .		14

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37	Supervised Learning in All FeFET-Based Spiking Neural Network: Opportunities and Challenges. Frontiers in Neuroscience, 2020, 14, 634.	2.8	58
38	Mismatch of Ferroelectric Film on Negative Capacitance FETs Performance. IEEE Transactions on Electron Devices, 2020, 67, 1297-1304.	3.0	26
39	Drainâ€"Erase Scheme in Ferroelectric Field-Effect Transistorâ€"Part I: Device Characterization. IEEE Transactions on Electron Devices, 2020, 67, 955-961.	3.0	26
40	Time-Delay Encoded Image Recognition in a Network of Resistively Coupled VOâ‚‚ on Si Oscillators. IEEE Electron Device Letters, 2020, 41, 629-632.	3.9	31
41	Drain-Erase Scheme in Ferroelectric Field Effect Transistorâ€"Part II: 3-D-NAND Architecture for In-Memory Computing. IEEE Transactions on Electron Devices, 2020, 67, 962-967.	3.0	29
42	Fully transparent field-effect transistor with high drain current and on-off ratio. APL Materials, 2020, 8, .	5.1	23
43	Stochastic Resonance in Insulator-Metal-Transition Systems. Scientific Reports, 2020, 10, 5549.	3.3	5
44	Monolithic 3D Integration of High Endurance Multi-Bit Ferroelectric FET for Accelerating Compute-In-Memory. , 2020, , .		56
45	Double-Gate W-Doped Amorphous Indium Oxide Transistors for Monolithic 3D Capacitorless Gain Cell eDRAM. , 2020, , .		32
46	Investigating Ferroelectric Minor Loop Dynamics and History Effectâ€"Part II: Physical Modeling and Impact on Neural Network Training. IEEE Transactions on Electron Devices, 2020, 67, 3598-3604.	3.0	15
47	Benchmarking Monolithic 3D Integration for Compute-in-Memory Accelerators: Overcoming ADC Bottlenecks and Maintaining Scalability to 7nm or Beyond. , 2020, , .		6
48	Understanding the Continuous-Time Dynamics of Phase-Transition Nano-Oscillator-Based Ising Hamiltonian Solver. IEEE Journal on Exploratory Solid-State Computational Devices and Circuits, 2020, 6, 155-163.	1.5	9
49	Low Thermal Budget (<250 Â°C) Dual-Gate Amorphous Indium Tungsten Oxide (IWO) Thin-Film Transistor for Monolithic 3-D Integration. IEEE Transactions on Electron Devices, 2020, 67, 5336-5342.	3.0	29
50	Microwave Performance of Ferroelectric-Gated GaN HEMTs. , 2020, , .		2
51	Emerging Steep-Slope Devices and Circuits: Opportunities and Challenges. , 2019, , 195-230.		7
52	Sensing in Ferroelectric Memories and Flip-Flops. , 2019, , 47-80.		0
53	Fundamental Understanding and Control of Device-to-Device Variation in Deeply Scaled Ferroelectric FETs. , 2019, , .		48
54	A FerroFET-Based In-Memory Processor for Solving Distributed and Iterative Optimizations via Least-Squares Method. IEEE Journal on Exploratory Solid-State Computational Devices and Circuits, 2019, 5, 132-141.	1.5	6

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55	Design and Analysis of an Ultra-Dense, Low-Leakage, and Fast FeFET-Based Random Access Memory Array. IEEE Journal on Exploratory Solid-State Computational Devices and Circuits, 2019, 5, 103-112.	1.5	50
56	Performance Enhancement of Ag/HfO$_2$ Metal Ion Threshold Switch Cross-Point Selectors. IEEE Electron Device Letters, 2019, 40, 1602-1605.	3.9	24
57	Spoken vowel classification using synchronization of phase transition nano-oscillators. , 2019, , .		1
58	A Swarm Optimization Solver Based on Ferroelectric Spiking Neural Networks. Frontiers in Neuroscience, 2019, 13, 855.	2.8	18
59	Programmable coupled oscillators for synchronized locomotion. Nature Communications, 2019, 10, 3299.	12.8	52
60	First principles calculations of intrinsic mobilities in tin-based oxide semiconductors SnO, SnO2, and Ta2SnO6. Journal of Applied Physics, 2019, 126, .	2.5	47
61	Back-End-of-Line Compatible Transistors for Monolithic 3-D Integration. IEEE Micro, 2019, 39, 8-15.	1.8	73
62	Steep Slope Ferroelectric Field Effect Transistor. , 2019, , .		3
63	Utilization of Negative-Capacitance FETs to Boost Analog Circuit Performances. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2019, 27, 2855-2860.	3.1	40
64	Energy-Efficient Edge Inference on Multi-Channel Streaming Data in 28nm HKMG FeFET Technology. , 2019, , .		2
65	Spoken vowel classification using synchronization of phase transition nano-oscillators. , 2019, , .		3
66	Biologically Plausible Ferroelectric Quasi-Leaky Integrate and Fire Neuron. , 2019, , .		13
67	Microscopic Crystal Phase Inspired Modeling of Zr Concentration Effects in Hf$_{1-x}$Zr$_x$O$_2$ Thin Films. , 2019, , .		2
68	Phase field modeling of domain dynamics and polarization accumulation in ferroelectric HZO. Applied Physics Letters, 2019, 114, .	3.3	60
69	Neuro-Mimetic Dynamics of a Ferroelectric FET-Based Spiking Neuron. IEEE Electron Device Letters, 2019, 40, 1213-1216.	3.9	39
70	Rebooting Our Computing Models. , 2019, , .		3
71	Stabilizing the commensurate charge-density wave in 1T-tantalum disulfide at higher temperatures *via* potassium intercalation. Nanoscale, 2019, 11, 6016-6022.	5.6	8
72	Design of 2T/Cell and 3T/Cell Nonvolatile Memories with Emerging Ferroelectric FETs. IEEE Design and Test, 2019, 36, 39-45.	1.2	26

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73	A Probabilistic Approach to Quantum Inspired Algorithms. , 2019, , .		5
74	An Empirically Validated Virtual Source FET Model for Deeply Scaled Cool CMOS. , 2019, , .		15
75	Significance of Multi and Few Domain Ferroelectric Switching Dynamics for Steep-Slope Non-Hysteretic Ferroelectric Field Effect Transistor. , 2019, , .		1
76	Polarization Recovery Behavior of Hf0.5Zr0.5O2 on Gallium Nitride HEMT Heterostructures. , 2019, , .		2
77	Experimental Demonstration of Phase Transition Nano-Oscillator Based Ising Machine. , 2019, , .		29
78	A Novel Ferroelectric Superlattice Based Multi-Level Cell Non-Volatile Memory. , 2019, , .		27
79	Hysteresis-free negative capacitance in the multi-domain scenario for logic applications. , 2019, , .		11
80	Equivalent Oxide Thickness (EOT) Scaling With Hafnium Zirconium Oxide High-κ Dielectric Near Morphotropic Phase Boundary. , 2019, , .		20
81	Cryogenic Response of HKMG MOSFETs for Quantum Computing Systems. , 2019, , .		5
82	Optimizing the energy balance to achieve autonomous self-powering for vigilant health and IoT applications. Journal of Physics: Conference Series, 2019, 1407, 012001.	0.4	5
83	Ferroelectric ternary content-addressable memory for one-shot learning. Nature Electronics, 2019, 2, 521-529.	26.0	217
84	Subnanosecond Fluctuations in Low-Barrier Nanomagnets. Physical Review Applied, 2019, 12, .	3.8	28
85	An Ultra-Dense 2FeFET TCAM Design Based on a Multi-Domain FeFET Model. IEEE Transactions on Circuits and Systems II: Express Briefs, 2019, 66, 1577-1581.	3.0	74
86	SRAMs and DRAMs With Separate Read–Write Ports Augmented by Phase Transition Materials. IEEE Transactions on Electron Devices, 2019, 66, 929-937.	3.0	6
87	Power and Area Efficient FPGA Building Blocks Based on Ferroelectric FETs. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 1780-1793.	5.4	21
88	Computing With Networks of Oscillatory Dynamical Systems. Proceedings of the IEEE, 2019, 107, 73-89.	21.3	57
89	Punch-Through Stop Doping Profile Control via Interstitial Trapping by Oxygen-Insertion Silicon Channel. IEEE Journal of the Electron Devices Society, 2018, 6, 481-486.	2.1	8
90	â€œNegative capacitanceâ€•in resistor-ferroelectric and ferroelectric-dielectric networks: Apparent or intrinsic?. Journal of Applied Physics, 2018, 123, .	2.5	82

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91	Computing with ferroelectric FETs: Devices, models, systems, and applications. , 2018, , .		48
92	Silicon compatible Sn-based resistive switching memory. Nanoscale, 2018, 10, 9441-9449.	5.6	24
93	Time-Resolved Measurement of Negative Capacitance. IEEE Electron Device Letters, 2018, 39, 272-275.	3.9	74
94	Lowering Area Overheads for FeFET-Based Energy-Efficient Nonvolatile Flip-Flops. IEEE Transactions on Electron Devices, 2018, 65, 2670-2674.	3.0	21
95	Critical Role of Interlayer in $Hf_{0.5}Zr_{0.5}O_2$ Ferroelectric FET Nonvolatile Memory Performance. IEEE Transactions on Electron Devices, 2018, 65, 2461-2469.	3.0	284
96	Stochastic Insulator-to-Metal Phase Transition-Based True Random Number Generator. IEEE Electron Device Letters, 2018, 39, 139-142.	3.9	35
97	Two-dimensional tantalum disulfide: controlling structure and properties via synthesis. 2D Materials, 2018, 5, 025001.	4.4	31
98	Exploiting Hybrid Precision for Training and Inference: A 2T-1FeFET Based Analog Synaptic Weight Cell. , 2018, , .		71
99	SoC Logic Compatible Multi-Bit FeMFET Weight Cell for Neuromorphic Applications. , 2018, , .		88
100	In-Memory Computing Primitive for Sensor Data Fusion in 28 nm HKMG FeFET Technology. , 2018, , .		31
101	Experimental Demonstration of Ferroelectric Spiking Neurons for Unsupervised Clustering. , 2018, , .		55
102	A Circuit Compatible Accurate Compact Model for Ferroelectric-FETs. , 2018, , .		120
103	A Threshold Switch Augmented Hybrid-FeFET (H-FeFET) with Enhanced Read Distinguishability and Reduced Programming Voltage for Non-Volatile Memory Applications. , 2018, , .		18
104	Analysis of DIBL Effect and Negative Resistance Performance for NCFET Based on a Compact SPICE Model. IEEE Transactions on Electron Devices, 2018, 65, 5525-5529.	3.0	57
105	Dynamics of Coupled Systems and their Computing Properties Invited Paper : Invited Paper. , 2018, , .		0
106	Heterogeneous integration of InAs/GaSb tunnel diode structure on silicon using 200 nm GaAsSb dislocation filtering buffer. AIP Advances, 2018, 8, .	1.3	1
107	Electrically triggered insulator-to-metal phase transition in two-dimensional (2D) heterostructures. Applied Physics Letters, 2018, 113, 142101.	3.3	14
108	Insinhts on the DC Characterization of Ferroelectric Field-Effect-Transistors. , 2018, , .		13

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109	Write Disturb in Ferroelectric FETs and Its Implication for 1T-FeFET AND Memory Arrays. IEEE Electron Device Letters, 2018, 39, 1656-1659.	3.9	72
110	Investigation of Threshold Switch OFF -State Resistance on Performance Enhancement in 2D Mos2 Phase-FETs. , 2018, , .		0
111	A FeFET Based Processing-In-Memory Architecture for Solving Distributed Least-Square Optimizations. , 2018, , .		5
112	Ten nanometre CMOS logic technology. Nature Electronics, 2018, 1, 500-501.	26.0	8
113	Experimental Investigation of N-Channel Oxygen-Inserted (OI) Silicon Channel MOSFETs with High-K/Metal Gate Stack. , 2018, , .		4
114	A ferroelectric field effect transistor based synaptic weight cell. Journal Physics D: Applied Physics, 2018, 51, 434001.	2.8	113
115	Influence of Body Effect on Sample-and-Hold Circuit Design Using Negative Capacitance FET. IEEE Transactions on Electron Devices, 2018, 65, 3909-3914.	3.0	38
116	Stochastic IMT (Insulator-Metal-Transition) Neurons: An Interplay of Thermal and Threshold Noise at Bifurcation. Frontiers in Neuroscience, 2018, 12, 210.	2.8	30
117	Computing with Coupled Oscillators: Theory, Devices, and Applications. , 2018, , .		18
118	The era of hyper-scaling in electronics. Nature Electronics, 2018, 1, 442-450.	26.0	375
119	Technology Innovations in Selective ALD for Next-Generation Contacts and Vias. , 2018, , .		0
120	Cockcroft-Walton Multiplier based on Unipolar $\mathbf{Ag/HfO_{2}/Pt}$ Threshold Switch. , 2018, , .		0
121	Investigation of the abrupt phase transition in 1T-TaS$_2$/MoS$_2$ heterostructures. , 2018, , .		1
122	Steep Switching Hybrid Phase Transition FETs (Hyper-FET) for Low Power Applications: A Device-Circuit Co-design Perspectiveâ€"Part I. IEEE Transactions on Electron Devices, 2017, 64, 1350-1357.	3.0	32
123	Dynamic Diagnosis for Defective Reconfigurable Single-Electron Transistor Arrays. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2017, 25, 1477-1489.	3.1	2
124	Steep Switching Hybrid Phase Transition FETs (Hyper-FET) for Low Power Applications: A Device-Circuit Co-design Perspectiveâ€"Part II. IEEE Transactions on Electron Devices, 2017, 64, 1358-1365.	3.0	24
125	Opportunities in vanadium-based strongly correlated electron systems. MRS Communications, 2017, 7, 27-52.	1.8	77
126	Design of Nonvolatile SRAM with Ferroelectric FETs for Energy-Efficient Backup and Restore. IEEE Transactions on Electron Devices, 2017, 64, 3037-3040.	3.0	48

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127	A steep slope Phase-FET based on 2D MoS$_2$ and the electronic phase transition in VO$_2$. , 2017, , .		3
128	Advancing Nonvolatile Computing With Nonvolatile NCFET Latches and Flip-Flops. IEEE Transactions on Circuits and Systems I: Regular Papers, 2017, 64, 2907-2919.	5.4	49
129	Pulsed I-V on TFETs: Modeling and Measurements. IEEE Transactions on Electron Devices, 2017, 64, 1489-1497.	3.0	6
130	Modeling and in Situ Probing of Surface Reactions in Atomic Layer Deposition. ACS Applied Materials & Interfaces, 2017, 9, 15848-15856.	8.0	33
131	Single-Event Measurement and Analysis of Antimony-Based p-Channel Quantum-Well MOSFETs With High- $kappa$ Dielectric. IEEE Transactions on Nuclear Science, 2017, 64, 434-440.	2.0	1
132	A Multitask Grocery Assist System for the Visually Impaired: Smart glasses, gloves, and shopping carts provide auditory and tactile feedback. IEEE Consumer Electronics Magazine, 2017, 6, 73-81.	2.3	26
133	Negative capacitance transients in metal-ferroelectric Hf$_{0.5}$Zr$_{0.5}$O$_2$-Insulator-Semiconductor (MFIS) capacitors. , 2017, , .		2
134	Investigation of electrically gate-all-around hexagonal nanowire FET (HexFET) architecture for 5 nm node logic and SRAM applications. , 2017, , .		2
135	Low power current sense amplifier based on phase transition material. , 2017, , .		10
136	ON-state evolution in lateral and vertical VO$_2$ threshold switching devices. Nanotechnology, 2017, 28, 405201.	2.6	11
137	Computing with dynamical systems based on insulator-metal-transition oscillators. Nanophotonics, 2017, 6, 601-611.	6.0	18
138	Fabrication, Characterization, and Analysis of Ge/GeSn Heterojunction p-Type Tunnel Transistors. IEEE Transactions on Electron Devices, 2017, 64, 4354-4362.	3.0	27
139	In Quest of the Next Information Processing Substrate. , 2017, , .		0
140	Vertex coloring of graphs via phase dynamics of coupled oscillatory networks. Scientific Reports, 2017, 7, 911.	3.3	93
141	Ultra-low power probabilistic IMT neurons for stochastic sampling machines. , 2017, , .		10
142	Soft error evaluation for InGaAs and Ge complementary FinFETs. , 2017, , .		3
143	Corrugated channel In$_{0.8}$Ga$_{0.2}$As quantum well transistors for low power logic applications. , 2017, , .		0
144	Impact of total and partial dipole switching on the switching slope of gate-last negative capacitance FETs with ferroelectric hafnium zirconium oxide gate stack. , 2017, , .		65

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145	A random number generator based on insulator-to-metal electronic phase transitions. , 2017, , .		7
146	Computational paradigms using oscillatory networks based on state-transition devices. , 2017, , .		2
147	Device-Circuit Analysis of Ferroelectric FETs for Low-Power Logic. IEEE Transactions on Electron Devices, 2017, 64, 3092-3100.	3.0	86
148	Punch-through stop doping profile control via interstitial trapping by oxygen-insertion silicon channel. , 2017, , .		6
149	Enabling Energy-Efficient Nonvolatile Computing With Negative Capacitance FET. IEEE Transactions on Electron Devices, 2017, 64, 3452-3458.	3.0	72
150	Fundamental mechanism behind volatile and non-volatile switching in metallic conducting bridge RAM. , 2017, , .		22
151	Ferroelectric FET analog synapse for acceleration of deep neural network training. , 2017, , .		322
152	Physics and technology of electronic insulator-to-metal transition (E-IMT) for record high on/off ratio and low voltage in device applications. , 2017, , .		6
153	PPAC scaling enablement for 5nm mobile SoC technology. , 2017, , .		10
154	Ultra-low power probabilistic IMT neurons for stochastic sampling machines. , 2017, , .		0
155	Connecting spectral techniques for graph coloring and eigen properties of coupled dynamics: A pathway for solving combinatorial optimizations (Invited paper). , 2017, , .		1
156	Ferroelectric transistor model based on self-consistent solution of 2D Poisson's, non-equilibrium Green's function and multi-domain Landau Khalatnikov equations. , 2017, , .		45
157	A computationally efficient compact model for leakage in cross-point array. , 2017, , .		0
158	Photoconductance Decay Characterization of 3D Multi-Fin Silicon on SOI Substrates. IEEE Electron Device Letters, 2017, 38, 1513-1515.	3.9	0
159	Harnessing ferroelectrics for non-volatile memories and logic. , 2017, , .		6
160	Band structure engineered Germanium-Tin (GeSn) p-channel tunnel transistors. , 2016, , .		1
161	Ferroelectric Transistor based Non-Volatile Flip-Flop. , 2016, , .		35
162	Exploiting ferroelectric FETs for low-power non-volatile logic-in-memory circuits. , 2016, , .		48

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163	Growth and characterization of metamorphic InAs/GaSb tunnel heterojunction on GaAs by molecular beam epitaxy. Journal of Applied Physics, 2016, 119, .	2.5	9
164	Transistor innovation in the 21st century â€" A lesson in serendipity. , 2016, , .		1
165	Performance benchmarking of p-type In<inf>0.65</inf>Ga<inf>0.35</inf>As/GaAs<inf>0.4</inf>Sb<inf>0.6</inf> and Ge/Ge<inf>0.93</inf>Sn<inf>0.07</inf> hetero-junction tunnel FETs. , 2016, , .		10
166	Ag/HfO<inf>2</inf> based threshold switch with extreme non-linearity for unipolar cross-point memory and steep-slope phase-FETs. , 2016, , .		26
167	On the potential of correlated materials in the design of spin-based cross-point memories (Invited). , 2016, , .		2
168	Physics-Based Circuit-Compatible SPICE Model for Ferroelectric Transistors. IEEE Electron Device Letters, 2016, , 1-1.	3.9	106
169	Revisiting the Theory of Ferroelectric Negative Capacitance. IEEE Transactions on Electron Devices, 2016, 63, 2043-2049.	3.0	37
170	Joule Heating-Induced Metalâ€"Insulator Transition in Epitaxial VO_2/TiO_2 Devices. ACS Applied Materials & Interfaces, 2016, 8, 12908-12914.	8.0	101
171	Area-Aware Decomposition for Single-Electron Transistor Arrays. ACM Transactions on Design Automation of Electronic Systems, 2016, 21, 1-20.	2.6	3
172	Ultra low power coupled oscillator arrays for computer vision applications. , 2016, , .		29
173	Computing with dynamical systems in the post-CMOS era. , 2016, , .		6
174	Phase-Transition-FET exhibiting steep switching slope of 8mV/decade and 36% enhanced ON current. , 2016, , .		18
175	Dynamics of electrically driven sub-nanosecond switching in vanadium dioxide. , 2016, , .		20
176	Computing with coupled dynamical systems. , 2016, , .		0
177	Polarization charge and coercive field dependent performance of negative capacitance FETs. , 2016, , .		3
178	Two-dimensional gallium nitride realized via grapheneÂencapsulation. Nature Materials, 2016, 15, 1166-1171.	27.5	626
179	Analysis of Functional Oxide based Selectors for Cross-Point Memories. IEEE Transactions on Circuits and Systems I: Regular Papers, 2016, 63, 2222-2235.	5.4	20
180	Device Circuit Co Design of FEFET Based Logic for Low Voltage Processors. , 2016, , .		35

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181	Electrically driven reversible insulator-metal phase transition in Ca<inf>2</inf>RuO<inf>4</inf>. , 2016, , .		1
182	Imprinting of Local Metallic States into VO₂ with Ultraviolet Light. Advanced Functional Materials, 2016, 26, 6612-6618.	14.9	43
183	Orbitronics â€" Harnessing metal insulator phase transition in 1T-MoSe<inf>2</inf>. , 2016, , .		0
184	In quest of the next switch. , 2016, , .		0
185	Opportunties and challenges of tunnel FETs. , 2016, , .		1
186	Correlated Material Enhanced SRAMs With Robust Low Power Operation. IEEE Transactions on Electron Devices, 2016, 63, 4744-4752.	3.0	10
187	Phase transition oxide neuron for spiking neural networks. , 2016, , .		14
188	Opportunities and Challenges of Tunnel FETs. IEEE Transactions on Circuits and Systems I: Regular Papers, 2016, 63, 2128-2138.	5.4	40
189	Comparative Area and Parasitics Analysis in FinFET and Heterojunction Vertical TFET Standard Cells. ACM Journal on Emerging Technologies in Computing Systems, 2016, 12, 1-23.	2.3	24
190	Nonvolatile memory design based on ferroelectric FETs. , 2016, , .		91
191	Enabling New Computation Paradigms with HyperFET - An Emerging Device. IEEE Transactions on Multi-Scale Computing Systems, 2016, 2, 30-48.	2.4	28
192	Diagnosis and Synthesis for Defective Reconfigurable Single-Electron Transistor Arrays. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2016, , 1-14.	3.1	3
193	IIIâ€"V Tunnel FET Model With Closed-Form Analytical Solution. IEEE Transactions on Electron Devices, 2016, 63, 2163-2168.	3.0	35
194	Field Effect and Strongly Localized Carriers in the Metal-Insulator Transition MaterialVO2. Physical Review Letters, 2015, 115, 196401.	7.8	31
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