Zhang, Lining

List of Publications by Year
in descending order

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150	1,380	430874	395702
papers	citations	18	33
		h-index	g-index

151	151	151	1102
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Dynamic Compact Model for Ferroelectric Capacitance. IEEE Electron Device Letters, 2022, 43, 390-393.	3.9	6
2	A review of compact modeling for phase change memory. Journal of Semiconductors, 2022, 43, 023101.	3.7	4
3	Modeling Multigate Negative Capacitance Transistors With Self-Heating Effects. IEEE Transactions on Electron Devices, 2022, 69, 3029-3036.	3.0	4
4	A Simulation Study of Interface Traps Effects of Magnetic Sensitivity in Sectorial SD-MAGFET. , 2022, , .		0
5	Strain Release Enabled Bandgap Scaling in Ge Nanowire and Tunnel FET Application. IEEE Transactions on Electron Devices, 2022, 69, 4725-4729.	3.0	1
6	Onâ€Chip Integrated High Gain Complementary MoS₂ Inverter Circuit with Exceptional High Hole Current Pâ€Channel Fieldâ€Effect Transistors. Advanced Electronic Materials, 2022, 8, .	5.1	3
7	Synthesis of twoâ€dimensional transition metal dichalcogenides for electronics and optoelectronics. InformaÄnÃ-MateriÃ¡ly, 2021, 3, 362-396.	17.3	87
8	High Current Nb-Doped P-Channel MoSâ„‚ Field-Effect Transistor Using Pt Contact. IEEE Electron Device Letters, 2021, 42, 343-346.	3.9	7
9	A Study of the Gate-Stack Small-Signal Model and Determination of Interface Traps in GaN-Based MIS-HEMTs. IEEE Transactions on Electron Devices, 2021, 68, 1507-1512.	3.0	1
10	Voltage Dependent Viscosity in Landau-Khalatnikov Theory for Switching Dynamics. , 2021, , .		0
11	A Dynamic Current Model for MFIS Negative Capacitance Transistors. IEEE Transactions on Electron Devices, 2021, 68, 3665-3671.	3.0	4
12	A Full-region Model for Ultra-Scaled MoS2 MOSFET Covering Direct Source-Drain Tunneling. , 2021, , .		0
13	Impacts of metal interlayer on Negative Capacitance Transistors. , 2021, , .		2
14	Low Frequency Noise of the Tunneling Contact Thin-Film Transistors. , 2021, , .		0
15	A Robust and Efficient Compact Model for Phase-Change Memory Circuit Simulations. IEEE Transactions on Electron Devices, 2021, 68, 4404-4410.	3.0	6
16	Channel doping effects in negative capacitance field-effect transistors. Solid-State Electronics, 2021, 186, 108181.	1.4	4
17	Robust Simulations of Nanoscale Phase Change Memory: Dynamics and Retention. Nanomaterials, 2021, 11, 2945.	4.1	3
18	Analytical Monolayer MoS₂ MOSFET Modeling Verified by First Principle Simulations. IEEE Electron Device Letters, 2020, 41, 171-174.	3.9	13

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19	On the Enhanced Miller Capacitance of Source-Gated Thin Film Transistors. IEEE Electron Device Letters, 2020, 41, 741-744.	3.9	2
20	A SPICE Model of Phase Change Memory for Neuromorphic Circuits. IEEE Access, 2020, 8, 95278-95287.	4.2	9
21	A Compact Phase Change Memory Model With Dynamic State Variables. IEEE Transactions on Electron Devices, 2020, 67, 133-139.	3.0	10
22	Memory Modeling with Dynamic Time Evolution Method for Neuromorphic Circuit Simulations. , 2020, , .		0
23	A Comparison Study of Velocity Saturation Models for Gate-all-around MOSFETs. , 2020, , .		1
24	A dual-gate IGZO Source-Gated transistor based on field modulation by TCAD simulation. , 2020, , .		0
25	Modeling Currentâ€“Voltage Characteristics of Bilayer Organic Light-Emitting Diodes. IEEE Transactions on Electron Devices, 2019, 66, 139-145.	3.0	8
26	Dynamic Time Evolutionary Aging Analysis for Device-Circuit Lifetime Estimation of Thin-Film Transistors. IEEE Electron Device Letters, 2019, 40, 1439-1442.	3.9	3
27	Control of hexagonal boron nitride dielectric thickness by single layer etching. Journal of Materials Chemistry C, 2019, 7, 6273-6278.	5.5	12
28	A Dynamic Time Evolution Method for Concurrent Device-Circuit Aging Simulations. IEEE Transactions on Electron Devices, 2019, 66, 184-190.	3.0	5
29	Design and Mechanism of Embedding Specific Carbon Nanotubes in Sputtered Sandwiched InGaZnO Thin-Film Transistors. IEEE Electron Device Letters, 2019, 40, 407-410.	3.9	7
30	On the Formulation of Self-Heating Models for Circuit Simulation. IEEE Journal of the Electron Devices Society, 2018, 6, 291-297.	2.1	17
31	Circular electrodes to reduce the current variation of OTFTs with the drop-casted semiconducting layer. Solid-State Electronics, 2018, 144, 49-53.	1.4	3
32	Origin of Nonideal Graphene-Silicon Schottky Junction. IEEE Transactions on Electron Devices, 2018, 65, 1995-2002.	3.0	9
33	Model of NBTI combined with mobility degradation. Journal of Semiconductors, 2018, 39, 124015.	3.7	2
34	Current Enhancement of Graphene-Inserted Tunneling Contact IGZO TFT. , 2018, , .		0
35	Compact Modeling of OLED for Co-simulations with TFTs. , 2018, , .		0
36	Engineering of Graphene-to-Semiconductor Contacts. , 2018, , .		0

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37	Current Conduction Mechanisms in h-BN as a Dielectric Material. , 2018, , .		2
38	A Smooth and Continuous Phase Change Memory SPICE Model for Improved Convergence. , 2018, , .		4
39	Artificial neural network design for compact modeling of generic transistors. Journal of Computational Electronics, 2017, 16, 825-832.	2.5	64
40	Tunneling contact IGZO TFTs with reduced saturation voltages. Applied Physics Letters, 2017, 110, .	3.3	27
41	Coil-Shaped Electrodes to Reduce the Current Variation of Drop-Casted OTFTs. IEEE Electron Device Letters, 2017, 38, 645-648.	3.9	8
42	Low Power Phase Change Memory With Vertical Carbon Nanotube Electrode. IEEE Journal of the Electron Devices Society, 2017, 5, 362-366.	2.1	5
43	A universal approach for signal dependent circuit reliability simulation. , 2017, , .		0
44	Gate-Controlled electron injection in tunneling contact IGZO TFTs. , 2017, , .		3
45	Compact Model for Double-Gate Tunnel FETs With Gateâ€“Drain Underlap. IEEE Transactions on Electron Devices, 2017, 64, 5242-5248.	3.0	17
46	Modeling of fringe current for semiconductor-extended organic TFTs. , 2016, , .		3
47	Doping enhanced barrier lowering in graphene-silicon junctions. Applied Physics Letters, 2016, 108, 263502.	3.3	10
48	Concurrent device/circuit aging for general reliability simulations. , 2016, , .		0
49	An algorithm of training sample selection for integrated circuit device modeling based on artificial neural networks. , 2016, , .		1
50	Compact Models of TFETs. , 2016, , 61-87.		0
51	A Compact Model for Double-Gate Heterojunction Tunnel FETs. IEEE Transactions on Electron Devices, 2016, 63, 4506-4513.	3.0	35
52	Modeling CNTFET Performance Variation Due to Spatial Distribution of Carbon Nanotubes. IEEE Transactions on Electron Devices, 2016, 63, 3776-3781.	3.0	2
53	Investigation of the NBTI induced mobility degradation for precise circuit aging simulation. , 2016, , .		4
54	Current enhanced double-gate TFET with source pocket and asymmetric gate oxide. , 2016, , .		4

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55	Dynamic NBTI simulation coupling with self-heating effect in SOI MOSFETs. , 2016, , .		0
56	A Short Channel Double-Gate Junctionless Transistor Model Including the Dynamic Channel Boundary Effect. IEEE Transactions on Electron Devices, 2016, 63, 4661-4667.	3.0	32
57	Universal framework for temperature dependence prediction of the negative bias temperature instability based on microscope pictures. Japanese Journal of Applied Physics, 2016, 55, 044201.	1.5	2
58	Analytical Current Model for Long-Channel Junctionless Double-Gate MOSFETs. IEEE Transactions on Electron Devices, 2016, , 1-7.	3.0	14
59	A Compact Model of Subthreshold Current With Source/Drain Depletion Effect for the Short-Channel Junctionless Cylindrical Surrounding-Gate MOSFETs. IEEE Transactions on Electron Devices, 2016, 63, 2176-2181.	3.0	29
60	Comparative Analysis of Carrier Statistics on MOSFET and Tunneling FET Characteristics. IEEE Journal of the Electron Devices Society, 2015, 3, 447-451.	2.1	3
61	Impact of channel line-edge roughness on junctionless FinFET. , 2015, , .		3
62	Gate Capacitance Model for Aligned Carbon Nanotube FETs With Arbitrary CNT Spacing. IEEE Transactions on Electron Devices, 2015, 62, 4327-4332.	3.0	4
63	Investigation of nitrogen enhanced NBTI effect using the universal prediction model. , 2015, , .		4
64	Characterization of interface trap dynamics responsible for hysteresis in organic thin-film transistors. Organic Electronics, 2015, 27, 192-196.	2.6	11
65	Atomic disorder scattering in emerging transistors by parameter-free first principle modeling. , 2014, , .		0
66	Double-gate tunneling FET with asymmetric gate structure and pocket source. , 2014, , .		3
67	Bias stress induced threshold voltage instability in solution processed organic thin film transistor. , 2014, , .		1
68	Research progress on core-shell nanowire FETs. , 2014, , .		0
69	Compact modeling beyond device physics. , 2014, , .		0
70	Model Order Reduction for Quantum Transport Simulation of Band-To-Band Tunneling Devices. IEEE Transactions on Electron Devices, 2014, 61, 561-568.	3.0	10
71	Low voltage SRAM design using tunneling regime of CNTFET. , 2014, , .		3
72	A gate leakage model for double gate tunneling field-effect transistors. , 2014, , .		0

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73	SPICE Modeling of Double-Gate Tunnel-FETs Including Channel Transports. IEEE Transactions on Electron Devices, 2014, 61, 300-307.	3.0	67
74	Standardizing the compact model developments for emerging transistors. , 2014, , .		0
75	Analytical Modeling of Capacitances for GaN HEMTs, Including Parasitic Components. IEEE Transactions on Electron Devices, 2014, 61, 755-761.	3.0	44
76	Atomistic simulation of phase change memory during switching. , 2014, , .		0
77	First Principles Simulations of Nanoscale Silicon Devices With Uniaxial Strain. IEEE Transactions on Electron Devices, 2013, 60, 3527-3533.	3.0	12
78	A Nonlinear Poisson-Schrodinger Solver Under Cylindrical Coordinate for Quantum Effect in Nanowire MOSFET. Journal of Computational and Theoretical Nanoscience, 2013, 10, 73-77.	0.4	1
79	Numerical Electron Mobility Model of Nanoscale Symmetric, Asymmetric and Independent Double-Gate MOSFETs. Journal of Computational and Theoretical Nanoscience, 2013, 10, 763-771.	0.4	0
80	Modeling FinFETs for CMOS Applications. Lecture Notes in Nanoscale Science and Technology, 2013, , 263-284.	0.8	0
81	Gate Underlap Design for Short Channel Effects Control in Cylindrical Gate-all-around MOSFETs based on an Analytical Model. IETE Technical Review (Institution of Electronics and) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 417		
82	Building a user friendly infrastructure for compact model development in the nano-device era. , 2012, , .		0
83	Numerical study on dual material gate nanowire tunnel field-effect transistor. , 2012, , .		4
84	A compact model for double-gate tunneling field-effect-transistors and its implications on circuit behaviors. , 2012, , .		50
85	Phase-Change Memory With Multifin Thin-Film-Transistor Driver Technology. IEEE Electron Device Letters, 2012, 33, 405-407.	3.9	4
86	An Analytical Charge Model for Double-Gate Tunnel FETs. IEEE Transactions on Electron Devices, 2012, 59, 3217-3223.	3.0	98
87	A Junctionless Nanowire Transistor With a Dual-Material Gate. IEEE Transactions on Electron Devices, 2012, 59, 1829-1836.	3.0	141
88	Unified Scale Length for Four-Terminal Double-Gate MOSFETs. IEEE Transactions on Electron Devices, 2012, 59, 1997-1999.	3.0	1
89	Zero-Mask Contact Fuse for One-Time-Programmable Memory in Standard CMOS Processes. IEEE Electron Device Letters, 2011, 32, 955-957.	3.9	22
90	3-D Numerical Simulation Study on 20 nm NMOSFET Design. Journal of Computational and Theoretical Nanoscience, 2011, 8, 1498-1501.	0.4	0

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91	Computation Efficient Yet Accurate Surface Potential Based Analytic Model for Symmetric DG MOSFETs to Predict Currentâ€“Voltage Characteristics. Journal of Computational and Theoretical Nanoscience, 2011, 8, 1548-1551.	0.4	0
92	A Unified Drain Current Model for Nanoscale Double-Gate and Surrounding-Gate MOSFETs Incorporating Velocity Saturation. Journal of Nanoscience and Nanotechnology, 2011, 11, 10480-10484.	0.9	0
93	Simulation Study on a New Dual-Material Nanowire MOS Surrounding-Gate Transistor. Journal of Nanoscience and Nanotechnology, 2011, 11, 11006-11010.	0.9	1
94	A Rigorous and Concise Surface Potential-Based Core Model for the Undoped Symmetric Double-Gate Metal-Oxide-Semiconductor Field Effect Transistors. Journal of Computational and Theoretical Nanoscience, 2011, 8, 1857-1862.	0.4	0
95	A Physics Based Yet Computation Efficient Core Model for Undoped Surrounding-Gate MOSFET Currentâ€“Voltage and Capacitanceâ€“Voltage Characteristics Prediction. Journal of Computational and Theoretical Nanoscience, 2011, 8, 1732-1738.	0.4	0
96	Uniaxial Strain Effects on Electron Ballistic Transport in Gate-All-Around Silicon Nanowire MOSFETs. IEEE Transactions on Electron Devices, 2011, 58, 3829-3836.	3.0	21
97	A physical based model to predict performance degradation of FinFET accounting for interface state distribution effect due to hot carrier injection. Microelectronics Reliability, 2011, 51, 337-341.	1.7	10
98	Modeling Short-Channel Effect of Elliptical Gate-All-Around MOSFET by Effective Radius. IEEE Electron Device Letters, 2011, 32, 1188-1190.	3.9	36
99	Study on Transport Characteristics of Silicon-Germanium Nanowire MOSFETs with Coreâ€“Shell Structure. Journal of Computational and Theoretical Nanoscience, 2010, 7, 528-535.	0.4	2
100	Extended Version of Carrier-Based Analytical Model to Account for the Doped Effect of Symmetric Double-Gate MOSFETs. Journal of Computational and Theoretical Nanoscience, 2010, 7, 627-633.	0.4	0
101	Analytical solution of subthreshold channel potential of gate underlap cylindrical gate-all-around MOSFET. Solid-State Electronics, 2010, 54, 806-808.	1.4	36
102	Comparison and improvement of two core compact models for double-gate MOSFETs. Solid-State Electronics, 2010, 54, 1444-1446.	1.4	3
103	Investigation of LOCOS- and Polysilicon-Bound Diodes for Robust Electrostatic Discharge (ESD) Applications. IEEE Transactions on Electron Devices, 2010, 57, 814-819.	3.0	28
104	Charge-based model for symmetric double-gate MOSFETs with inclusion of channel doping effect. Microelectronics Reliability, 2010, 50, 1062-1070.	1.7	7
105	A generic numerical model for detection of terahertz radiation in MOS field-effect transistors. Solid-State Electronics, 2010, 54, 791-795.	1.4	6
106	One-dimensional continuous analytic potential solution to generic oxideâ€“siliconâ€“oxide system. Chinese Physics B, 2010, 19, 067304.	1.4	1
107	Impact of structure parameters and operation conditions on performance of nanoscale BioFET. , 2010, , .		0
108	A unified drain current model for nanoscale double-gate and surrounding-gate MOSFETs incorporating velocity saturation. , 2010, , .		0

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109	Study on electron mobility in nanoscale DG MOSFETs with symmetric, asymmetric and independent operation modes. , 2010, , .		0
110	An improved computationally efficient drain current model for double-gate MOSFETs. , 2010, , .		2
111	A noncharge-sheet channel potential and drain current model for dynamic-depletion silicon-on-insulator metal-oxide-semiconductor field-effect transistors. Journal of Applied Physics, 2010, 107, 054507.	2.5	8
112	FinFET: From compact modeling to circuit performance. , 2010, , .		5
113	Simulation study on a new dual-material nanowire MOS surrounding-gate transistor. , 2010, , .		0
114	Analytical subthreshold channel potential model of asymmetric gate underlap gate-all-around MOSFET. , 2010, , .		3
115	A continuous surface-potential solution from accumulation to inversion for intrinsic symmetric double-gate MOSFETs. Molecular Simulation, 2009, 35, 448-455.	2.0	5
116	Terahertz Wave Generation and Detection Analysis of Silicon Nanowire MOS Field-Effect Transistor. IETE Technical Review (Institution of Electronics and Telecommunication Engineers, India), 2009, 26, 430.	3.2	6
117	A carrier-based analytic drain current model incorporating velocity saturation for undoped surrounding-gate MOSFETs. Semiconductor Science and Technology, 2009, 24, 115003.	2.0	4
118	Charge-based model enhancement for undoped surrounding-gate MOSFETs. Electronics Letters, 2009, 45, 569.	1.0	0
119	A charge-based compact model for predicting the currentâ€“voltage and capacitanceâ€“voltage characteristics of heavily doped cylindrical surrounding-gate MOSFETs. Solid-State Electronics, 2009, 53, 49-53.	1.4	19
120	Sub-threshold behavior of long channel undoped cylindrical surrounding-gate MOSFETs. Microelectronics Reliability, 2009, 49, 897-903.	1.7	6
121	A complete analytic surface potential-based core model for intrinsic nanowire surrounding-gate MOSFETs. Molecular Simulation, 2009, 35, 483-490.	2.0	2
122	A unified FinFET reliability model including high K gate stack dynamic threshold voltage, hot carrier injection, and negative bias temperature instability. , 2009, , .		5
123	Generic DG MOSFET analytic model with vertical electric field induced mobility degradation effects. , 2009, , .		3
124	Effects of body doping on threshold voltage and channel potential of symmetric DG MOSFETs with continuous solution from accumulation to strong-inversion regions. Semiconductor Science and Technology, 2009, 24, 085005.	2.0	18
125	Numerical simulation study on electron mobility of independent DG MOSFETs. , 2009, , .		0
126	An analytic model for Ge/Si core/shell nanowire MOSFETs considering drift-diffusion and ballistic transport. , 2009, , .		1

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127	ULTRA-SOI: New generation of SOI CMOS model with physics based dynamic depletion characteristics. , 2009, , .		0
128	A Web-Based Platform for Nanoscale Non-classical Device Modeling and Circuit Performance Simulation. , 2009, , .		4
129	An analytic channel potential based model for dynamic depletion surrounding-gate mosfets with arbitrary doping level. , 2009, , .		4
130	An Analytical Terahertz Detection Theory for Silicon-Based Nanowire MOS Field Effect Transistor. Journal of Computational and Theoretical Nanoscience, 2009, 6, 2247-2254.	0.4	2
131	A Compact Model of Silicon-Based Nanowire MOSFETs for Circuit Simulation and Design. IEEE Transactions on Electron Devices, 2008, 55, 2898-2906.	3.0	29
132	An Analytic Model for Nanowire MOSFETs With Ge/Si Core/Shell Structure. IEEE Transactions on Electron Devices, 2008, 55, 2907-2917.	3.0	18
133	A Charge-Based Model for Long-Channel Cylindrical Surrounding-Gate MOSFETs From Intrinsic Channel to Heavily Doped Body. IEEE Transactions on Electron Devices, 2008, 55, 2187-2194.	3.0	70
134	Modeling of dynamic threshold voltage in high K gate stack and the application in FinFET reliability. , 2008, , .		0
135	Terahert detection analysis of nanowire gated field effect transistor. , 2008, , .		0
136	Improved Clonal Selection Algorithm based on Lamarckian Local Search Technique. , 2008, , .		4
137	FinFET reliability study by forward gated-diode generationâ€“recombination current. Semiconductor Science and Technology, 2008, 23, 075008.	2.0	6
138	A complete charge based compact model for silicon nanowire FETs including doping and advanced physical effects. , 2008, , .		1
139	Optimal Approximation of Linear Systems by an Improved Clonal Selection Algorithm. , 2008, , .		0
140	FinFET reliability study by forward gated-diode method. , 2008, , .		0
141	A charge-based compact model for arbitrary doped cylindrical surrounding-gate MOSFETs. , 2008, , .		0
142	Modeling nanoscale MOSFETs by a neural network approach. , 2008, , .		1
143	An analytic surface potential based non-charge-sheet poly-Si TFT model including substrate and film thickness effects. , 2008, , .		1
144	Improved Clonal Selection Algorithm based on Baldwinian Learning. , 2008, , .		2

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145	A unified carrier-based model for undoped symmetric double-gate and surrounding-gate MOSFETs. Semiconductor Science and Technology, 2007, 22, 1312-1316.	2.0	2
146	A Surface-Potential-Based Non-Charge-Sheet Core Model for Fully Depleted SOI MOSFET. , 2007, , .		1
147	Complicated Subthreshold Behavior of Undoped Cylindrical Surrounding-Gate MOSFETs. , 2007, , .		1
148	Continuous Surface Potential versus Voltage Equation of Undoped Surrounding-Gate MOSFETs and Its Solution. , 2007, , .		0
149	A Complete Surface Potential-Based Core Model for the Undoped Symmetric Double-Gate MOSFETs. , 2007, , .		1
150	Silicon-Based Nanowire MOSFETs: From Process and Device Physics to Simulation and Modeling. , 0, , .		1