Siegfried Selberherr

List of Publications by Year
in descending order

906	9,818	71102	106344
papers	citations	41 h-index	65 g-index

973	973	973	4888
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Advances in modeling emerging magnetoresistive random access memories: from finite element methods to machine learning approaches. , 2022, , .		1
2	A review of quantum transport in field-effect transistors. Semiconductor Science and Technology, 2022, 37, 043001.	2.0	11
3	Temperature increase in STT-MRAM at writing: A fully three-dimensional finite element approach. Solid-State Electronics, 2022, 193, 108269.	1.4	5
4	Interface effects in ultra-scaled MRAM cells. Solid-State Electronics, 2022, 194, 108373.	1.4	3
5	Finite element modeling of spinâ€“orbit torques. Solid-State Electronics, 2022, 194, 108323.	1.4	4
6	Double Reference Layer STT-MRAM Structures with Improved Performance. Solid-State Electronics, 2022, 194, 108335.	1.4	6
7	Reinforcement learning to reduce failures in SOT-MRAM switching. Microelectronics Reliability, 2022, 135, 114570.	1.7	0
8	Spin Transfer Torques in Ultra-Scaled MRAM Cells. , 2022, , .		1
9	Numerical Analysis of Deterministic Switching of a Perpendicularly Magnetized Spin-Orbit Torque Memory Cell. IEEE Journal of the Electron Devices Society, 2021, 9, 61-67.	2.1	6
10	Microstructure and Granularity Effects in Electromigration. IEEE Journal of the Electron Devices Society, 2021, 9, 476-483.	2.1	3
11	Event Biasing. Modeling and Simulation in Science, Engineering and Technology, 2021, , 107-115.	0.6	0
12	Self-consistent Monte Carlo Solution of Wigner and Poisson Equations Using an Efficient Multigrid Approach. Studies in Computational Intelligence, 2021, , 60-67.	0.9	0
13	Stationary Quantum Particle Attributes. Modeling and Simulation in Science, Engineering and Technology, 2021, , 153-173.	0.6	0
14	Small Signal Analysis. Modeling and Simulation in Science, Engineering and Technology, 2021, , 63-72.	0.6	0
15	Monte Carlo Computing. Modeling and Simulation in Science, Engineering and Technology, 2021, , 39-43.	0.6	0
16	A computational approach for investigating Coulomb interaction using Wignerâ€“Poisson coupling. Journal of Computational Electronics, 2021, 20, 775-784.	2.5	7
17	Concepts of Device Modeling. Modeling and Simulation in Science, Engineering and Technology, 2021, , 3-14.	0.6	0
18	Hierarchy of Kinetic Models. Modeling and Simulation in Science, Engineering and Technology, 2021, , 147-152.	0.6	0

#	Article	IF	Citations
19	General Transport: Self-Consistent Mixed Problem. Modeling and Simulation in Science, Engineering and Technology, 2021, , 93-105.	0.6	0
20	The Semiconductor Model: Fundamentals. Modeling and Simulation in Science, Engineering and Technology, 2021, , 15-23.	0.6	0
21	Transport Theories in Phase Space. Modeling and Simulation in Science, Engineering and Technology, 2021, , 25-38.	0.6	0
22	Wigner Function Modeling. Modeling and Simulation in Science, Engineering and Technology, 2021, , 119-121.	0.6	0
23	Emerging CMOS Compatible Magnetic Memories and Logic. IEEE Journal of the Electron Devices Society, 2021, 9, 456-463.	2.1	2
24	Reviewâ€"Modeling Methods for Analysis of Electromigration Degradation in Nano-Interconnects. ECS Journal of Solid State Science and Technology, 2021, 10, 035003.	1.8	10
25	Electromagnetic Coherent Electron Control. , 2021, , .		0
26	Optimization of a Spin-Orbit Torque Switching Scheme Based on Micromagnetic Simulations and Reinforcement Learning. Micromachines, 2021, 12, 443.	2.9	10
27	Reinforcement learning approach for deterministic SOT-MRAM switching. , 2021, , .		0
28	Subbands in a nanoribbon of topologically insulating MoS2 in the 1Tâ€² phase. Solid-State Electronics, 2021, 184, 108081.	1.4	2
29	Two-pulse switching scheme and reinforcement learning for energy efficient SOT-MRAM simulations. Solid-State Electronics, 2021, 185, 108075.	1.4	0
30	Coupled spin and charge drift-diffusion approach applied to magnetic tunnel junctions. Solid-State Electronics, 2021, 186, 108103.	1.4	17
31	Homogeneous Transport: Stochastic Approach. Modeling and Simulation in Science, Engineering and Technology, 2021, , 55-61.	0.6	0
32	Evolution in a Quantum Wire. Modeling and Simulation in Science, Engineering and Technology, 2021, , 123-145.	0.6	0
33	Stochastic Approaches to Electron Transport in Micro- and Nanostructures. Modeling and Simulation in Science, Engineering and Technology, 2021, , .	0.6	7
34	Gas Sensing with Two-Dimensional Materials Beyond Graphene. , 2021, , .		3
35	Temperature Increase in MRAM at Writing: A Finite Element Approach. , 2021, , .		0
36	Improving failure rates in pulsed SOT-MRAM switching by reinforcement learning. Microelectronics Reliability, 2021, 126, 114231.	1.7	0

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37	Geometric advection and its application in the emulation of high aspect ratio structures. Computer Methods in Applied Mechanics and Engineering, 2021, 386, 114196.	6.6	0
38	Parallel Correction for Hierarchical Re-Distancing Using the Fast Marching Method. Studies in Computational Intelligence, 2021, , 438-451.	0.9	1
39	Combined Process Simulation and Emulation of an SRAM Cell of the 5nm Technology Node. , 2021, , .		1
40	Reinforcement Learning Approach for Sub-Critical Current SOT-MRAM Switching. , 2021, , .		0
41	Spin and Charge Drift-Diffusion Approach to Torque Computation in Magnetic Tunnel Junctions. , 2021, , .		0
42	Reinforcement Learning to Reduce Failures in SOT-MRAM Switching. , 2021, , .		0
43	Finite Element Method Approach to MRAM Modeling. , 2021, , .		1
44	Robust magnetic field-free switching of a perpendicularly magnetized free layer for SOT-MRAM. Solid-State Electronics, 2020, 168, 107730.	1.4	10
45	Integration of Gas Sensors with CMOS Technology. , 2020, , .		3
46	Analysis of Switching Under Fixed Voltage and Fixed Current in Perpendicular STT-MRAM. IEEE Journal of the Electron Devices Society, 2020, 8, 1249-1256.	2.1	0
47	Ballistic Conductance in a Topological 1T '-MoS2 Nanoribbon. Semiconductors, 2020, 54, 1713-1715.	0.5	0
48	Conductance in a Nanoribbon of Topologically Insulating MoS2 in the 1Tâ€™ Phase. IEEE Transactions on Electron Devices, 2020, 67, 4687-4690.	3.0	4
49	Complex Systems in Phase Space. Entropy, 2020, 22, 1103.	2.2	4
50	Influence of Current Redistribution in Switching Models for Perpendicular STT-MRAM. ECS Transactions, 2020, 97, 159-164.	0.5	0
51	Perpendicular STT-MRAM Switching at Fixed Voltage and at Fixed Current. , 2020, , .		1
52	The Level-Set Method for Multi-Material Wet Etching and Non-Planar Selective Epitaxy. IEEE Access, 2020, 8, 115406-115422.	4.2	16
53	Emerging CMOS Compatible Magnetic Memories and Logic. , 2020, , .		4
54	Electro-Thermal-Mechanical Modeling of Gas Sensor Hotplates. , 2020, , 17-72.		7

#	Article	IF	Citations
55	Topologically Protected and Conventional Subbands in a 1Tâ€™ -MoS2 Nanoribbon Channel. , 2020, , .		1
56	Comprehensive Modeling of Coupled Spin and Charge Transport through Magnetic Tunnel Junctions. , 2020, , .		1
57	A Monte Carlo Evaluation of the Current and Low Frequency Current Noise at Spin-Dependent Hopping. Lecture Notes in Computer Science, 2020, , 446-453.	1.3	0
58	Influence of Current Redistribution in Switching Models for Perpendicular STT-MRAM. ECS Meeting Abstracts, 2020, MA2020-01, 1389-1389.	0.0	1
59	Subband Structure and Ballistic Conductance of a Molybdenum Disulfide Nanoribbon in Topological 1Tâ€™ Phase: A kÂ·p Study. , 2020, , .		0
60	Comprehensive modeling of coupled spin-charge transport and magnetization dynamics in STT-MRAM cells. , 2020, , .		0
61	Reduced Current Spin-Orbit Torque Switching of a Perpendicularly Magnetized Free Layer. , 2020, , .		0
62	Parallelized Construction of Extension Velocities for the Level-Set Method. Lecture Notes in Computer Science, 2020, , 348-358.	1.3	1
63	Computation of Torques in Magnetic Tunnel Junctions through Spin and Charge Transport Modeling. , 2020, , .		2
64	Efficient Demagnetizing Field Calculation for Disconnected Complex Geometries in STT-MRAM Cells. , 2020, , .		9
65	Geometric Advection Algorithm for Process Emulation. , 2020, , .		2
66	Thermo-Electro-Mechanical Simulation of Semiconductor Metal Oxide Gas Sensors. Materials, 2019, 12, 2410.	2.9	20
67	Process Simulation in the Browser: Porting ViennaTS using WebAssembly. , 2019, , .		0
68	CMOS-Compatible Gas Sensors. , 2019, , .		1
69	Spin-Based CMOS-Compatible Memories. , 2019, , .		0
70	Novel Numerical Dissipation Scheme for Level-Set Based Anisotropic Etching Simulations. , 2019, , .		0
71	Parallelized Level-Set Velocity Extension Algorithm for Nanopatterning Applications. , 2019, , .		2
72	Combining Perpendicular and Shape Anisotropy for Optimal Switching of Advanced Spin-Orbit Torque Memory Cells. , 2019, , .		0

#	Article	IF	Citations
73	Mobility of Circular and Elliptical Si Nanowire Transistors Using a Multi-Subband 1D Formalism. IEEE Electron Device Letters, 2019, 40, 1571-1574.	3.9	15
74	Improved Sensing Capability of Integrated Semiconducting Metal Oxide Gas Sensor Devices. Sensors, 2019, 19, 374.	3.8	21
75	Wigner equation for general electromagnetic fields: The Weyl-Stratonovich transform. Physical Review B, 2019, 99, .	3.2	11
76	Simulation of the Impact of Ionized Impurity Scattering on the Total Mobility in Si Nanowire Transistors. Materials, 2019, 12, 124.	2.9	21
77	Evaluation of Serial and Parallel Shared-Memory Distance-1 Graph Coloring Algorithms. Lecture Notes in Computer Science, 2019, , 106-114.	1.3	1
78	Current and shot noise at spin-dependent hopping through junctions with ferromagnetic contacts. Solid-State Electronics, 2019, 159, 43-50.	1.4	0
79	Simulation of the Effects of Postimplantation Annealing on Silicon Carbide DMOSFET Characteristics. IEEE Transactions on Electron Devices, 2019, 66, 3060-3065.	3.0	4
80	Two-pulse sub-ns switching scheme for advanced spin-orbit torque MRAM. Solid-State Electronics, 2019, 155, 49-56.	1.4	21
81	A shared memory parallel multi-mesh fast marching method for re-distancing. Advances in Computational Mathematics, 2019, 45, 2029-2045.	1.6	3
82	Efficient Magnetic Field-Free Switching of a Symmetric Perpendicular Magnetic Free Layer for Advanced SOT-MRAM. , 2019, , .		0
83	CMOS Technology Compatible Magnetic Memories. , 2019, , .		2
84	A Flexible Shared-Memory Parallel Mesh Adaptation Framework. , 2019, , .		0
85	Switching Speedup of the Magnetic Free Layer of Advanced SOT-MRAM. , 2019, , .		0
86	Magnetic field-free deterministic switching of a perpendicular magnetic layer by spin-orbit torques. , 2019, , .		0
87	Empirical Model for Electrical Activation of Aluminum- and Boron-Implanted Silicon Carbide. IEEE Transactions on Electron Devices, 2018, 65, 674-679.	3.0	10
88	Modeling and Simulation of Novel Semiconducting Metal Oxide Gas Sensors for Wearable Devices. IEEE Sensors Journal, 2018, 18, 1960-1970.	4.7	30
89	Stochastic analysis of surface roughness models in quantum wires. Computer Physics Communications, 2018, 228, 30-37.	7.5	7
90	Current and shot noise at spin-dependent hopping through magnetic tunnel junctions. , 2018, , .		2

#	Article	IF	Citations
91	Accelerating Flux Calculations Using Sparse Sampling. Micromachines, 2018, 9, 550.	2.9	2
92	Nanowire FETs. , 2018, , .		0
93	Modeling of Gate Stack Patterning for Advanced Technology Nodes: A Review. Micromachines, 2018, 9, 631.	2.9	27
94	Simulation of Injection Currents into Disordered Molecular Conductors. Materials Today: Proceedings, 2018, 5, 17472-17477.	1.8	0
95	Steady-State Empirical Model for Electrical Activation of Silicon-Implanted Gallium Nitride. , 2018, , .		1
96	Impact of the Effective Mass on the Mobility in Si Nanowire Transistors. , 2018, , .		4
97	Enhanced Sensing Performance of Integrated Gas Sensor Devices. Proceedings (mdpi), 2018, 2, 1508.	0.2	1
98	Field-free Fast Reliable Deterministic Switching in Perpendicular Spin-Orbit Torque MRAM Cells. , 2018, , .		1
99	Modeling and Simulation of Electrical Activation of Acceptor-Type Dopants in Silicon Carbide. Materials Science Forum, 2018, 924, 192-195.	0.3	4
100	Study of the 1D Scattering Mechanisms' Impact on the Mobility in Si Nanowire Transistors. , 2018, , .		6
101	Switching current reduction in advanced spin-orbit torque MRAM. , 2018, , .		4
102	Unified feature scale model for etching in SF<inf>6</inf> and Cl plasma chemistries. , 2018, , .		1
103	Transient model for electrical activation of aluminium and phosphorus-implanted silicon carbide. Journal of Applied Physics, 2018, 123, .	2.5	14
104	Ultra-Fast Switching of a Free Magnetic Layer with Out-of-Plane Magnetization in Spin-Orbit Torque MRAM Cells. ECS Transactions, 2018, 85, 213-218.	0.5	0
105	Demands for spin-based nonvolatility in emerging digital logic and memory devices for low power computing. Facta Universitatis - Series Electronics and Energetics, 2018, 31, 529-545.	0.9	0
106	Sparse Surface Speed Evaluation on a Dynamic Three-Dimensional Surface Using an Iterative Partitioning Scheme. Lecture Notes in Computer Science, 2018, , 694-707.	1.3	1
107	Spin correlations at hopping in magnetic structures: from tunneling magnetoresistance to single-spin transistor. , 2018, , .		0
108	Framework to model neutral particle flux in convex high aspect ratio structures using one-dimensional radiosity. Solid-State Electronics, 2017, 128, 141-147.	1.4	5

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109	Analysis of lenseâ€governed Wigner signed particle quantum dynamics. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1700102.	2.4	10
110	Using Temporary Explicit Meshes for Direct Flux Calculation on Implicit Surfaces. Procedia Computer Science, 2017, 108, 245-254.	2.0	10
111	Evaluation of the shared-memory parallel Fast Marching Method for re-distancing problems. , 2017, , .		3
112	ReaxFF Reactive Molecular Dynamics Study of Orientation Dependence of Initial Silicon Carbide Oxidation. Journal of Physical Chemistry A, 2017, 121, 8791-8798.	2.5	25
113	Anisotropic interpolation method of silicon carbide oxidation growth rates for three-dimensional simulation. Solid-State Electronics, 2017, 128, 135-140.	1.4	6
114	Modeling electromigration in nanoscaled copper interconnects. , 2017, , .		1
115	Modeling of electrical activation ratios of phosphorus and nitrogen doped silicon carbide. , 2017, , .		5
116	Non-volatility by spin in modern nanoelectronics. , 2017, , .		1
117	Accelerated direct flux calculations using an adaptively refined icosahedron. , 2017, , .		0
118	Silicon-on-insulator for spintronic applications: spin lifetime and electric spin manipulation. ChemistrySelect, 2016, 1, .	1.5	1
119	Stress Evolution During Nanoindentation in Open TSVs. IEEE Transactions on Device and Materials Reliability, 2016, 16, 470-474.	2.0	1
120	Effects of the Deposition Process Variation on the Performance of Open TSVs. , 2016, , .		0
121	Direction dependent three-dimensional silicon carbide oxidation growth rate calculations. , 2016, , .		0
122	Using one-dimensional radiosity to model neutral particle flux in high aspect ratio holes. , 2016, , .		2
123	Influence of spin relaxation on trap-assisted resonant tunneling in ferromagnet-oxide-semiconductor structures. , 2016, , .		0
124	CMOS-compatible spintronic devices: a review. Semiconductor Science and Technology, 2016, 31, 113006.	2.0	85
125	ViennaCL---Linear Algebra Library for Multi- and Many-Core Architectures. SIAM Journal of Scientific Computing, 2016, 38, S412-S439.	2.8	64
126	The exploitation of magnetization orientation encoded spin-transfer torque for an ultra dense non-volatile magnetic shift register. , 2016, , .		1

#	Article	IF	Citations
127	Three-dimensional growth rate modeling and simulation of silicon carbide thermal oxidation. , 2016, , .		2
128	Using one-dimensional radiosity to model neutral flux in convex high aspect ratio structures. , 2016, , .		0
129	Magnetic field dependent tunneling magnetoresistance through a quantum well between ferromagnetic contacts. , 2016, , .		0
130	Stress Considerations for System-on-Chip Gas Sensor Integration in CMOS Technology. IEEE Transactions on Device and Materials Reliability, 2016, 16, 483-495.	2.0	3
131	Impact of across-wafer variation on the electrical performance of TSVs. , 2016, , .		2
132	Layer coupling and read disturbances in a buffered magnetic logic environment. Proceedings of SPIE, 2016, , .	0.8	0
133	Growth rates of dry thermal oxidation of 4H-silicon carbide. Journal of Applied Physics, 2016, 120, .	2.5	30
134	Electron Momentum and Spin Relaxation in Silicon Films. Mathematics in Industry, 2016, , 695-700.	0.3	0
135	Neumann Series Analysis of the Wigner Equation Solution. Mathematics in Industry, 2016, , 701-707.	0.3	1
136	Enhancement of Electron Spin Relaxation Time in Thin SOI Films by Spin Injection Orientation and Uniaxial Stress. Journal of Nano Research, 2016, 39, 34-42.	0.8	2
137	Stress in three-dimensionally integrated sensor systems. Microelectronics Reliability, 2016, 61, 3-10.	1.7	3
138	Evaluation of Mobile ARM-Based SoCs for High Performance Computing. , 2016, , .		4
139	INSTITUT FÃœR MIKROELEKTRONIK / INSTITUTE FOR MICROELECTRONICS. , 2016, , 57-62.		0
140	Improved drive-current into nanoscaled channels using electrostatic lenses. , 2015, , .		2
141	Influence of valley splitting on spin relaxation time in a strained thin silicon film. , 2015, , .		2
142	Stress Considerations in Thin Films for CMOS-Integrated Gas Sensors. ECS Transactions, 2015, 66, 243-250.	0.5	4
143	Global statistical methodology for the analysis of equipment parameter effects on TSV formation. , 2015, , .		6
144	SOT-MRAM based on 1Transistor-1MTJ-cell structure. , 2015, , .		2

#	Article	IF	Citations
145	Novel Buffered Magnetic Logic Gate Grid. ECS Transactions, 2015, 66, 295-303.	0.5	2
146	Silicon spintronics: Progress and challenges. Physics Reports, 2015, 585, 1-40.	25.6	56
147	Electron mobility and spin lifetime enhancement in strained ultra-thin silicon films. Solid-State Electronics, 2015, 112, 46-50.	1.4	4
148	Variation of Spin Lifetime with Spin Injection Orientation in Strained Thin Silicon Films. ECS Transactions, 2015, 66, 233-240.	0.5	3
149	Dependence of spin lifetime on spin injection orientation in strained silicon films. , 2015, , .		5
150	Compact model for solder bump electromigration failure. , 2015, , .		1
151	Memory-efficient particle annihilation algorithm for Wigner Monte Carlo simulations. , 2015, , .		0
152	Improving the performance of a non-volatile magnetic flip flop by exploiting the spin Hall effect. , 2015, , .		0
153	Processing of integrated gas sensor devices. , 2015, , .		3
154	Injection direction sensitive spin lifetime model in a strained thin silicon film. , 2015, , .		1
155	Parallelization of the Two-Dimensional Wigner Monte Carlo Method. Lecture Notes in Computer Science, 2015, , 309-316.	1.3	2
156	Modelling of multipurpose spintronic devices. International Journal of Nanotechnology, 2015, 12, 313.	0.2	3
157	Progress in Magnetoresistive Memory: Magnetic Tunnel Junctions with a Composite Free Layer. , 2015, , .		0
158	Intrinsic stress analysis of tungsten-lined open TSVs. Microelectronics Reliability, 2015, 55, 1843-1848.	1.7	10
159	The Wigner equation in the presence of electromagnetic potentials. Journal of Computational Electronics, 2015, 14, 888-893.	2.5	6
160	Influence of magnetization variations in the free layer on a non-volatile magnetic flip flop. Solid-State Electronics, 2015, 108, 2-7.	1.4	6
161	Coupled simulation to determine the impact of across wafer variations in oxide PECVD on electrical and reliability parameters of through-silicon vias. Microelectronic Engineering, 2015, 137, 141-145.	2.4	10
162	Performance and Stress Analysis of Metal Oxide Films for CMOS-Integrated Gas Sensors. Sensors, 2015, 15, 7206-7227.	3.8	50

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163	Boundary conditions and the Wigner equation solution. Journal of Computational Electronics, 2015, 14, 859-863.	2.5	11
164	Transformation invariant local element size specification. Applied Mathematics and Computation, 2015, 267, 195-206.	2.2	1
165	Spin-based devices for future microelectronics. , 2015, , .		0
166	(Invited) Spin-Based Silicon and CMOS-Compatible Devices. ECS Transactions, 2015, 66, 223-231.	0.5	0
167	Intersubband spin relaxation reduction and spin lifetime enhancement by strain in SOI structures. Microelectronic Engineering, 2015, 147, 89-91.	2.4	9
168	ViennaMaterials â€“ A dedicated material library for computational science and engineering. Applied Mathematics and Computation, 2015, 267, 282-293.	2.2	3
169	CMOS-compatible spintronic devices. , 2015, , .		0
170	Distributed-memory parallelization of the Wigner Monte Carlo method using spatial domain decomposition. Journal of Computational Electronics, 2015, 14, 151-162.	2.5	18
171	A comparison of approaches for the solution of the Wigner equation. Mathematics and Computers in Simulation, 2015, 107, 108-119.	4.4	4
172	Investigation of Novel Silicon PV Cells of a Lateral Type. Silicon, 2015, 7, 283-291.	3.3	6
173	Evaluation of Spin Lifetime in Thin-Body FETs: A High Performance Computing Approach. Lecture Notes in Computer Science, 2015, , 285-292.	1.3	2
174	Free Open Source Mesh Healing for TCAD Device Simulations. Lecture Notes in Computer Science, 2015, , 293-300.	1.3	1
175	Concept of a SOT-MRAM Based on 1Transistor-1MTJ-Cell Structure. , 2015, , .		1
176	Spin-Based CMOS-Compatible Devices. Lecture Notes in Computer Science, 2015, , 42-49.	1.3	0
177	The Influence of Electrostatic Lenses on Wave Packet Dynamics. Lecture Notes in Computer Science, 2015, , 277-284.	1.3	1
178	Template-based mesh generation for semiconductor devices. , 2014, , .		1
179	Electromigration induced failure of solder bumps and the role of IMC. , 2014, , .		0
180	Manufacturing of 3D integrated sensors and circuits. , 2014, , .		1

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181	Modeling of microstructural effects on electromigration failure. , 2014, , .		0
182	Progress in Magnetoresistive Memory: Magnetic Tunnel Junctions with a Composite Free Layer. International Journal of High Speed Electronics and Systems, 2014, 23, 1450014.	0.7	0
183	Electromigration induced resistance increase in open TSVs. , 2014, , .		2
184	Electromigration in solder bumps: A mean-time-to-failure TCAD study. , 2014, , .		0
185	Influence of device geometry on the non-volatile magnetic flip flop characteristics. , 2014, , .		2
186	The Wigner Monte Carlo method for accurate semiconductor device simulation. , 2014, , .		3
187	Increasing mobility and spin lifetime with shear strain in thin silicon films. , 2014, , .		1
188	Spin lifetime in strained silicon films. , 2014, , .		0
189	Implementation and analysis of an adaptive multilevel Monte Carlo algorithm. Monte Carlo Methods and Applications, 2014, 20, 1-41.	0.8	30
190	The effects of etching and deposition on the performance and stress evolution of open through silicon vias. Microelectronics Reliability, 2014, 54, 1953-1958.	1.7	11
191	A benchmark study of the Wigner Monte Carlo method. Monte Carlo Methods and Applications, 2014, 20, 43-51.	0.8	29
192	On the material depletion rate due to electromigration in a copper TSV structure. , 2014, , .		3
193	Methods of simulating thin film deposition using spray pyrolysis techniques. Microelectronic Engineering, 2014, 117, 57-66.	2.4	42
194	Highly flexible and reusable finite element simulations with ViennaX. Journal of Computational and Applied Mathematics, 2014, 270, 484-495.	2.0	1
195	Electron dynamics in nanoscale transistors by means of Wigner and Boltzmann approaches. Physica A: Statistical Mechanics and Its Applications, 2014, 398, 194-198.	2.6	11
196	ViennaX: a parallel plugin execution framework for scientific computing. Engineering With Computers, 2014, 30, 651-668.	6.1	2
197	Spin injection and diffusion in silicon based devices from a space charge layer. Journal of Applied Physics, 2014, 115, 17C503.	2.5	9
198	Novel bias-field-free spin transfer oscillator. Journal of Applied Physics, 2014, 115, 17C901.	2.5	10

#	Article	IF	Citations
199	Electromigration reliability of open TSV structures. , 2014, , .		0
200	Valley splitting and spin lifetime enhancement in strained thin silicon films. , 2014, , .		4
201	Effects of sidewall scallops on the performance and reliability of filled copper and open tungsten TSVs. , 2014, , .		3
202	Efficient calculation of the two-dimensional Wigner potential. , 2014, , .		2
203	Effects of sidewall scallops on open tungsten TSVs. , 2014, , .		4
204	Spin diffusion and the role of screening effects in semiconductors. , 2014, , .		0
205	Three-dimensional simulation for the reliability and electrical performance of through-silicon vias. , 2014, , .		0
206	Frequency dependence study of a bias field-free nano-scale oscillator. , 2014, , .		0
207	Process and reliability of SF<inf>6</inf>/O<inf>2</inf> plasma etched copper TSVs. , 2014, , .		1
208	Electromigration reliability of open TSV structures. Microelectronics Reliability, 2014, 54, 2133-2137.	1.7	7
209	Modeling of spin-based silicon technology. , 2014, , .		0
210	High performance MRAM-based stateful logic. , 2014, , .		3
211	Electromigration reliability of solder bumps. , 2014, , .		2
212	Compact modeling of memristive IMP gates for reliable stateful logic design. , 2014, , .		0
213	Implications of the coherence length on the discrete Wigner potential. , 2014, , .		4
214	Magnetic tunnel junctions for future memory and logic-in-memory applications. , 2014, , .		1
215	Influence of magnetization variations in the free layer on a non-volatile magnetic flip flop. , 2014, , .		2
216	Spin injection in a semiconductor through a space-charge layer. Solid-State Electronics, 2014, 101, 116-121.	1.4	8

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217	Modeling spin-based electronic devices. , 2014, , .		0
218	Modeling the Growth of Tin Dioxide Using Spray Pyrolysis Deposition for Gas Sensor Applications. IEEE Transactions on Semiconductor Manufacturing, 2014, 27, 269-277.	1.7	13
219	The meshing framework ViennaMesh for finite element applications. Journal of Computational and Applied Mathematics, 2014, 270, 166-177.	2.0	8
220	Spray pyrolysis deposition for gas sensor integration in the backend of standard CMOS processes. , 2014, , .		1
221	The Role of Annihilation in a Wigner Monte Carlo Approach. Lecture Notes in Computer Science, 2014, , 186-193.	1.3	6
222	Modeling and Analysis of Spray Pyrolysis Deposited SnO2 Films for Gas Sensors. , 2014, , 295-310.		4
223	Microstructural impact on electromigration: A TCAD study. Facta Universitatis - Series Electronics and Energetics, 2014, 27, 1-11.	0.9	3
224	Uniaxial Shear Strain as a Mechanism to Increase Spin Lifetime in Thin Film of a SOI-Based Silicon Spin FETs. Engineering Materials, 2014, , 127-149.	0.6	0
225	Composite magnetic tunnel junctions for fast memory devices and efficient spin-torque nano-oscillators. WIT Transactions on Information and Communication Technologies, 2014, , .	0.0	0
226	Implication logic gates using spin-transfer-torque-operated magnetic tunnel junctions for intrinsic logic-in-memory. Solid-State Electronics, 2013, 84, 191-197.	1.4	65
227	Decoherence effects in the Wigner function formalism. Journal of Computational Electronics, 2013, 12, 388-396.	2.5	10
228	A method for simulating Atomic Force Microscope nanolithography in the Level Set framework. Microelectronic Engineering, 2013, 107, 23-32.	2.4	7
229	Novel MTJ-based shift register for non-volatile logic applications. , 2013, , .		6
230	Physically based models of electromigration. , 2013, , .		1
231	Two-dimensional transient wigner particle model. , 2013, , .		5
232	Stress estimation in open tungsten TSV. , 2013, , .		1
233	Electromigration induced stress in open TSVs. , 2013, , .		0
234	Impact of intermetallic compound on solder bump electromigration reliability. , 2013, , .		3

#	Article	IF	Citations
235	Influence of temperature on the standard deviation of electromigration lifetimes. , 2013, , .		1
236	Rigorous simulation study of a novel non-volatile magnetic flip-flop. , 2013, , .		10
237	Electromigration enhanced growth of intermetallic compound in solder bumps. , 2013, , .		0
238	Transverse domain wall formation in a free layer: A mechanism for switching failure in a MTJ-based STT-MRAM. , 2013, , .		0
239	Reduction of momentum and spin relaxation rate in strained thin silicon films. , 2013, , .		8
240	Electromigration analyses of open TSVs. , 2013, , .		0
241	Performance analysis and comparison of two 1T/1MTJ-based logic gates. , 2013, , .		3
242	Quantum insights in gate oxide charge-trapping dynamics in nanoscale MOSFETs. , 2013, , .		3
243	Stress evolution in the metal layers of TSVs with Bosch scallops. Microelectronics Reliability, 2013, 53, 1602-1605.	1.7	8
244	Subband splitting and surface roughness induced spin relaxation in (001) silicon SOI MOSFETs. Solid-State Electronics, 2013, 90, 34-38.	1.4	14
245	Simulation study of an electrically read- and writable magnetic logic gate. Microelectronic Engineering, 2013, 112, 188-192.	2.4	1
246	Influence of Geometry on the Memristive Behavior of the Domain Wall Spintronic Memristors and Its Applications for Measurement. Journal of Superconductivity and Novel Magnetism, 2013, 26, 1745-1748.	1.8	2
247	Physical scales in the Wignerâ€“Boltzmann equation. Annals of Physics, 2013, 328, 220-237.	2.8	25
248	Reliability Analysis and Comparison of Implication and Reprogrammable Logic Gates in Magnetic Tunnel Junction Logic Circuits. IEEE Transactions on Magnetics, 2013, 49, 5620-5628.	2.1	24
249	Spin Lifetime Enhancement by Shear Strain in Thin Silicon-On-Insulator Films. ECS Transactions, 2013, 53, 203-208.	0.5	0
250	Strain-induced reduction of surface roughness dominated spin relaxation in MOSFETs. , 2013, , .		1
251	Influence of the valley degeneracy on spin relaxation in thin silicon films. , 2013, , .		0
252	Design and applications of magnetic tunnel junction based logic circuits. , 2013, , .		10

#	Article	IF	Citations
253	Decoherence and time reversibility: The role of randomness at interfaces. Journal of Applied Physics, 2013, 114, 174902.	2.5	5
254	Analysis of solder bump electromigration reliability. , 2013, , .		0
255	Wigner quasi-particle attributesâ€"An asymptotic perspective. Applied Physics Letters, 2013, 102, .	3.3	38
256	Evaluation of spin lifetime in strained UT2B silicon-on-insulator MOSFETs. , 2013, , .		0
257	Modeling the growth of thin SnO2 films using spray pyrolysis deposition. , 2013, , .		2
258	MRAM-based logic array for large-scale non-volatile logic-in-memory applications. , 2013, , .		12
259	Using strain to increase the reliability of scaled spin MOSFETs. , 2013, , .		1
260	Structural optimization of MTJs with a composite free layer. Proceedings of SPIE, 2013, , .	0.8	0
261	Concept of a Bias-Field-Free Spin-Torque Oscillator Based on Two MgO-MTJs. , 2013, , .		2
262	A Lightweight Task Graph Scheduler for Distributed High-Performance Scientific Computing. Lecture Notes in Computer Science, 2013, , 563-566.	1.3	1
263	Distributed High-Performance Parallel Mesh Generation with ViennaMesh. Lecture Notes in Computer Science, 2013, , 548-552.	1.3	1
264	Multiple purpose spin transfer torque operated devices. Facta Universitatis - Series Electronics and Energetics, 2013, 26, 227-238.	0.9	0
265	Analysis of Resistance Change Development Due to Voiding in Copper Interconnects Ended by A Through Silicon Via. ECS Transactions, 2012, 49, 273-280.	0.5	0
266	Electric Field Based Simulations of Local Oxidation Nanolithography Using Atomic Force Microscopy in a Level Set Environment. ECS Transactions, 2012, 49, 265-272.	0.5	1
267	Towards a free open source process and device simulation framework. , 2012, , .		1
268	Role of the physical scales on the transport regime. , 2012, , .		0
269	Atomistic method for analysis of electromigration. , 2012, , .		0
270	Particle-grid techniques for semiclassical and quantum transport simulations. , 2012, , .		0

#	Article	IF	Citations
271	New trends in microelectronics: Towards an ultimate memory concept. , 2012, , .		0
272	Electrothermal analysis of In<inf>0.12</inf>Al<inf>0.88</inf>N/GaN HEMTs. , 2012, , .		0
273	Recent developments in advanced memory modeling. , 2012, , .		0
274	Thermo-mechanical simulations of an open tungsten TSV. , 2012, , .		6
275	MTJs with a composite free layer for high-speed spin transfer torque RAM: Micromagnetic simulations. , 2012, , .		1
276	Reduction of surface roughness induced spin relaxation in SOI MOSFETs. , 2012, , .		1
277	New trends in microelectronics: Towards an ultimate memory concept. , 2012, , .		0
278	Ab initio method for electromigration analysis. , 2012, , .		0
279	Formation and movement of voids in copper interconnect structures. , 2012, , .		1
280	Interconnect reliability dependence on fast diffusivity paths. Microelectronics Reliability, 2012, 52, 1532-1538.	1.7	4
281	Electromigration failure in a copper dual-damascene structure with a through silicon via. Microelectronics Reliability, 2012, 52, 1981-1986.	1.7	22
282	MTJ-based implication logic gates and circuit architecture for large-scale spintronic stateful logic systems. , 2012, , .		5
283	Emerging memory technologies: Trends, challenges, and modeling methods. Microelectronics Reliability, 2012, 52, 628-634.	1.7	80
284	Temperature dependence of the transport properties of spin field-effect transistors built with InAs and Si channels. Solid-State Electronics, 2012, 71, 25-29.	1.4	11
285	Modeling Emerging Non-volatile Memories: Current Trends and Challenges. Physics Procedia, 2012, 25, 99-104.	1.2	5
286	A Numerical Study of Line-Edge Roughness Scattering in Graphene Nanoribbons. IEEE Transactions on Electron Devices, 2012, 59, 433-440.	3.0	58
287	Physics-Based Modeling of GaN HEMTs. IEEE Transactions on Electron Devices, 2012, 59, 685-693.	3.0	41
288	Fast Switching in Magnetic Tunnel Junctions With Two Pinned Layers: Micromagnetic Modeling. IEEE Transactions on Magnetics, 2012, 48, 1289-1292.	2.1	17

#	Article	IF	Citations
289	Phonon-Induced Decoherence in Electron Evolution. Lecture Notes in Computer Science, 2012, , 472-479.	1.3	2
290	GPU-Accelerated Non-negative Matrix Factorization for Text Mining. Lecture Notes in Computer Science, 2012, , 158-163.	1.3	17
291	Efficient Simulations of the Transport Properties of Spin Field-Effect Transistors Built on Silicon Fins. Lecture Notes in Computer Science, 2012, , 630-637.	1.3	0
292	A Monte Carlo Simulator for Non-contact Mode Atomic Force Microscopy. Lecture Notes in Computer Science, 2012, , 447-454.	1.3	1
293	Chapter 22. Monte Carlo Investigations of Electron Decoherence due to Phonons. , 2012, , 203-212.		1
294	Chapter 11. A Two-Dimensional Lorentzian Distribution for an Atomic Force Microscopy Simulator. , 2012, , 97-104.		1
295	Domain-wall spintronic memristor for capacitance and inductance sensing. , 2011, , .		2
296	Multilevel simulation for the investigation of fast diffusivity paths. , 2011, , .		0
297	Properties of InAs- and silicon-based ballistic spin field-effect transistors. , 2011, , .		0
298	Transport properties of spin field-effect transistors built on Si and InAs. , 2011, , .		2
299	Switching time and current reduction using a composite free layer in magnetic tunnel junctions. , 2011, , .		4
300	A Level Set simulator for nanooxidation using non-contact atomic force microscopy. , 2011, , .		0
301	High-quality mesh generation based on orthogonal software modules. , 2011, , .		1
302	Modeling of advanced memories. , 2011, , .		0
303	The Economic Limit to Moore's Law. IEEE Transactions on Semiconductor Manufacturing, 2011, 24, 1-4.	1.7	48
304	A simulator for local anodic oxidation of silicon surfaces. , 2011, , .		2
305	A compact model for early electromigration lifetime estimation. , 2011, , .		1
306	Strained MOSFETs on ordered SiGe dots. Solid-State Electronics, 2011, 65-66, 81-87.	1.4	2

#	Article	IF	Citations
307	A compact model for early electromigration failures of copper dual-damascene interconnects. Microelectronics Reliability, 2011, 51, 1573-1577.	1.7	22
308	Hierarchical Simulation of Process Variations and Their Impact on Circuits and Systems: Methodology. IEEE Transactions on Electron Devices, 2011, 58, 2218-2226.	3.0	15
309	Hierarchical Simulation of Process Variations and Their Impact on Circuits and Systems: Results. IEEE Transactions on Electron Devices, 2011, 58, 2227-2234.	3.0	21
310	Performance Assessment of Nanoscale Field-Effect Diodes. IEEE Transactions on Electron Devices, 2011, 58, 2378-2384.	3.0	41
311	Foreword Special Issue on Characterization of Nano CMOS Variability by Simulation and Measurements. IEEE Transactions on Electron Devices, 2011, 58, 2190-2196.	3.0	2
312	An Analytical Model for Line-Edge Roughness Limited Mobility of Graphene Nanoribbons. IEEE Transactions on Electron Devices, 2011, 58, 3725-3735.	3.0	34
313	Reduction of switching time in pentalayer magnetic tunnel junctions with a compositeâ€free layer. Physica Status Solidi - Rapid Research Letters, 2011, 5, 420-422.	2.4	21
314	Electromigration in submicron interconnect features of integrated circuits. Materials Science and Engineering Reports, 2011, 71, 53-86.	31.8	68
315	Properties of InAs- and silicon-based ballistic spin field-effect transistors operated at elevated temperature. , 2011, , .		0
316	Integration of atomistic and continuum-level electromigration models. , 2011, , .		1
317	Compact modeling of interconnect reliability. , 2011, , .		1
318	Perspectives of Silicon for Future Spintronic Applications From the Peculiarities of the Subband Structure in Thin Films. IEEE Nanotechnology Magazine, 2011, 10, 737-743.	2.0	0
319	Stochastic model of the resistive switching mechanism in bipolar resistive random access memory: Monte Carlo simulations. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 01AD03.	1.2	15
320	Ballistic Transport Properties of Spin Field-Effect Transistors Built on Silicon and InAs Fins. ECS Transactions, 2011, 39, 155-162.	0.5	0
321	Modeling Electromigration Lifetimes of Copper Interconnects. ECS Transactions, 2011, 39, 163-169.	0.5	1
322	Properties of Silicon Ballistic Spin Fin-Based Field-Effect Transistors. ECS Transactions, 2011, 35, 277-282.	0.5	4
323	Subband Structure Engineering in Silicon-On-Insulator FinFETs Using Confinement. ECS Transactions, 2011, 35, 117-122.	0.5	1
324	Stochastic Algorithm for Solving the Wigner-Boltzmann Correction Equation. Lecture Notes in Computer Science, 2011, , 95-102.	1.3	0

#	Article	IF	Citations
325	Modeling of the SET and RESET Process in Bipolar Resistive Oxide-Based Memory Using Monte Carlo Simulations. Lecture Notes in Computer Science, 2011, , 87-94.	1.3	2
326	Parallelization Strategy for Hierarchical Run Length Encoded Data Structures. , 2011, , .		3
327	Simulation of Field-Effect Biosensors (BioFETs) for Biotin-Streptavidin Complexes. , 2010, , .		3
328	Electron subband structure in strained silicon UTB films from the Henselâ€“Hasegawaâ€“Nakayama model â€“ Part 1 analytical consideration and strain-induced valley splitting. Solid-State Electronics, 2010, 54, 137-142.	1.4	5
329	Physically based models of electromigration: From Blackâ€™s equation to modern TCAD models. Microelectronics Reliability, 2010, 50, 775-789.	1.7	115
330	Analysis of Thermoelectric Properties of Scaled Silicon Nanowires Using an Atomistic Tight-Binding Model. Journal of Electronic Materials, 2010, 39, 1902-1908.	2.2	26
331	Stochastic modeling of bipolar resistive switching in metal-oxide based memory by Monte Carlo technique. Journal of Computational Electronics, 2010, 9, 146-152.	2.5	5
332	The Economic Limit to Moore's Law [Point of View. Proceedings of the IEEE, 2010, 98, 351-353.	21.3	16
333	Three-dimensional level set based Bosch process simulations using ray tracing for flux calculation. Microelectronic Engineering, 2010, 87, 20-29.	2.4	47
334	Relation between the PCB near field and the common mode coupling from the PCB to cables. , 2010, , .		0
335	Modeling floating body Z-RAM storage cells. , 2010, , .		1
336	A stochastic model of bipolar resistive switching in metal-oxide-based memory. , 2010, , .		1
337	Transport modeling for nanoscale semiconductor devices. , 2010, , .		6
338	A Modular Tool Chain for High Performance CFD Simulations in Intracranial Aneurysms. AIP Conference Proceedings, 2010, , .	0.4	2
339	A Unified Topological Layer for Finite Element Space Discretization. , 2010, , .		1
340	A Dispatched Covariant Type System for Numerical Applications in C++. , 2010, , .		0
341	Biotin-Streptavidin Sensitive BioFETs and Their Properties. Communications in Computer and Information Science, 2010, , 85-95.	0.5	4
342	Electromigration anisotropy and mechanical stress in modern copper interconnect. , 2010, , .		2

#	Article	IF	Citations
343	Modeling demands for nanoscale devices. , 2010, , .		1
344	Three-dimensional simulation of focused ion beam processing using the level set method. , 2010, , .		2
345	Stochastic modeling hysteresis and resistive switching in bipolar oxide-based memory. , 2010, , .		3
346	Stochastic modeling of the resistive switching mechanism in oxide-based memory. , 2010, , .		1
347	Strained MOSFETs on ordered SiGe dots. , 2010, , .		1
348	A Monte Carlo simulation of reproducible hysteresis in RRAM. , 2010, , .		0
349	Impact of parameter variability on electromigration lifetime distribution. , 2010, , .		0
350	Dynamischer Speicher. , 2010, , 303-314.		0
351	Grafische Darstellungsmittel. , 2010, , 9-17.		0
352	Zeichenketten. , 2010, , 199-214.		0
353	Felder. , 2010, , 163-178.		0
354	Eingabe â€" Ausgabe. , 2010, , 67-76.		0
355	Rekursive Funktionen. , 2010, , 257-264.		0
356	Particle Model of the Scattering-Induced Wigner Function Correction. Lecture Notes in Computer Science, 2010, , 411-418.	1.3	1
357	Numerik. , 2010, , 315-322.		0
358	Fehlerbehandlung. , 2010, , 323-334.		0
359	Transport in Nanostructures: A Comparative Analysis Using Monte Carlo Simulation, the Spherical Harmonic Method, and Higher Moments Models. Lecture Notes in Computer Science, 2010, , 443-450.	1.3	0
360	Die Entwicklungsumgebung. , 2010, , 19-32.		0

#	Article	IF	Citations
361	Iterationen. , 2010, , 113-133.		0
362	Stress-Induced Anisotropy of Electromigration in Copper Interconnects. , 2009, , .		2
363	Subband parameters in strained (110) silicon films from the Hensel-Hasegawa-Nakayama model of the conduction band. , 2009, , .		0
364	The effect of microstructure on electromigration induced voids. , 2009, , .		1
365	Performance evaluation of graphene nanoribbon infrared photodetectors. , 2009, , .		2
366	The effect of microstructure on the electromigration lifetime distribution. , 2009, , .		0
367	Modeling Techniques for Strained CMOS Technology. ECS Transactions, 2009, 25, 3-18.	0.5	0
368	The Effect of Microstructure on Electromigration-Induced Failure Development. ECS Transactions, 2009, 23, 345-352.	0.5	2
369	Three-Dimensional Plasma Etching Simulation using Advanced Ray Tracing and Level Set Techniques. ECS Transactions, 2009, 23, 61-68.	0.5	1
370	Impact of Confinement of Semiconductor and Band Engineering on Future Device Performance. ECS Transactions, 2009, 19, 15-26.	0.5	2
371	Impact of Confinement and Stress on the Subband Parameters in Ultra-Thin Silicon Films. ECS Transactions, 2009, 23, 389-396.	0.5	0
372	Cavity Model for the Slot Radiation of an Enclosure Excited by Printed Circuit Board Traces With Different Loads. IEEE Transactions on Electromagnetic Compatibility, 2009, 51, 18-24.	2.2	5
373	A fast level set framework for large three-dimensional topography simulations. Computer Physics Communications, 2009, 180, 1242-1250.	7.5	39
374	Modeling of modern MOSFETs with strain. Journal of Computational Electronics, 2009, 8, 192-208.	2.5	7
375	Classical Approximation of the Scattering Induced Wigner Correction Equation. , 2009, , .		0
376	Electromigration failure development in modern dual-damascene interconnects. , 2009, , .		0
377	A Comprehensive TCAD Approach for Assessing Electromigration Reliability of Modern Interconnects. IEEE Transactions on Device and Materials Reliability, 2009, 9, 9-19.	2.0	47
378	Thickness Dependence of the Effective Masses in a Strained Thin Silicon Film. , 2009, , .		3

#	Article	IF	Citations
379	The Effect of Copper Grain Size Statistics on the Electromigration Lifetime Distribution. , 2009, , .		5
380	Synergies in scientific computing by combining multi-paradigmatic languages for high-performance applications. International Journal of Parallel, Emergent and Distributed Systems, 2009, 24, 539-549.	1.0	0
381	Modeling of Low Concentrated Buffer DNA Detection with Suspend Gate Field-Effect Transistors (SGFET). , 2009, , .		3
382	Copper Microstructure Impact on Evolution of Electromigration Induced Voids. , 2009, , .		2
383	The Linear Combination of Bulk Bands-Method for Electron and Hole Subband Calculations in Strained Silicon Films and Surface Layers. , 2009, , .		2
384	Valley splitting in thin silicon films from a two-band k·p model. , 2009, , .		0
385	A Fast Void Detection Algorithm for Three-Dimensional Deposition Simulation. , 2009, , .		0
386	GUIDE: Parallel library-centric application design by a generic scientific simulation environment. International Journal of Parallel, Emergent and Distributed Systems, 2009, 24, 505-520.	1.0	1
387	Scaling of advanced floating body Z-RAM storage cells: A modeling approach. , 2009, , .		0
388	Dependence of Injection Velocity and Capacitance of Si Nanowires on Diameter, Orientation, and Gate Bias: An Atomistic Tight-Binding Study. , 2009, , .		2
389	Preface to the Special Section on Electromigration Published in March 2009. IEEE Transactions on Device and Materials Reliability, 2009, 9, 103-103.	2.0	0
390	Mobility Modeling in Advanced MOSFETs with Ultra-Thin Silicon Body under Stress. Journal of Integrated Circuits and Systems, 2009, 4, 55-60.	0.4	2
391	Analysis of Electromigration in Dual-Damascene Interconnect Structures. Journal of Integrated Circuits and Systems, 2009, 4, 67-72.	0.4	0
392	Electron subband dispersions in ultra-thin silicon films fromÂaÂtwo-band kâ‹…p theory. Journal of Computational Electronics, 2008, 7, 164-167.	2.5	2
393	Effect of strains on anisotropic material transport in copper interconnect structures under electromigration stress. Journal of Computational Electronics, 2008, 7, 128-131.	2.5	3
394	Three-dimensional simulation of sacrificial etching. Microsystem Technologies, 2008, 14, 665-671.	2.0	0
395	Numerical study of quantum transport in carbon nanotube transistors. Mathematics and Computers in Simulation, 2008, 79, 1051-1059.	4.4	19
396	The effect of uniaxial stress on band structure and electron mobility of silicon. Mathematics and Computers in Simulation, 2008, 79, 1071-1077.	4.4	9

#	Article	IF	Citations
397	Two-band kÂ·p model for the conduction band in silicon: Impact of strain and confinement on band structure and mobility. Solid-State Electronics, 2008, 52, 1563-1568.	1.4	30
398	Electron subband structure and controlled valley splitting in silicon thin-body SOI FETs: Two-band kÂ·p theory and beyond. Solid-State Electronics, 2008, 52, 1861-1866.	1.4	14
399	Current transport models for nanoscale semiconductor devices. Materials Science and Engineering Reports, 2008, 58, 228-270.	31.8	33
400	A robust parallel delaunay mesh generation approach suitable for three-dimensional TCAD. , 2008, , .		1
401	<title>Comparative analysis of pseudo-potential and tight-binding band structure calculations with an analytical two-band kâ€¢p model: conduction band of silicon</title>. Proceedings of SPIE, 2008, , .	0.8	0
402	Ultra-scaled Z-RAM cell. , 2008, , .		30
403	Stress-induced valley splitting in silicon thin films. , 2008, , .		0
404	Current transport in carbon nanotube transistors. , 2008, , .		0
405	Coupling of non-equilibrium Green’s function and Wigner function approaches. , 2008, , .		5
406	Simulation of field-effect Biosensors (BioFETs). , 2008, , .		4
407	Reduction of the dark-current in carbon nanotube photo-detectors. , 2008, , .		1
408	Radiated emission from the slot of a slim cubical enclosure with multiple sources inside. , 2008, , .		0
409	Analysis of microstructure impact on electromigration. , 2008, , .		2
410	Analysis of electromigration in redundant vias. , 2008, , .		3
411	Modeling current transport in carbon nanotube transistors. , 2008, , .		1
412	Mobility enhancement in thin silicon films: Strain and thickness dependences of the effective masses and non-parabolicity parameter. , 2008, , .		3
413	Three-dimensional topography simulation using advanced level set and ray tracing methods. , 2008, , .		7
414	Comprehensive modeling of electromigration induced interconnect degradation mechanisms. , 2008, , .		0

#	Article	IF	Citations
415	Mobility Modeling in Advanced MOSFETs with Ultra-Thin Silicon Body under Stress. ECS Transactions, 2008, 14, 159-168.	0.5	0
416	Current transport in carbon nanotube transistors. , 2008, , .		0
417	Calculation of the radiation from the slot of a slim enclosure with a cavity resonator model. , 2008, , .		0
418	Analysis of Electromigration in Dual-Damascene Interconnect Structures. ECS Transactions, 2008, 14, 337-348.	0.5	0
419	The effect of inelastic phonon scattering on carbon nanotube-based transistor performance. Journal of Physics: Conference Series, 2008, 109, 012029.	0.4	2
420	Domain separation with port interfaces for calculation of emissions from enclosure slots. , 2008, , .		4
421	TCAD solutions for submicron copper interconnect. , 2008, , .		0
422	Three-dimensional on-chip inductance and resistance extraction. , 2007, , .		0
423	Strain-induced anisotropy of electromigration in copper interconnect. , 2007, , .		1
424	Electron Mobility Model for $langle hbox{110} angle$ Stressed Silicon Including Strain-Dependent Mass. IEEE Nanotechnology Magazine, 2007, 6, 97-100.	2.0	47
425	The role of inelastic electron-phonon interaction on the on-current and gate delay time of CNT FETs. , 2007, , .		1
426	Modeling of Advanced Semiconductor Devices. ECS Transactions, 2007, 4, 207-216.	0.5	0
427	Electromigration Modeling for Interconnect Structures in Microelectronics. ECS Transactions, 2007, 9, 295-304.	0.5	0
428	Carbon Nanotube Based Transistors: A Computational Study. AIP Conference Proceedings, 2007, , .	0.4	1
429	Three-dimensional simulation of sacrificial etching. , 2007, , .		0
430	Planarization of Silicon Dioxide and Silicon Nitride Passivation Layers. Journal of Physics: Conference Series, 2007, 61, 1051-1055.	0.4	2
431	Alternating-Direction Implicit Formulation of the Finite-Element Time-Domain Method. IEEE Transactions on Microwave Theory and Techniques, 2007, 55, 1322-1331.	4.6	50
432	Predictive Simulation of AlGaN/GaN HEMTs. , 2007, , .		11

#	Article	IF	Citations
433	Hydrodynamic Modeling of AlGaN/GaN HEMTs. , 2007, , 273-276.		5
434	Optimization of the Perfectly Matched Layer for the Finite-Element Time-Domain Method. IEEE Microwave and Wireless Components Letters, 2007, 17, 10-12.	3.2	20
435	Investigation of Intrinsic Stress Effects in Cantilever Structures. , 2007, , .		0
436	Effects of shear strain on the conduction band in silicon: An efficient two-band k·p theory. , 2007, , .		14
437	Two-Band k·p model for the conduction band in silicon: impact of Strain and confinement on band structure and mobility. , 2007, , .		0
438	Self-Consistent Wigner Monte Carlo Simulations of Current in Emerging Nanodevices: Role of Tunneling and Scattering. AIP Conference Proceedings, 2007, , .	0.4	1
439	Low-Field Mobility in Strained Silicon Inversion Layers and UTB MOSFETs for Different Substrate Orientations. AIP Conference Proceedings, 2007, , .	0.4	0
440	Volume inversion mobility in SOI MOSFETs for different thin body orientations. Solid-State Electronics, 2007, 51, 299-305.	1.4	16
441	A study of ion implantation into crystalline germanium. Solid-State Electronics, 2007, 51, 982-988.	1.4	10
442	Comparison of deposition models for a TEOS LPCVD process. Microelectronics Reliability, 2007, 47, 623-625.	1.7	0
443	VSP â€“ A gate stack analyzer. Microelectronics Reliability, 2007, 47, 704-708.	1.7	0
444	High performance, uniaxially-strained, silicon and germanium, double-gate p-MOSFETs. Microelectronic Engineering, 2007, 84, 2063-2066.	2.4	24
445	Modeling current transport in ultra-scaled field-effect transistors. Microelectronics Reliability, 2007, 47, 11-19.	1.7	2
446	The Effect of General Strain on the Band Structure and Electron Mobility of Silicon. IEEE Transactions on Electron Devices, 2007, 54, 2183-2190.	3.0	171
447	Foreword Special Issue on Simulation and Modeling of Nanoelectronics Devices. IEEE Transactions on Electron Devices, 2007, 54, 2072-2078.	3.0	3
448	Scattering and space-charge effects in Wigner Monte Carlo simulations of single and double barrier devices. Journal of Computational Electronics, 2007, 5, 447-450.	2.5	8
449	Physical modeling of electron mobility enhancement for arbitrarily strained silicon. Journal of Computational Electronics, 2007, 6, 55-58.	2.5	23
450	A multi-purpose SchrÃ¶dinger-Poisson Solver for TCAD applications. Journal of Computational Electronics, 2007, 6, 179-182.	2.5	38

#	Article	IF	Citations
451	Tunneling CNTFETs. Journal of Computational Electronics, 2007, 6, 243-246.	2.5	21
452	Dissipative transport in CNTFETs. Journal of Computational Electronics, 2007, 6, 321-324.	2.5	8
453	Geometry optimization for carbon nanotube transistors. Solid-State Electronics, 2007, 51, 1565-1571.	1.4	2
454	Efficient Coupling of Monte Carlo and Level Set Methods for Topography Simulation. , 2007, , 417-420.		3
455	Finite difference solutions of the nonlinear SchrÃ¶dinger equation and their conservation of physical quantities. Communications in Mathematical Sciences, 2007, 5, 779-788.	1.0	6
456	A Computational Framework for Topological Operations. Lecture Notes in Computer Science, 2007, , 781-790.	1.3	0
457	Numerical Simulation Of Biochemical Behaviour Of Biosensors With Perforated Membrane. , 2007, , .		0
458	Three-Dimensional Sacrificial Etching. , 2007, , 433-436.		0
459	On the Magnetic Field Extraction for On-Chip Inductance Calculation. , 2007, , 349-352.		0
460	Intrinsic Stress Build-Up During Volmer-Weber Crystal Growth. , 2007, , 37-40.		0
461	Optimal Design for Carbon Nanotube Transistors. , 2006, , .		1
462	Three-Dimensional Transient Interconnect Analysis With Regard to Mechanical Stress. , 2006, , .		1
463	Simulation of Texture Development Caused Stress Build-Up in Electroplated Copper Lines. , 2006, , .		1
464	Electron Inversion Layer Mobility Enhancement by Uniaxial Stress on (001) and (110) Oriented MOSFETs. , 2006, , .		6
465	A Tensorial High-Field Electron Mobility Model for Strained Silicon. , 2006, , .		0
466	Orientation Dependence of the Low Field Mobility in Double-and Single-gate SOI FETs. Solid-State Device Research Conference, 2008 ESSDERC 2008 38th European, 2006, , .	0.0	3
467	Planarization of Passivation Layers during Manufacturing Processes of Image Sensors. , 2006, , .		0
468	Current Flow in Upcoming Microelectronic Devices. , 2006, , .		0

#	Article	IF	Citations
469	The Effect of Electron-Phonon Interaction on the Static and Dynamic Response of CNTFETs. , 2006, , .		0
470	Analytical Modeling of Electron Mobility in Strained Germanium. , 2006, , .		1
471	Monte Carlo Simulation of Boron Implantation into (100) Germanium. , 2006, , .		0
472	Strain Effects on Quasi-Bound State Tunneling in Advanced SOI CMOS Technologies. , 2006, , .		0
473	Anisotropic Mesh Refinement for the Simulation of Three-Dimensional Semiconductor Manufacturing Processes. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2006, 25, 2129-2139.	2.7	7
474	Generation of Unstructured Meshes for Process and Device Simulation by Means of Partial Differential Equations. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2006, 25, 2118-2128.	2.7	4
475	Rigorous modeling of carbon nanotube transistors. Journal of Physics: Conference Series, 2006, 38, 29-32.	0.4	17
476	A fast and stable Poisson-SchrÃ¶dinger solver for the analysis of carbon nanotube transistors. Journal of Computational Electronics, 2006, 5, 155-159.	2.5	15
477	High-Field Electron Mobility Model for Strained-Silicon Devices. IEEE Transactions on Electron Devices, 2006, 53, 3054-3062.	3.0	6
478	Microstructure and Stress Aspects of Electromigration Modeling. AIP Conference Proceedings, 2006, , .	0.4	18
479	Analysis of Hole Transport in Arbitrarily Strained Germanium. ECS Transactions, 2006, 3, 443-450.	0.5	1
480	Low-Field Electron Mobility in Stressed UTB SOI MOSFETs for Different Substrate Orientations. ECS Transactions, 2006, 3, 45-54.	0.5	1
481	Efficient Calculation of Lifetime Based Direct Tunneling Through Stacked Dielectrics. ECS Transactions, 2006, 1, 693-703.	0.5	0
482	Device Simulation Demands of Upcoming Microelectronics Devices. International Journal of High Speed Electronics and Systems, 2006, 16, 115-136.	0.7	3
483	Numerical Analysis of Gate Stacks. ECS Transactions, 2006, 3, 299-308.	0.5	1
484	A Comprehensive Study of Carbon Nanotube Based Transistors: The Effects of Geometrical, Interface Barrier, and Scattering Parameters. , 2006, , .		1
485	Impact of Random Bit Values on NBTI Lifetime of an SRAM Cell. , 2006, , .		6
486	Theoretical Investigation Of Performance In Uniaxially- and Biaxially-Strained Si, SiGe and Ge Double-Gate p-MOSFETs. , 2006, , .		11

#	Article	IF	Citations
487	Optimizing the Performance of Carbon Nanotube Transistors. , 2006, , .		0
488	A Finite Element Time-Domain Algorithm Based on the Alternating-Direction Implicit Method. , 2006, , .		2
489	A Study of Boron Implantation into High Ge Content SiGe Alloys. ECS Transactions, 2006, 3, 667-676.	0.5	2
490	Strain engineering for CMOS devices. , 2006, , .		8
491	Three-Dimensional Simulation of Intrinsic Stress Build-Up in Thin Films. , 2006, , .		1
492	Quantum Correction to the Semiclassical Electron-Phonon Scattering Operator. Lecture Notes in Computer Science, 2006, , 594-601.	1.3	0
493	<title>Transient electro-thermal investigations of interconnect structures exposed to mechanical stress</title>. , 2005, , .		0
494	Optimization of Schottky barrier carbon nanotube field effect transistors. Microelectronic Engineering, 2005, 81, 428-433.	2.4	12
495	Quantum transport in ultra-scaled double-gate MOSFETs: A Wigner function-based Monte Carlo approach. Solid-State Electronics, 2005, 49, 1510-1515.	1.4	31
496	Electron Mobility Model for Strained-Si Devices. IEEE Transactions on Electron Devices, 2005, 52, 527-533.	3.0	74
497	An advanced equation assembly module. Engineering With Computers, 2005, 21, 151-163.	6.1	0
498	Numerical Analysis of Coaxial Double Gate Schottky Barrier Carbon Nanotube Field Effect Transistors. Journal of Computational Electronics, 2005, 4, 75-78.	2.5	17
499	Numerical Analysis of SiC Merged PiN Schottky Diodes. Materials Science Forum, 2005, 483-485, 949-952.	0.3	3
500	Modeling of Lattice Site-Dependent Incomplete Ionization in Î±-SiC Devices. Materials Science Forum, 2005, 483-485, 845-848.	0.3	16
501	Numerical Simulation and Optimization for 900V 4H-SiC DiMOSFET Fabrication. Materials Science Forum, 2005, 483-485, 793-796.	0.3	1
502	Shot Noise Suppression and Enhancement at 2D Hopping and in Single-Electron Arrays. AIP Conference Proceedings, 2005, , .	0.4	0
503	Separated carrier injection control in carbon nanotube field-effect transistors. Journal of Applied Physics, 2005, 97, 106103.	2.5	21
504	Three-Dimensional Simulation of Stress Dependent Thermal Oxidation. , 2005, , .		1

#	Article	IF	Citations
505	A method for generating structurally aligned grids for semiconductor device simulation. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2005, 24, 1485-1491.	2.7	1
506	Modeling of Tunneling Currents for Highly Degraded CMOS Devices. , 2005, , .		3
507	Applications of Three-Dimensional Topography Simulation in the Design of Interconnect Lines. , 2005, , .		1
508	Monte Carlo Simulation of Ion Implantation for Doping of Strained Silicon MOSFETs. , 2005, , .		0
509	Dynamic Mesh Adaptation for Three-Dimensional Electromigration Simulation. , 2005, , .		1
510	Efficient Calculation of Quasi-Bound State Tunneling in CMOS Devices. , 2005, , .		4
511	Optimization of Single-Gate Carbon-Nanotube Field-Effect Transistors. IEEE Nanotechnology Magazine, 2005, 4, 533-538.	2.0	9
512	Nonparabolic macroscopic transport models for device simulation based on bulk Monte Carlo data. Journal of Applied Physics, 2005, 97, 093710.	2.5	17
513	Computational Intelligence, Bioinformatics and Computational Biology: A Brief Overview of Methods, Problems and Perspectives. Journal of Computational and Theoretical Nanoscience, 2005, 2, 473-491.	0.4	5
514	Unified particle approach to Wigner-Boltzmann transport in small semiconductor devices. Physical Review B, 2004, 70, .	3.2	146
515	Solution of the Space-dependent Wigner Equation Using a Particle Model. Monte Carlo Methods and Applications, 2004, 10, .	0.8	2
516	Operator-Split Method for Variance Reduction in Stochastic Solutions of the Wigner Equation. Monte Carlo Methods and Applications, 2004, 10, .	0.8	2
517	High-voltage lateral trench gate SOI-LDMOSFETs. Microelectronics Journal, 2004, 35, 299-304.	2.0	7
518	Feature-Scale Process Simulation and Accurate Capacitance Extraction for the Backend of a 100-nm Aluminum/TEOS Process. IEEE Transactions on Electron Devices, 2004, 51, 1129-1134.	3.0	8
519	Analysis of Split-Drain MAGFETs. IEEE Transactions on Electron Devices, 2004, 51, 2237-2245.	3.0	33
520	Statistical simulation of gate dielectric wearout, leakage, and breakdown. Microelectronics Reliability, 2004, 44, 1879-1884.	1.7	0
521	Evolution of Current Transport Models for Engineering Applications. Journal of Computational Electronics, 2004, 3, 149-155.	2.5	4
522	A Non-Parabolic Six Moments Model for the Simulation of Sub-100 nm Semiconductor Devices. Journal of Computational Electronics, 2004, 3, 183-187.	2.5	6

#	Article	IF	Citations
523	Rigorous modeling of high-speed semiconductor devices. Microelectronics Reliability, 2004, 44, 889-897.	1.7	0
524	Enhancement of breakdown voltage for Ni-SiC Schottky diodes utilizing field plate edge termination. Microelectronics Reliability, 2004, 44, 1473-1478.	1.7	9
525	New SOI lateral power devices with trench oxide. Solid-State Electronics, 2004, 48, 1007-1015.	1.4	10
526	On the simulation of the formation and dissolution of silicon self-interstitial clusters and the corresponding inverse modeling problem. Microelectronics Journal, 2004, 35, 167-171.	2.0	1
527	Extraction of material parameters based on inverse modeling of three-dimensional interconnect fusing structures. Microelectronics Journal, 2004, 35, 805-810.	2.0	8
528	An algorithm for smoothing three-dimensional Monte Carlo ion implantation simulation results. Mathematics and Computers in Simulation, 2004, 66, 219-230.	4.4	3
529	Direct extraction feature for scattering parameters of SiGe-HBTs. Applied Surface Science, 2004, 224, 365-369.	6.1	0
530	Rigorous modeling approach to numerical simulation of SiGe HBTs. Applied Surface Science, 2004, 224, 361-364.	6.1	7
531	The state-of-the-art in simulation for optimization of SiGe-HBTs. Applied Surface Science, 2004, 224, 312-319.	6.1	3
532	Interconnects and Propagation of High Frequency Signals. Springer Series in Materials Science, 2004, , 357-385.	0.6	1
533	Modeling of Tunneling Current and Gate Dielectric Reliability for Nonvolatile Memory Devices. IEEE Transactions on Device and Materials Reliability, 2004, 4, 306-319.	2.0	85
534	Semiclassical Approximation of Electron-Phonon Scattering Beyond Fermi's Golden Rule. SIAM Journal on Applied Mathematics, 2004, 64, 1933-1953.	1.8	13
535	A Study on Global and Local Optimization Techniques for TCAD Analysis Tasks. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2004, 23, 814-822.	2.7	24
536	A quasi-particle model of the electronâ€“Wigner potential interaction. Semiconductor Science and Technology, 2004, 19, S226-S228.	2.0	3
537	A Stable Backward Monte Carlo Method for the Solution of the Boltzmann Equation. Lecture Notes in Computer Science, 2004, , 170-177.	1.3	3
538	A Weight Decomposition Approach to the Sign Problem in Wigner Transport Simulations. Lecture Notes in Computer Science, 2004, , 178-184.	1.3	3
539	A Zero Field Monte Carlo Algorithm Accounting for the Pauli Exclusion Principle. Lecture Notes in Computer Science, 2004, , 185-193.	1.3	3
540	Advanced Transport Models for Sub-Micrometer Devices. , 2004, , 1-8.		21

#	Article	IF	Citations
541	On the Validity of the Relaxation Time Approximation for Macroscopic Transport Models. , 2004, , 109-112.		1
542	Monte Carlo Simulation of Ion Implantation in Silicon-Germanium Alloys. , 2004, , 169-172.		1
543	On the Calculation of Quasi-Bound States and Their Impact on Direct Tunneling in CMOS Devices. , 2004, , 25-28.		6
544	Full Three-Dimensional Analysis of a Non-Volatile Memory Cell. , 2004, , 129-132.		2
545	Accurate Modeling of Lattice Site-Dependent Ionization Level of Impurities in Î±-SiC Devices. , 2004, , 295-298.		0
546	Anisotropic Laplace Refinement for Three-Dimensional Oxidation Simulation. , 2004, , 165-168.		0
547	Three-Dimensional Analysis of Schottky Barrier Carbon Nanotube Field Effect Transistors. , 2004, , 149-152.		1
548	A Monte Carlo Method Seamlessly Linking Quantum and Classical Transport Calculations. Journal of Computational Electronics, 2003, 2, 147-151.	2.5	24
549	Analysis of Gate Dielectric Stacks Using the Transmitting Boundary Method. Journal of Computational Electronics, 2003, 2, 219-223.	2.5	5
550	Stochastic interpretation of the Wigner transport in nanostructures. Microelectronics Journal, 2003, 34, 443-445.	2.0	5
551	Improving SiC lateral DMOSFET reliability under high field stress. Microelectronics Reliability, 2003, 43, 1889-1894.	1.7	2
552	A numerical study of partial-SOI LDMOSFETs. Solid-State Electronics, 2003, 47, 275-281.	1.4	36
553	Monte Carlo algorithms for stationary device simulations. Mathematics and Computers in Simulation, 2003, 62, 453-461.	4.4	4
554	Efficient inductance calculation in interconnect structures by applying the Monte Carlo method. Microelectronics Journal, 2003, 34, 815-821.	2.0	7
555	Modeling of retention time degradation due to inelastic trap-assisted tunneling in EEPROM devices. Microelectronics Reliability, 2003, 43, 1495-1500.	1.7	9
556	An event bias technique for Monte Carlo device simulation. Mathematics and Computers in Simulation, 2003, 62, 367-375.	4.4	2
557	Substrate orientation-dependence of electron mobility in strained SiGe layers. , 2003, , .		3
558	Prolog to: A review of hydrodynamic and energy-transport models for semiconductor device simulation. Proceedings of the IEEE, 2003, 91, 249-250.	21.3	2

#	Article	IF	Citations
559	A review of hydrodynamic and energy-transport models for semiconductor device simulation. Proceedings of the IEEE, 2003, 91, 251-274.	21.3	210
560	Simulation of arsenic in situ doping with polysilicon cvd and its application to high aspect ratio trenches. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2003, 22, 285-292.	2.7	1
561	On smoothing three-dimensional monte carlo ion implantation simulation results. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2003, 22, 879-883.	2.7	2
562	Rigorous integration of semiconductor process and device simulators. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2003, 22, 1204-1214.	2.7	5
563	Comparison of numerical quantum device models. , 2003, , .		2
564	A multistage smoothing algorithm for coupling cellular and polygonal datastructures. , 2003, , .		0
565	Reformulation of macroscopic transport models based on the moments of the scattering integral [semiconductor device modeling applications]. , 2003, , .		3
566	Numerical analysis of compound semiconductor RF devices. , 2003, , .		2
567	Mobility modeling in presence of quantum effects. , 2003, , .		2
568	Error estimated driven anisotropic mesh refinement for three-dimensional diffusion simulation. , 2003, , .		3
569	The stationary Monte Carlo method for device simulation. I. Theory. Journal of Applied Physics, 2003, 93, 3553-3563.	2.5	22
570	Monte Carlo method for modeling of small signal response including the Pauli exclusion principle. Journal of Applied Physics, 2003, 94, 5791-5799.	2.5	14
571	The stationary Monte Carlo method for device simulation. II. Event biasing and variance estimation. Journal of Applied Physics, 2003, 93, 3564-3571.	2.5	8
572	HOT CARRIER EFFECTS WITHIN MACROSCOPIC TRANSPORT MODELS. International Journal of High Speed Electronics and Systems, 2003, 13, 873-901.	0.7	10
573	Energy transport gate current model accounting for non-Maxwellian energy distribution. Electronics Letters, 2003, 39, 691.	1.0	3
574	Simulation of void formation in interconnect lines. , 2003, 5117, 445.		3
575	HOT CARRIER EFFECTS WITHIN MACROSCOPIC TRANSPORT MODELS. Selected Topics in Electornics and Systems, 2003, , 173-201.	0.2	1
576	Three-dimensional device optimization by Green's functions. EPJ Applied Physics, 2003, 21, 103-106.	0.7	0

#	Article	IF	Citations
577	Grafische Darstellungsmittel. , 2003, , 9-17.		0
578	Numerik. , 2003, , 311-318.		0
579	Datenstrukturen. , 2003, , 261-297.		0
580	Ein exemplarisches Software-Projekt. , 2003, , 331-352.		0
581	Abgeleitete Datentypen. , 2003, , 211-237.		0
582	Dateien. , 2003, , 239-252.		0
583	Die Entwicklungsumgebung. , 2003, , 19-32.		0
584	Dynamischer Speicher. , 2003, , 299-310.		0
585	Eingabe â€" Ausgabe. , 2003, , 67-76.		0
586	Zeichenketten. , 2003, , 195-210.		0
587	Zeiger. , 2003, , 175-193.		0
588	Erste Schritte. , 2003, , 33-40.		0
589	Iterationen. , 2003, , 109-129.		0
590	Accurate impact ionization model which accounts for hot and cold carrier populations. Applied Physics Letters, 2002, 80, 613-615.	3.3	67
591	Simulation of hot-electron oxide tunneling current based on a non-Maxwellian electron energy distribution function. Journal of Applied Physics, 2002, 92, 6019-6027.	2.5	30
592	Transient model for terminal current noise. Applied Physics Letters, 2002, 80, 607-609.	3.3	1
593	Characterization of the hot electron distribution function using six moments. Journal of Applied Physics, 2002, 91, 3869-3879.	2.5	85
594	Three-Dimensional Analysis of a MAGFET at 300 K and 77 K. , 2002, , .		8

#	Article	IF	Citations
595	On Increasing the Accuracy of Simulations of Deposition and Etching Processes Using Radiosity and the Level Set Method. , 2002, , .		6
596	Effects of Stress-Induced Bandgap Narrowing on Reverse-Bias Junction Behavior. , 2002, , .		1
597	Technology CAD: Device simulation and characterization. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2002, 20, 407.	1.6	7
598	Lateral Trench Gate Super-Junction SOI-LDMOSFETs with Low On-Resistance. , 2002, , .		5
599	Revision of the standard hydrodynamic transport model for SOI simulation. IEEE Transactions on Electron Devices, 2002, 49, 1814-1820.	3.0	32
600	Femtosecond relaxation of hot electrons by phonon emission in presence of electric field. Physica B: Condensed Matter, 2002, 314, 301-304.	2.7	20
601	A Wigner equation with quantum electronâ€“phonon interaction. Microelectronic Engineering, 2002, 63, 199-203.	2.4	11
602	Design optimization of multi-barrier tunneling devices using the transfer-matrix method. Solid-State Electronics, 2002, 46, 1545-1551.	1.4	5
603	Simulative prediction of the resistance change due to electromigration induced void evolution. Microelectronics Reliability, 2002, 42, 1457-1460.	1.7	5
604	An extensible TCAD optimization framework combining gradient based and genetic optimizers. Microelectronics Journal, 2002, 33, 61-68.	2.0	11
605	An Improved Energy Transport Model Suitable for Simulation of Partially Depleted SOI MOSFETs. Journal of Computational Electronics, 2002, 1, 371-374.	2.5	1
606	A Space Dependent Wigner Equation Including Phonon Interaction. Journal of Computational Electronics, 2002, 1, 27-31.	2.5	5
607	Industrial application of heterostructure device simulation. IEEE Journal of Solid-State Circuits, 2001, 36, 1365-1370.	5.4	15
608	A Backward Monte Carlo Method for Simulation of the Electron Quantum Kinetics in Semiconductors. VLSI Design, 2001, 13, 405-411.	0.5	7
609	Effectiveness of silicon nitride passivation in III-V based heterojunction bipolar transistors. Radiation Effects and Defects in Solids, 2001, 156, 261-265.	1.2	0
610	Simulation of ferroelectric thin films. Radiation Effects and Defects in Solids, 2001, 156, 157-161.	1.2	0
611	Micro materials modeling in MINIMOS-NT. Microsystem Technologies, 2001, 7, 183-187.	2.0	13
612	Influence of generation/recombination effects in simulations of partially depleted SOI MOSFETs. Solid-State Electronics, 2001, 45, 621-627.	1.4	12

#	Article	IF	Citations
613	A finite element simulator for three-dimensional analysis of interconnect structures. Microelectronics Journal, 2001, 32, 163-171.	2.0	29
614	A methodology for deep sub-0.25 Î¼m CMOS technology prediction. IEEE Transactions on Electron Devices, 2001, 48, 2331-2336.	3.0	5
615	Nonlinear electronic transport and device performance of HEMTs. IEEE Transactions on Electron Devices, 2001, 48, 210-217.	3.0	12
616	Two-dimensional simulation of ferroelectric memory cells. IEEE Transactions on Electron Devices, 2001, 48, 316-322.	3.0	3
617	Simulation of power heterojunction bipolar transistors on gallium arsenide. IEEE Transactions on Electron Devices, 2001, 48, 1264-1269.	3.0	32
618	Fully coupled electrothermal mixed-mode device simulation of SiGe HBT circuits. IEEE Transactions on Electron Devices, 2001, 48, 1421-1427.	3.0	15
619	Accurate Simulation of Substrate Currents by Accounting for the Hot Electron Tail Population. , 2001, , .		2
620	Optimization of Industrial High Voltage Structures by Three-Dimensional Diffusion Simulation. , 2001, , .		0
621	Investigation of spurious velocity overshoot using Monte Carlo data. Applied Physics Letters, 2001, 79, 1900-1902.	3.3	12
622	Influence of the distribution function shape and the band structure on impact ionization modeling. Journal of Applied Physics, 2001, 90, 6165-6171.	2.5	21
623	Using six moments of Boltzmannâ€™s transport equation for device simulation. Journal of Applied Physics, 2001, 90, 2389-2396.	2.5	41
624	Monte Carlo Analysis of the Small-Signal Response of Charge Carriers. Lecture Notes in Computer Science, 2001, , 175-182.	1.3	3
625	An Impact Ionization Model Including Non-Maxwellian And Non-Parabolicity Effects. , 2001, , 46-49.		2
626	Variance and Covariance Estimation in Stationary Monte Carlo Device Simulation. , 2001, , 140-143.		1
627	Analysis of Ultra Short MOSFETs with High-k Gate Dielectrics. , 2001, , 412-415.		0
628	A Methodology for Deep Sub-Quartermicron CMOS Technology Characterization. , 2001, , 428-431.		1
629	Advanced Hybrid Cellular Based Approach for Three-Dimensional Etching and Deposition Simulation. , 2001, , 424-427.		4
630	Monitoring Arsenic In-Situ Doping with Advanced Models for Poly-Silicon CVD. , 2001, , 124-127.		3

#	Article	IF	Citations
631	A Review of Modeling Issues for RF Heterostructure Device Simulation. , 2001, , 432-435.		0
632	Investigation of Spurious Velocity Overshoot Using Monte Carlo Data. , 2001, , 54-57.		5
633	A Comparative Study Of Two Numerical Techniques For Inductance Calculation In Interconnect Structures. , 2001, , 254-257.		0
634	Greenâ€™s Function Approach for Three-Dimensional Diffusion Simulation of Industrial High Voltage Applications. , 2001, , 408-411.		0
635	Extensible TCAD optimization framework combining gradient-based and genetic optimizers. , 2000, , .		4
636	Hydrodynamic modeling of avalanche breakdown in a gate overvoltage protection structure. Solid-State Electronics, 2000, 44, 1135-1143.	1.4	4
637	Mixed-mode device simulation. Microelectronics Journal, 2000, 31, 873-881.	2.0	42
638	A temperature dependent model for the saturation velocity in semiconductor materials. Materials Science in Semiconductor Processing, 2000, 3, 149-155.	4.0	104
639	Three-dimensional resist development simulation â€" Benchmarks and integration with lithography. Microelectronic Engineering, 2000, 53, 449-452.	2.4	2
640	Development of global calibration for accurate GaAs-PHEMT simulation. IEEE Transactions on Electron Devices, 2000, 47, 1957-1964.	3.0	9
641	Theory of the Monte Carlo method for semiconductor device simulation. IEEE Transactions on Electron Devices, 2000, 47, 1898-1908.	3.0	48
642	A Global Self-Heating Model for Device Simulation. , 2000, , .		1
643	Incorporation of Equipment Simulation into Integrated Feature Scale Profile Evolution. , 2000, , .		0
644	Simulation of Polysilicon Emitter Bipolar Transistors. , 2000, , .		3
645	A Monte Carlo method for small signal analysis of the Boltzmann equation. Journal of Applied Physics, 2000, 87, 4308-4314.	2.5	9
646	Analysis of HBT behavior after strong electrothermal stress. , 2000, , .		9
647	Simulation of gallium-arsenide based high electron mobility transistors. , 2000, , .		6
648	Parallelization of a Monte Carlo ion implantation simulator. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2000, 19, 560-567.	2.7	6

#	Article	IF	Citations
649	On the interplay between meshing and discretization in three-dimensional diffusion simulation. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2000, 19, 1233-1240.	2.7	12
650	Response to â€œComment on â€˜Influence of the doping element on the electron mobility in n-siliconâ€™â€Šâ€•[J. Appl. Phys. 85, 7984 (1999)]. Journal of Applied Physics, 1999, 85, 7986-7986.	2.5	2
651	An energy relaxation time model for device simulation. Solid-State Electronics, 1999, 43, 1791-1795.	1.4	41
652	Drive performance of an asymmetric MOSFET structure: the peak device. Microelectronics Journal, 1999, 30, 229-233.	2.0	7
653	Study of dopant-dependent band gap narrowing in compound semiconductor devices. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1999, 66, 46-49.	3.5	48
654	A computationally efficient method for three-dimensional simulation of ion implantation. , 1999, , .		2
655	Three-dimensional simulation of HPCVD-linking continuum transport and reaction kinetics with topography simulation. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1999, 18, 1741-1749.	2.7	6
656	Linear gate assignment: a fast statistical mechanics approach. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1999, 18, 1750-1758.	2.7	19
657	Simulation of complete VLSI fabrication processes with heterogeneous simulation tools. IEEE Transactions on Semiconductor Manufacturing, 1999, 12, 76-86.	1.7	2
658	Advanced Models, Applications, and Software Systems for High Performance Computing â€” Application in Microelectronics. Lecture Notes in Computational Science and Engineering, 1999, , 291-308.	0.3	0
659	Two-Dimensional Simulation of Ferroelectric Memory Cells. Journal of the Korean Physical Society, 1999, 35, S104-S106.	0.7	0
660	An interpolation based MOSFET model for low-voltage applications. Microelectronics Journal, 1998, 29, 529-534.	2.0	9
661	A comparative study of single-electron memories. IEEE Transactions on Electron Devices, 1998, 45, 2365-2371.	3.0	52
662	A CMOS IC for portable EEG acquisition systems. IEEE Transactions on Instrumentation and Measurement, 1998, 47, 1191-1196.	4.7	107
663	Mixed-element decomposition method for three-dimensional grid adaptation. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1998, 17, 561-572.	2.7	1
664	High-precision interconnect analysis. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1998, 17, 1148-1159.	2.7	6
665	Monte Carlo simulation of silicon amorphization during ion implantation. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1998, 17, 1236-1243.	2.7	6
666	Integrated optimization capabilities in the VISTA technology CAD framework. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1998, 17, 1244-1251.	2.7	2

#	Article	IF	Citations
667	Influence of the doping element on the electron mobility in n-silicon. Journal of Applied Physics, 1998, 83, 3096-3101.	2.5	28
668	Three-dimensional photolithography simulator including rigorous nonplanar exposure simulation for off-axis illumination. , 1998, 3334, 764.		2
669	Single-Electron Memories. VLSI Design, 1998, 8, 219-223.	0.5	3
670	Implications of dopant-dependent low-field mobility and band gap narrowing on the bipolar device performance. European Physical Journal Special Topics, 1998, 08, Pr3-91-Pr3-94.	0.2	7
671	Hydrodynamic Mixed-Mode Simulation. , 1998, , 247-250.		10
672	A Physically-Based Electron Mobility Model for Silicon Device Simulation. , 1998, , 312-315.		3
673	A Dopant-Dependent Band Gap Narrowing Model Application for Bipolar Device Simulation. , 1998, , 105-108.		4
674	Parallel and Distributed TCAD Simulations using Dynamic Load Balancing. , 1998, , 89-92.		1
675	Two-Dimensional Simulation of Ferroelectric Nonvolatile Memory Cells. , 1998, , 368-371.		0
676	Efficient Algorithms for Three-Dimensional Etching and Deposition Simulation. , 1998, , 16-19.		5
677	Simulation of AVC Measurements. , 1998, , 284-287.		0
678	Accurate Layout-Based Interconnect Analysis. , 1998, , 336-339.		1
679	ProzeÃŸsimulation: Stand der Technik. , 1997, , 203-243.		0
680	Influence of backside doping on the nonlinear capacitances of a PHEMT affecting the VCO frequency characteristics. , 1997, , .		0
681	Influence of Dopant Species on Electron Mobility in Heavily Doped Semiconductors. Materials Science Forum, 1997, 258-263, 939-944.	0.3	5
682	SIMON-A simulator for single-electron tunnel devices and circuits. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1997, 16, 937-944.	2.7	318
683	Rigorous three-dimensional photoresist exposure and development simulation over nonplanar topography. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1997, 16, 1431-1438.	2.7	8
684	Simulation of submicron double-heterojunction high electron mobility transistors with MINIMOS-NT. IEEE Transactions on Electron Devices, 1997, 44, 700-707.	3.0	44

#	Article	IF	Citations
685	Optimization of pseudomorphic HEMT's supported by numerical simulations. IEEE Transactions on Electron Devices, 1997, 44, 1822-1828.	3.0	17
686	Physical models for strained and relaxed GaInAs alloys: Band structure and low-field transport. Solid-State Electronics, 1997, 41, 1139-1152.	1.4	50
687	On the lower bounds of CMOS supply voltage. Solid-State Electronics, 1996, 39, 425-430.	1.4	17
688	A single-electron device and circuit simulator with a new algorithm to incorporate co-tunneling. Journal of Technology Computer Aided Design TCAD, 1996, , 1-18.	0.0	0
689	Optimized algorithms for three-dimensional cellular topography simulation. Journal of Technology Computer Aided Design TCAD, 1996, , 1-39.	0.0	2
690	Fully unstructured Delaunay mesh generation using a modified advancing front approach for applications in technology cad. Journal of Technology Computer Aided Design TCAD, 1996, , 1-38.	0.0	0
691	Three-dimensional photolithography simulation. Journal of Technology Computer Aided Design TCAD, 1996, , 1-37.	0.0	3
692	AMIGOS: Analytical model interface & general object-oriented solver. Journal of Technology Computer Aided Design TCAD, 1996, , 1-72.	0.0	6
693	VLSI performance metric based on minimum TCAD simulations. Journal of Technology Computer Aided Design TCAD, 1996, , 1-29.	0.0	0
694	High-level TCAD task representation and automation. Journal of Technology Computer Aided Design TCAD, 1996, , 1-30.	0.0	5
695	Two-dimensional dopant profiling of submicron metalâ€“oxideâ€“semiconductor field-effect transistor using nonlinear least squares inverse modeling. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1996, 14, 224.	1.6	8
696	An advanced model for dopant diffusion in polysilicon. IEEE Transactions on Electron Devices, 1995, 42, 1750-1755.	3.0	23
697	Two-dimensional simulation of thermal runaway in a nonplanar GTO-thyristor. IEEE Transactions on Electron Devices, 1995, 42, 2137-2146.	3.0	7
698	The Viennese integrated system for technology CAD applications. Microelectronics Journal, 1995, 26, 137-158.	2.0	7
699	Process simulation for the 1990s. Microelectronics Journal, 1995, 26, 203-215.	2.0	4
700	Device modelling for the 1990s. Microelectronics Journal, 1995, 26, 217-233.	2.0	9
701	Algorithms and models for cellular based topography simulation. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1995, 14, 1104-1114.	2.7	52
702	VISTA-user interface, task level, and tool integration. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1995, 14, 1208-1222.	2.7	10

#	Article	IF	Citations
703	Trajectory split method for Monte Carlo simulation of ion implantation. IEEE Transactions on Semiconductor Manufacturing, 1995, 8, 402-407.	1.7	31
704	The extraction of two-dimensional MOS transistor doping via inverse modeling. IEEE Electron Device Letters, 1995, 16, 17-19.	3.9	27
705	Three-Dimensional Grid Adaptation Using a Mixed-Element Decomposition Method. , 1995, , 464-467.		11
706	Analytical Model for Phosphorus Large Angle Tilted Implantation. , 1995, , 488-491.		2
707	Statistical Accuracy and CPU Time Characteristic of Three Trajectory Split Methods for Monte Carlo Simulation of Ion Implantation. , 1995, , 492-495.		8
708	The Simulation System for Three-Dimensional Capacitance and Current Density Calculation with a User Friendly GUI. , 1995, , 151-154.		5
709	3D TCAD at TU Vienna. , 1995, , 136-161.		6
710	A Programmable Tool for Interactive Wafer-State Level Data Processing. , 1995, , 58-61.		0
711	Polygonal Geometry Reconstruction after Cellular Etching or Deposition Simulation. , 1995, , 50-53.		3
712	Two-Dimensional Transient Simulation of Charge-Coupled Devices Using MINIMOS NT. , 1995, , 440-443.		0
713	TCAD Optimization Based on Task-Level Framework Services. , 1995, , 70-73.		2
714	A comparison of numerical solutions of the Boltzmann transport equation for high-energy electron transport silicon. IEEE Transactions on Electron Devices, 1994, 41, 1646-1654.	3.0	66
715	A hybrid device simulator that combines Monte Carlo and drift-diffusion analysis. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1994, 13, 201-210.	2.7	32
716	VISTA-the data level. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1994, 13, 72-81.	2.7	12
717	Finite difference, boundary-fitted grid generation for arbitrarily shaped two-dimensional simulation areas. Computer Methods in Applied Mechanics and Engineering, 1993, 110, 17-24.	6.6	1
718	Electron Transport in Silicon Dioxide at Intermediate and High Electric Fields. , 1993, , 65-68.		4
719	The Viennese Integrated System for Technology CAD Applications. , 1993, , 197-236.		13
720	Analysis of a CMOS-Compatible Vertical Bipolar Transistor. , 1993, , 261-264.		0

#	Article	IF	Citations
721	Practical Use of a Hierarchical Linear Solver Concept for 3D MOS Device Simulation. , 1993, , 85-88.		3
722	Evaluation of Effective Device Parameters by Comparison of Measured and Simulated C-V Characteristics for Conventional and Pseudomorphic HEMTs. , 1993, , 461-464.		3
723	Two-dimensional numerical modeling of interband tunneling accounting for nonuniform electric field. , 1992, , .		5
724	Fast Iterative Solution of Carrier Continuity Equations for Three-Dimensional Device Simulation. SIAM Journal on Scientific and Statistical Computing, 1992, 13, 289-306.	1.5	8
725	Calculation of contact currents in device simulation. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1992, 11, 128-136.	2.7	6
726	Transient two-dimensional numerical analysis of the charge-pumping experiment. Microelectronic Engineering, 1992, 19, 687-690.	2.4	3
727	Analysis of geometric charge-pumping components in a thin-film SOI device. Microelectronic Engineering, 1992, 19, 819-822.	2.4	3
728	Monte-Carlo â€" Poisson coupling using transport coefficients. Microelectronic Engineering, 1991, 15, 53-56.	2.4	1
729	A new open technology CAD system. Microelectronic Engineering, 1991, 15, 217-220.	2.4	2
730	On the numerical solution of the three-dimensional semiconductor device equations on vector-concurrent computers. Computer Physics Communications, 1991, 67, 145-156.	7.5	2
731	Self-adaptive space and time grids in device simulation. International Journal for Numerical Methods in Engineering, 1991, 31, 1357-1374.	2.8	2
732	Three-dimensional simulation of semiconductor devices on supercomputers. , 1991, , .		0
733	Device modeling and physics. Physica Scripta, 1991, T35, 293-298.	2.5	1
734	BAMBI â€" A transient 2D-MESFET model with general boundary conditions including Schottky and current controlled contacts. Microelectronics Journal, 1990, 21, 5-21.	2.0	3
735	The evolution of the MINIMOS mobility model. Solid-State Electronics, 1990, 33, 1425-1436.	1.4	85
736	On the effect of non-degenerate doping of polysilicon gate in thin oxide MOS-devicesâ€"Analytical modeling. Solid-State Electronics, 1990, 33, 1539-1544.	1.4	23
737	Coupling of Monte Carlo and Drift Diffusion Method with Applications to Metal Oxide Semiconductor Field Effect Transistors. Japanese Journal of Applied Physics, 1990, 29, L2283-L2285.	1.5	5
738	Three-dimensional effects due to the field oxide in MOS devices analyzed with MINIMOS 5. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1990, 9, 856-867.	2.7	3

#	Article	IF	Citations
739	Numerical treatment of nonrectangular field-oxide for 3-D MOSFET simulation. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1990, 9, 1189-1197.	2.7	4
740	Efficient Coupling of Monte Carlo and Drift Diffusion Method with Applications to MOSFETs. , 1990, , .		2
741	MESFET Analysis with MINIMOS. , 1989, , 92-96.		0
742	Process modeling. Microelectronic Engineering, 1989, 9, 605-610.	2.4	1
743	MOS device modeling at 77 K. IEEE Transactions on Electron Devices, 1989, 36, 1464-1474.	3.0	156
744	Two-dimensional transient simulation of the turn-off behavior of a planar MOS-transistor. Solid-State Electronics, 1989, 32, 685-709.	1.4	2
745	Computer simulations of Schottky contacts with a non-constant recombination velocity. Solid-State Electronics, 1989, 32, 363-367.	1.4	23
746	Three-dimensional process and device modeling. Microelectronics Journal, 1989, 20, 113-127.	2.0	4
747	Monte Carlo simulation of ion implantation into two- and three-dimensional structures. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1989, 8, 450-459.	2.7	36
748	Physical Models for Silicon VLSI. , 1989, , 70-88.		5
749	Two-dimensional modeling of ion implantation induced point defects. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1988, 7, 174-180.	2.7	50
750	MOS device modeling at liquid-nitrogen temperature. , 1988, , .		5
751	3D MOSFET DEVICE EFFECTS DUE TO FIELD OXIDE. Journal De Physique Colloque, 1988, 49, C4-245-C4-248.	0.2	4
752	ON-RESISTANCE IN THE ALDMOST. Journal De Physique Colloque, 1988, 49, C4-629-C4-632.	0.2	4
753	The extension of MINIMOS to a three dimensional simulation program. , 1987, , .		6
754	A NEW MODEL FOR THE DETERMINATION OF POINT DEFECT EQUILIBRIUM CONCENTRATIONS IN SILICON. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 1987, 6, 37-44.	0.9	1
755	Efficient two-dimensional Monte Carlo simulation of ion implantation. , 1987, , .		3
756	Two-dimensional modeling of ion implantation with spatial moments. Solid-State Electronics, 1987, 30, 445-455.	1.4	33

#	Article	IF	Citations
757	MINIMOS 3: A MOSFET simulator that includes energy balance. IEEE Transactions on Electron Devices, 1987, 34, 1074-1078.	3.0	72
758	Die Erweiterung von MINIMOS auf ein 3D Simulationsprogramm. , 1987, , 116-121.		0
759	Zwei-Dimensionale Transiente Simulation des Einschaltverhaltens eines Planaren MOS-Transistors. , 1987, , 100-105.		0
760	Rigorous 3D Electrostatic Field Analysis of SAW Transducers with Closed-Form Formulae. , 1986, , .		20
761	Two-Dimensional Green's Function of a Semi-Infinite Anisotropic Dielectric in the Wavenumber Domain. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 1986, 33, 315-317.	3.0	16
762	Two-dimensional coupled diffusion modeling. Physica B: Physics of Condensed Matter & C: Atomic, Molecular and Plasma Physics, Optics, 1985, 129, 187-191.	0.9	1
763	Simulation of critical IC fabrication processes using advanced physical and numerical methods. IEEE Transactions on Electron Devices, 1985, 32, 156-167.	3.0	128
764	Simulation of critical IC-fabrication steps. IEEE Transactions on Electron Devices, 1985, 32, 1940-1953.	3.0	23
765	Simulation of Critical IC-Fabrication Steps. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1985, 4, 384-397.	2.7	54
766	Simulation of Critical IC Fabrication Processes Using Advanced Physical and Numerical Methods. IEEE Journal of Solid-State Circuits, 1985, 20, 76-87.	5.4	9
767	Temperature distribution and power dissipation in MOSFETs. Solid-State Electronics, 1984, 27, 394-395.	1.4	15
768	Process and device modeling for VISI. Microelectronics Reliability, 1984, 24, 225-257.	1.7	48
769	Implications of Analytical Investigations About the Semiconductor Equations on Device Modeling Programs. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1984, 3, 52-64.	2.7	10
770	On the Calculation of Charge, Electrostatic Potential and Capacitance in Generalized Finite SAW Structures. , 1984, , .		25
771	Some Fundamental Properties. , 1984, , 8-45.		6
772	Process Modeling. , 1984, , 46-79.		3
773	Analytical Investigations About the Basic Semiconductor Equations. , 1984, , 127-148.		9
774	The Physical Parameters. , 1984, , 80-126.		13

#	Article	IF	Citations
775	The Discretization of the Basic Semiconductor Equations. , 1984, , 149-201.		4
776	The Solution of Systems of Nonlinear Algebraic Equations. , 1984, , 202-213.		0
777	The Solution of Sparse Systems of Linear Equations. , 1984, , 214-257.		0
778	A Glimpse on Results. , 1984, , 258-285.		0
779	Analysis and Simulation of Semiconductor Devices. , 1984, , .		1,659
780	ON MODELING THE INTRINSIC NUMBER AND FERMI LEVELS FOR DEVICE AND PROCESS SIMULATION. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 1984, 3, 79-105.	0.9	3
781	JANAP â€" Ein Programm Zur Simulation Des Zeitverhaltens Von Nichtlinearen Elektrischen Schaltungen. Informatik-Fachberichte, 1984, , 149-153.	0.2	1
782	Numerische Simulation Von Halbleiterbauelementen. , 1984, , 154-158.		0
783	Finite boxesâ€"A generalization of the finite-difference method suitable for semiconductor device simulation. IEEE Transactions on Electron Devices, 1983, 30, 1070-1082.	3.0	86
784	A novel finite-element approach to device modeling. IEEE Transactions on Electron Devices, 1983, 30, 1083-1092.	3.0	17
785	A singular perturbation approach for the analysis of the fundamental semiconductor equations. IEEE Transactions on Electron Devices, 1983, 30, 1165-1180.	3.0	36
786	Numerical analysis of acoustic wave generation in anisotropic piezoelectric materials. Sensors and Actuators, 1983, 4, 71-76.	1.7	4
787	Surface and Bulk Wave Velocities in Arbitrary Anisotropic Piezoelectric Materials. , 1983, , .		4
788	Two Dimensional MOS-Transistor Modeling. , 1983, , 490-581.		5
789	Analysis of Breakdown Phenomena in MOSFET's. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1982, 1, 77-85.	2.7	41
790	Numerical Analysis of Acoustic Wave Generation in Anisotropic Piezoelectric Materials. , 1982, , .		5
791	Atlas, matrices et similaritÃ©s: Petit aperÃ§u dialectomÃ©trique. Computers and the Humanities, 1982, 16, 69-84.	1.4	1
792	Investigation of parameter sensitivity of short channel mosfets. Solid-State Electronics, 1982, 25, 85-90.	1.4	43

#	Article	IF	Citations
793	A two-dimensional model of the avalanche effects in MOS transistors. Solid-State Electronics, 1982, 25, 177-183.	1.4	65
794	A numerical analysis of bulk-barrier diodes. Solid-State Electronics, 1982, 25, 317-324.	1.4	15
795	Simple and accurate representation of implantation parameters by low order polynomals. Solid-State Electronics, 1981, 24, 591-593.	1.4	4
796	MINIMOSâ€"A two-dimensional MOS transistor analyzer. IEEE Transactions on Electron Devices, 1980, 27, 1540-1550.	3.0	238
797	MINIMOS - A Two-Dimensional MOS Transistor Analyzer. IEEE Journal of Solid-State Circuits, 1980, 15, 605-615.	5.4	28
798	Three-dimensional topography simulation based on a level set method [deposition and etching processes]. , 0, , .		0
799	Low temperature MOS device modeling. , 0, , .		12
800	GaAs MESFET simulation with MINIMOS. , 0, , .		0
801	Rta-simulations With the 2-d Process Simulator Promis. , 0, , .		2
802	Connection of Network and Device Simulation. , 0, , .		1
803	High performance preconditioning on supercomputers for the 3D device simulator MINIMOS. , 0, , .		1
804	An integrated technology CAD environment. , 0, , .		0
805	Two Dimensional Simulation of Thermal Runaway in a Nonplanar GTO-Thyristor. , 0, , .		0
806	Adaptive Grid for Monte Carlo Simulation of Ion Implantation. , 0, , .		2
807	A Monte Carlo MOSFET simulator based on a new method for the Poisson-transport iteration. , 0, , .		0
808	Consistent User Interface and Task Level Architecture of a TCAD System. , 0, , .		3
809	Electrothermai Analysis Oflatch-up In An IGT. , 0, , .		0
810	Three Dimensional Monte Carlo Simulation Of Ion Implantation With Octree Based Point Location. , 0, , .		9

#	Article	IF	Citations
811	A New Method For Simulation Of Etching And Deposition Processes. , 0, , .		6
812	Capacitance Calculation Of VLSI Multilevel Wiring Structures. , 0, , .		5
813	Dynamic grain-growth and static clustering effects on dopant diffusion in polysilicon. , 0, , .		1
814	Optimum scaling of non-symmetric Jacobian matrices for threshold pivoting preconditioners. , 0, , .		3
815	A novel method for extracting the two-dimensional doping profile of a sub-half micron MOSFET. , 0, , .		8
816	Trajectory split method for Monte Carlo simulation of ion implantation demonstrated by three-dimensional poly-buffered LOCOS field oxide corners. , 0, , .		2
817	Two-dimensional hydrodynamic simulation of High Electron Mobility Transistors using a block iterative scheme in combination with full Newton method. , 0, , .		1
818	VLSI performance analysis method for low-voltage circuit operation. , 0, , .		2
819	Simulation of ion implantation using the four-parameter kappa distribution function. , 0, , .		0
820	Adaptive tessellation for the three-dimensional simulation of doping profiles. , 0, , .		0
821	Investigation of channeling in field oxide corners by three-dimensional Monte Carlo simulation of ion implantation. , 0, , .		0
822	A consistent dynamic MOSFET model for low-voltage applications. , 0, , .		1
823	Simulation environment for semiconductor technology analysis. , 0, , .		1
824	Ultra-low-power CMOS technologies. , 0, , .		34
825	Three-dimensional photoresist exposure and development simulation. , 0, , .		2
826	A new approach to fully unstructured three-dimensional Delaunay mesh generation with improved element quality. , 0, , .		2
827	Grid generation for three-dimensional process and device simulation. , 0, , .		8
828	A method for unified treatment of interface conditions suitable for device simulation. , 0, , .		1

#	Article	IF	Citations
829	Influence of dopant species on electron mobility in InP. , 0, , .		0
830	AMIGOS: analytical model interface and general object-oriented solver. , 0, , .		3
831	Modeling nonparabolicity effects in silicon inversion layers. , 0, , .		4
832	A new approach to ionized-impurity scattering. , 0, , .		1
833	Monte Carlo simulation of electron transport in doped silicon. , 0, , .		2
834	Technology CAD: process and device simulation. , 0, , .		1
835	VLSI performance metric based on minimum TCAD simulations. , 0, , .		0
836	Technology CAD for smart power devices. , 0, , .		1
837	Influence of T-gate shape and footprint length on PHEMT high frequency performance. , 0, , .		3
838	SAP-a program package for three-dimensional interconnect simulation. , 0, , .		5
839	A CMOS IC for portable EEG acquisition systems. , 0, , .		52
840	Mixed-mode device simulation. , 0, , .		9
841	Practical inverse modeling with SIESTA. , 0, , .		4
842	Parallelization of a Monte-Carlo ion implantation simulator for three-dimensional crystalline structures. , 0, , .		3
843	Linking three-dimensional topography simulation with high pressure CVD reaction kinetics. , 0, , .		1
844	Thermal simulations of III/V HEMTs. , 0, , .		2
845	S-Para S-parameter simulation of HBTs on gallium arsenide. , 0, , .		3
846	Consistent comparison of drift-diffusion and hydro-dynamic device simulations. , 0, , .		4

#	Article	IF	Citations
847	Investigation of a mesh criterion for three-dimensional finite element diffusion simulation. , 0, , .		4
848	Simulation of heterojunction bipolar transistors on gallium-arsenide. , 0, , .		6
849	Comparison of finite element and finite box discretization for three-dimensional diffusion modeling using AMIGOS. , 0, , .		2
850	Monte-Carlo method for direct computation of the small signal kinetic coefficients. , 0, , .		1
851	Thermal models for semiconductor device simulation. , 0, , .		18
852	A backward Monte Carlo method for simulation of electron quantum kinetics in semiconductors. , 0, , .		0
853	Electro-thermal effects in mixed-mode device simulation. , 0, , .		2
854	Simulation of InAlAs/InGaAs high electron mobility transistors with a single set of physical parameters. , 0, , .		6
855	Industrial application of heterostructure device simulation. , 0, , .		2
856	The state of the art in interconnect simulation. , 0, , .		6
857	Numerical study of partial-SOI LDMOSFET power devices. , 0, , .		5
858	Design optimization of multi-barrier tunneling devices using the transfer-matrix method. , 0, , .		0
859	Optimization of high-speed SiGe HBTs. , 0, , .		0
860	Reliable prediction of deep sub-quarter micron CMOS technology performance. , 0, , .		0
861	A Wigner equation for the nanometer and femtosecond transport regime. , 0, , .		6
862	Three-dimensional analysis of leakage currents in III-V HBTs. , 0, , .		0
863	An adaptive grid approach for the simulation of electromigration induced void migration. , 0, , .		5
864	A new gate current model accounting for a non-Maxwellian electron energy distribution function. , 0, , .		0

#	Article	IF	Citations
865	A strategy to enforce the discrete minimax principle on finite element meshes. , 0, , .		0
866	Investigation of the electron mobility in strained Si/sub 1-x/Ge/sub x/ at high Ge composition. , 0, , .		1
867	Wigner transport through tunneling structures scattering interpretation of the potential operator. , 0, , .		6
868	Simulation and inverse modeling of TEOS deposition processes using a fast level set method. , 0, , .		11
869	Simulation of a "Well Tempered" SOI MOSFET using an enhanced hydrodynamic transport model. , 0, , .		4
870	Enhanced advancing front Delaunay meshing in TCAD. , 0, , .		4
871	A calibrated model for silicon self-interstitial cluster formation and dissolution. , 0, , .		0
872	Recent advances in transport modeling for miniaturized CMOS devices. , 0, , .		1
873	Electromigration induced evolution of voids in current crowding areas of interconnects. , 0, , .		0
874	Macro-modeling for MOS device simulation. , 0, , .		0
875	Small-signal analysis and direct S-parameter extraction. , 0, , .		4
876	From feature scale simulation to backend simulation for a 100 nm CMOS process. , 0, , .		0
877	Rigorous modeling of high-speed semiconductor devices. , 0, , .		0
878	Simulation of thermal oxidation: a three-dimensional finite element approach. , 0, , .		3
879	A method for generating structurally aligned high quality grids and its application to the simulation of a trench gate MOSFET. , 0, , .		0
880	Evaluation of ZrO/sub 2/ gate dielectrics for advanced CMOS devices. , 0, , .		1
881	Silicon carbide accumulation-mode laterally diffused MOSFET. , 0, , .		1
882	Simulation of carrier transport in carbon nanotube field effect transistors. , 0, , .		6

#	Article	IF	Citations
883	Optimization of electrothermal material parameters using inverse modeling [polysilicon fuse interconnects]. , 0, , .		1
884	Three-dimensional topography simulation for deposition and etching processes using a level set method. , 0, , .		1
885	Gate leakage models for device simulation. , 0, , .		2
886	Gate current modeling for MOSFETs. , 0, , .		0
887	Modeling of wearout, leakage, and breakdown of gate dielectrics [MOSFET]. , 0, , .		3
888	Improving the ambipolar behavior of Schottky barrier carbon nanotube field effect transistors. , 0, , .		10
889	Analysis of high speed heterostructure devices. , 0, , .		1
890	Tunneling and intersubband coupling in ultra-thin body double-gate mosfets. , 0, , .		0
891	A comparison of quantum correction models for the three-dimensional simulation of FinFET structures. , 0, , .		3
892	Numerical simulation of selected semiconductor devices. , 0, , .		0
893	Comprehensive analysis of vacancy dynamics due to electromigration. , 0, , .		2
894	Inverse modeling of oxid deposition using measurements of a TEOS CVD process. , 0, , .		1
895	Modeling Current Transport in Ultra-Scaled Field Effect Transistors. , 0, , .		0
896	The effect of device geometry on the static and dynamic response of carbon nanotube field effect transistors. , 0, , .		6
897	Impact of NBTI-Driven Parameter Degradation on Lifetime of a 90nm p-MOSFET. , 0, , .		7
898	Improving DC and AC characteristics of ohmic contact carbon nanotube field effect transistors. , 0, , .		6
899	Optimization Issue in Interconnect Analysis. , 0, , .		0
900	Optimizing the Performance of Carbon Nanotube Transistors. , 0, , .		0

#	Article	IF	Citations
901	A Tensorial High-Field Electron Mobility Model for Strained Silicon. , 0, , .		0
902	Current Transport in Nanoelectronic Semiconductor Devices. , 0, , .		1
903	Reliability-Based Optimization of Spin-Transfer Torque Magnetic Tunnel Junction Implication Logic Gates. Advanced Materials Research, 0, 854, 89-95.	0.3	5
904	Acoustic Phonon and Surface Roughness Spin Relaxation Mechanisms in Strained Ultra-Scaled Silicon Films. Advanced Materials Research, 0, 854, 29-34.	0.3	2
905	Silicon-on-Insulator for Spintronic Applications: Spin Lifetime and Electric Spin Manipulation. , 0, , .		0
906	Surface Morphology of 4H-SiC after Thermal Oxidation. Materials Science Forum, 0, 963, 180-183.	0.3	1