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	Analysis and Simulation of Semiconductor Devices. , 1984, , .		1,659
2	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
3	MINIMOSâ€"A two-dimensional MOS transistor analyzer. IEEE Transactions on Electron Devices, 1980, 27, 1540-1550.	3.0	238
4	A review of hydrodynamic and energy-transport models for semiconductor device simulation. Proceedings of the IEEE, 2003, 91, 251-274.	21.3	210
5	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
6	MOS device modeling at 77 K. IEEE Transactions on Electron Devices, 1989, 36, 1464-1474.	3.0	156
7	Unified particle approach to Wigner-Boltzmann transport in small semiconductor devices. Physical Review B, 2004, 70, .	3.2	146
8	Simulation of critical IC fabrication processes using advanced physical and numerical methods. IEEE Transactions on Electron Devices, 1985, 32, 156-167.	3.0	128
9	Physically based models of electromigration: From Blackâ€™s equation to modern TCAD models. Microelectronics Reliability, 2010, 50, 775-789.	1.7	115
10	A CMOS IC for portable EEG acquisition systems. IEEE Transactions on Instrumentation and Measurement, 1998, 47, 1191-1196.	4.7	107
11	A temperature dependent model for the saturation velocity in semiconductor materials. Materials Science in Semiconductor Processing, 2000, 3, 149-155.	4.0	104
12	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
13	The evolution of the MINIMOS mobility model. Solid-State Electronics, 1990, 33, 1425-1436.	1.4	85
14	Characterization of the hot electron distribution function using six moments. Journal of Applied Physics, 2002, 91, 3869-3879.	2.5	85
15	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
16	CMOS-compatible spintronic devices: a review. Semiconductor Science and Technology, 2016, 31, 113006.	2.0	85
17	Emerging memory technologies: Trends, challenges, and modeling methods. Microelectronics Reliability, 2012, 52, 628-634.	1.7	80
18	Electron Mobility Model for Strained-Si Devices. IEEE Transactions on Electron Devices, 2005, 52, 527-533.	3.0	74

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19	MINIMOS 3: A MOSFET simulator that includes energy balance. IEEE Transactions on Electron Devices, 1987, 34, 1074-1078.	3.0	72
20	Electromigration in submicron interconnect features of integrated circuits. Materials Science and Engineering Reports, 2011, 71, 53-86.	31.8	68
21	Accurate impact ionization model which accounts for hot and cold carrier populations. Applied Physics Letters, 2002, 80, 613-615.	3.3	67
22	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
23	A two-dimensional model of the avalanche effects in MOS transistors. Solid-State Electronics, 1982, 25, 177-183.	1.4	65
24	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
25	ViennaCL---Linear Algebra Library for Multi- and Many-Core Architectures. SIAM Journal of Scientific Computing, 2016, 38, S412-S439.	2.8	64
26	A Numerical Study of Line-Edge Roughness Scattering in Graphene Nanoribbons. IEEE Transactions on Electron Devices, 2012, 59, 433-440.	3.0	58
27	Silicon spintronics: Progress and challenges. Physics Reports, 2015, 585, 1-40.	25.6	56
28	Simulation of Critical IC-Fabrication Steps. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1985, 4, 384-397.	2.7	54
29	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
30	A comparative study of single-electron memories. IEEE Transactions on Electron Devices, 1998, 45, 2365-2371.	3.0	52
31	A CMOS IC for portable EEG acquisition systems. , 0, , .		52
32	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
33	Physical models for strained and relaxed GaInAs alloys: Band structure and low-field transport. Solid-State Electronics, 1997, 41, 1139-1152.	1.4	50
34	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
35	Performance and Stress Analysis of Metal Oxide Films for CMOS-Integrated Gas Sensors. Sensors, 2015, 15, 7206-7227.	3.8	50
36	Process and device modeling for VISI. Microelectronics Reliability, 1984, 24, 225-257.	1.7	48

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37	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
38	Theory of the Monte Carlo method for semiconductor device simulation. IEEE Transactions on Electron Devices, 2000, 47, 1898-1908.	3.0	48
39	The Economic Limit to Moore's Law. IEEE Transactions on Semiconductor Manufacturing, 2011, 24, 1-4.	1.7	48
40	Electron Mobility Model for $langle hbox{110} angle$ Stressed Silicon Including Strain-Dependent Mass. IEEE Nanotechnology Magazine, 2007, 6, 97-100.	2.0	47
41	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
42	Three-dimensional level set based Bosch process simulations using ray tracing for flux calculation. Microelectronic Engineering, 2010, 87, 20-29.	2.4	47
43	Simulation of submicron double-heterojunction high electron mobility transistors with MINIMOS-NT. IEEE Transactions on Electron Devices, 1997, 44, 700-707.	3.0	44
44	Investigation of parameter sensitivity of short channel mosfets. Solid-State Electronics, 1982, 25, 85-90.	1.4	43
45	Mixed-mode device simulation. Microelectronics Journal, 2000, 31, 873-881.	2.0	42
46	Methods of simulating thin film deposition using spray pyrolysis techniques. Microelectronic Engineering, 2014, 117, 57-66.	2.4	42
47	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
48	An energy relaxation time model for device simulation. Solid-State Electronics, 1999, 43, 1791-1795.	1.4	41
49	Using six moments of Boltzmannâ€™s transport equation for device simulation. Journal of Applied Physics, 2001, 90, 2389-2396.	2.5	41
50	Performance Assessment of Nanoscale Field-Effect Diodes. IEEE Transactions on Electron Devices, 2011, 58, 2378-2384.	3.0	41
51	Physics-Based Modeling of GaN HEMTs. IEEE Transactions on Electron Devices, 2012, 59, 685-693.	3.0	41
52	A fast level set framework for large three-dimensional topography simulations. Computer Physics Communications, 2009, 180, 1242-1250.	7.5	39
53	A multi-purpose SchrÃ¶dinger-Poisson Solver for TCAD applications. Journal of Computational Electronics, 2007, 6, 179-182.	2.5	38
54	Wigner quasi-particle attributesâ€”An asymptotic perspective. Applied Physics Letters, 2013, 102, .	3.3	38

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55	A singular perturbation approach for the analysis of the fundamental semiconductor equations. IEEE Transactions on Electron Devices, 1983, 30, 1165-1180.	3.0	36
56	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
57	A numerical study of partial-SOI LDMOSFETs. Solid-State Electronics, 2003, 47, 275-281.	1.4	36
58	Ultra-low-power CMOS technologies. , 0, , .		34
59	An Analytical Model for Line-Edge Roughness Limited Mobility of Graphene Nanoribbons. IEEE Transactions on Electron Devices, 2011, 58, 3725-3735.	3.0	34
60	Two-dimensional modeling of ion implantation with spatial moments. Solid-State Electronics, 1987, 30, 445-455.	1.4	33
61	Analysis of Split-Drain MAGFETs. IEEE Transactions on Electron Devices, 2004, 51, 2237-2245.	3.0	33
62	Current transport models for nanoscale semiconductor devices. Materials Science and Engineering Reports, 2008, 58, 228-270.	31.8	33
63	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
64	Simulation of power heterojunction bipolar transistors on gallium arsenide. IEEE Transactions on Electron Devices, 2001, 48, 1264-1269.	3.0	32
65	Revision of the standard hydrodynamic transport model for SOI simulation. IEEE Transactions on Electron Devices, 2002, 49, 1814-1820.	3.0	32
66	Trajectory split method for Monte Carlo simulation of ion implantation. IEEE Transactions on Semiconductor Manufacturing, 1995, 8, 402-407.	1.7	31
67	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
68	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
69	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
70	Ultra-scaled Z-RAM cell. , 2008, , .		30
71	Implementation and analysis of an adaptive multilevel Monte Carlo algorithm. Monte Carlo Methods and Applications, 2014, 20, 1-41.	0.8	30
72	Growth rates of dry thermal oxidation of 4H-silicon carbide. Journal of Applied Physics, 2016, 120, .	2.5	30

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73	Modeling and Simulation of Novel Semiconducting Metal Oxide Gas Sensors for Wearable Devices. IEEE Sensors Journal, 2018, 18, 1960-1970.	4.7	30
74	A finite element simulator for three-dimensional analysis of interconnect structures. Microelectronics Journal, 2001, 32, 163-171.	2.0	29
75	A benchmark study of the Wigner Monte Carlo method. Monte Carlo Methods and Applications, 2014, 20, 43-51.	0.8	29
76	MINIMOS - A Two-Dimensional MOS Transistor Analyzer. IEEE Journal of Solid-State Circuits, 1980, 15, 605-615.	5.4	28
77	Influence of the doping element on the electron mobility in n-silicon. Journal of Applied Physics, 1998, 83, 3096-3101.	2.5	28
78	The extraction of two-dimensional MOS transistor doping via inverse modeling. IEEE Electron Device Letters, 1995, 16, 17-19.	3.9	27
79	Modeling of Gate Stack Patterning for Advanced Technology Nodes: A Review. Micromachines, 2018, 9, 631.	2.9	27
80	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
81	On the Calculation of Charge, Electrostatic Potential and Capacitance in Generalized Finite SAW Structures. , 1984, , .		25
82	Physical scales in the Wignerâ€“Boltzmann equation. Annals of Physics, 2013, 328, 220-237.	2.8	25
83	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
84	A Monte Carlo Method Seamlessly Linking Quantum and Classical Transport Calculations. Journal of Computational Electronics, 2003, 2, 147-151.	2.5	24
85	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
86	High performance, uniaxially-strained, silicon and germanium, double-gate p-MOSFETs. Microelectronic Engineering, 2007, 84, 2063-2066.	2.4	24
87	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
88	Simulation of critical IC-fabrication steps. IEEE Transactions on Electron Devices, 1985, 32, 1940-1953.	3.0	23
89	Computer simulations of Schottky contacts with a non-constant recombination velocity. Solid-State Electronics, 1989, 32, 363-367.	1.4	23
90	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

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91	An advanced model for dopant diffusion in polysilicon. IEEE Transactions on Electron Devices, 1995, 42, 1750-1755.	3.0	23
92	Physical modeling of electron mobility enhancement for arbitrarily strained silicon. Journal of Computational Electronics, 2007, 6, 55-58.	2.5	23
93	The stationary Monte Carlo method for device simulation. I. Theory. Journal of Applied Physics, 2003, 93, 3553-3563.	2.5	22
94	A compact model for early electromigration failures of copper dual-damascene interconnects. Microelectronics Reliability, 2011, 51, 1573-1577.	1.7	22
95	Electromigration failure in a copper dual-damascene structure with a through silicon via. Microelectronics Reliability, 2012, 52, 1981-1986.	1.7	22
96	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
97	Separated carrier injection control in carbon nanotube field-effect transistors. Journal of Applied Physics, 2005, 97, 106103.	2.5	21
98	Tunneling CNTFETs. Journal of Computational Electronics, 2007, 6, 243-246.	2.5	21
99	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
100	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
101	Improved Sensing Capability of Integrated Semiconducting Metal Oxide Gas Sensor Devices. Sensors, 2019, 19, 374.	3.8	21
102	Simulation of the Impact of Ionized Impurity Scattering on the Total Mobility in Si Nanowire Transistors. Materials, 2019, 12, 124.	2.9	21
103	Two-pulse sub-ns switching scheme for advanced spin-orbit torque MRAM. Solid-State Electronics, 2019, 155, 49-56.	1.4	21
104	Advanced Transport Models for Sub-Micrometer Devices. , 2004, , 1-8.		21
105	Rigorous 3D Electrostatic Field Analysis of SAW Transducers with Closed-Form Formulae. , 1986, , .		20
106	Femtosecond relaxation of hot electrons by phonon emission in presence of electric field. Physica B: Condensed Matter, 2002, 314, 301-304.	2.7	20
107	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
108	Thermo-Electro-Mechanical Simulation of Semiconductor Metal Oxide Gas Sensors. Materials, 2019, 12, 2410.	2.9	20

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109	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
110	Numerical study of quantum transport in carbon nanotube transistors. Mathematics and Computers in Simulation, 2008, 79, 1051-1059.	4.4	19
111	Thermal models for semiconductor device simulation. , 0, , .		18
112	Microstructure and Stress Aspects of Electromigration Modeling. AIP Conference Proceedings, 2006, , .	0.4	18
113	Distributed-memory parallelization of the Wigner Monte Carlo method using spatial domain decomposition. Journal of Computational Electronics, 2015, 14, 151-162.	2.5	18
114	A novel finite-element approach to device modeling. IEEE Transactions on Electron Devices, 1983, 30, 1083-1092.	3.0	17
115	On the lower bounds of CMOS supply voltage. Solid-State Electronics, 1996, 39, 425-430.	1.4	17
116	Optimization of pseudomorphic HEMT's supported by numerical simulations. IEEE Transactions on Electron Devices, 1997, 44, 1822-1828.	3.0	17
117	Numerical Analysis of Coaxial Double Gate Schottky Barrier Carbon Nanotube Field Effect Transistors. Journal of Computational Electronics, 2005, 4, 75-78.	2.5	17
118	Nonparabolic macroscopic transport models for device simulation based on bulk Monte Carlo data. Journal of Applied Physics, 2005, 97, 093710.	2.5	17
119	Rigorous modeling of carbon nanotube transistors. Journal of Physics: Conference Series, 2006, 38, 29-32.	0.4	17
120	Fast Switching in Magnetic Tunnel Junctions With Two Pinned Layers: Micromagnetic Modeling. IEEE Transactions on Magnetics, 2012, 48, 1289-1292.	2.1	17
121	Coupled spin and charge drift-diffusion approach applied to magnetic tunnel junctions. Solid-State Electronics, 2021, 186, 108103.	1.4	17
122	GPU-Accelerated Non-negative Matrix Factorization for Text Mining. Lecture Notes in Computer Science, 2012, , 158-163.	1.3	17
123	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
124	Modeling of Lattice Site-Dependent Incomplete Ionization in Î±-SiC Devices. Materials Science Forum, 2005, 483-485, 845-848.	0.3	16
125	Volume inversion mobility in SOI MOSFETs for different thin body orientations. Solid-State Electronics, 2007, 51, 299-305.	1.4	16
126	The Economic Limit to Moore's Law [Point of View. Proceedings of the IEEE, 2010, 98, 351-353.	21.3	16

#	Article	IF	Citations
127	The Level-Set Method for Multi-Material Wet Etching and Non-Planar Selective Epitaxy. IEEE Access, 2020, 8, 115406-115422.	4.2	16
128	A numerical analysis of bulk-barrier diodes. Solid-State Electronics, 1982, 25, 317-324.	1.4	15
129	Temperature distribution and power dissipation in MOSFETs. Solid-State Electronics, 1984, 27, 394-395.	1.4	15
130	Industrial application of heterostructure device simulation. IEEE Journal of Solid-State Circuits, 2001, 36, 1365-1370.	5.4	15
131	Fully coupled electrothermal mixed-mode device simulation of SiGe HBT circuits. IEEE Transactions on Electron Devices, 2001, 48, 1421-1427.	3.0	15
132	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
133	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
134	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
135	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
136	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
137	Effects of shear strain on the conduction band in silicon: An efficient two-band k·p theory. , 2007, , .		14
138	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
139	Subband splitting and surface roughness induced spin relaxation in (001) silicon SOI MOSFETs. Solid-State Electronics, 2013, 90, 34-38.	1.4	14
140	Transient model for electrical activation of aluminium and phosphorus-implanted silicon carbide. Journal of Applied Physics, 2018, 123, .	2.5	14
141	The Physical Parameters. , 1984, , 80-126.		13
142	Micro materials modeling in MINIMOS-NT. Microsystem Technologies, 2001, 7, 183-187.	2.0	13
143	Semiclassical Approximation of Electron-Phonon Scattering Beyond Fermi's Golden Rule. SIAM Journal on Applied Mathematics, 2004, 64, 1933-1953.	1.8	13
144	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

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145	The Viennese Integrated System for Technology CAD Applications. , 1993, , 197-236.		13
146	Low temperature MOS device modeling. , 0, , .		12
147	VISTA-the data level. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1994, 13, 72-81.	2.7	12
148	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
149	Influence of generation/recombination effects in simulations of partially depleted SOI MOSFETs. Solid-State Electronics, 2001, 45, 621-627.	1.4	12
150	Nonlinear electronic transport and device performance of HEMTs. IEEE Transactions on Electron Devices, 2001, 48, 210-217.	3.0	12
151	Investigation of spurious velocity overshoot using Monte Carlo data. Applied Physics Letters, 2001, 79, 1900-1902.	3.3	12
152	Optimization of Schottky barrier carbon nanotube field effect transistors. Microelectronic Engineering, 2005, 81, 428-433.	2.4	12
153	MRAM-based logic array for large-scale non-volatile logic-in-memory applications. , 2013, , .		12
154	Simulation and inverse modeling of TEOS deposition processes using a fast level set method. , 0, , .		11
155	A Wigner equation with quantum electronâ€“phonon interaction. Microelectronic Engineering, 2002, 63, 199-203.	2.4	11
156	An extensible TCAD optimization framework combining gradient based and genetic optimizers. Microelectronics Journal, 2002, 33, 61-68.	2.0	11
157	Theoretical Investigation Of Performance In Uniaxially- and Biaxially-Strained Si, SiGe and Ge Double-Gate p-MOSFETs. , 2006, , .		11
158	Predictive Simulation of AlGaN/GaN HEMTs. , 2007, , .		11
159	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
160	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
161	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
162	Boundary conditions and the Wigner equation solution. Journal of Computational Electronics, 2015, 14, 859-863.	2.5	11

#	Article	IF	Citations
163	Wigner equation for general electromagnetic fields: The Weyl-Stratonovich transform. Physical Review B, 2019, 99, .	3.2	11
164	Three-Dimensional Grid Adaptation Using a Mixed-Element Decomposition Method. , 1995, , 464-467.		11
165	A review of quantum transport in field-effect transistors. Semiconductor Science and Technology, 2022, 37, 043001.	2.0	11
166	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
167	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
168	HOT CARRIER EFFECTS WITHIN MACROSCOPIC TRANSPORT MODELS. International Journal of High Speed Electronics and Systems, 2003, 13, 873-901.	0.7	10
169	New SOI lateral power devices with trench oxide. Solid-State Electronics, 2004, 48, 1007-1015.	1.4	10
170	Improving the ambipolar behavior of Schottky barrier carbon nanotube field effect transistors. , 0, , .		10
171	A study of ion implantation into crystalline germanium. Solid-State Electronics, 2007, 51, 982-988.	1.4	10
172	Decoherence effects in the Wigner function formalism. Journal of Computational Electronics, 2013, 12, 388-396.	2.5	10
173	Rigorous simulation study of a novel non-volatile magnetic flip-flop. , 2013, , .		10
174	Design and applications of magnetic tunnel junction based logic circuits. , 2013, , .		10
175	Novel bias-field-free spin transfer oscillator. Journal of Applied Physics, 2014, 115, 17C901.	2.5	10
176	Intrinsic stress analysis of tungsten-lined open TSVs. Microelectronics Reliability, 2015, 55, 1843-1848.	1.7	10
177	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
178	Analysis of lenseâ€governed Wigner signed particle quantum dynamics. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1700102.	2.4	10
179	Using Temporary Explicit Meshes for Direct Flux Calculation on Implicit Surfaces. Procedia Computer Science, 2017, 108, 245-254.	2.0	10
180	Empirical Model for Electrical Activation of Aluminum- and Boron-Implanted Silicon Carbide. IEEE Transactions on Electron Devices, 2018, 65, 674-679.	3.0	10

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181	Robust magnetic field-free switching of a perpendicularly magnetized free layer for SOT-MRAM. Solid-State Electronics, 2020, 168, 107730.	1.4	10
182	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
183	Optimization of a Spin-Orbit Torque Switching Scheme Based on Micromagnetic Simulations and Reinforcement Learning. Micromachines, 2021, 12, 443.	2.9	10
184	Hydrodynamic Mixed-Mode Simulation. , 1998, , 247-250.		10
185	Analytical Investigations About the Basic Semiconductor Equations. , 1984, , 127-148.		9
186	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
187	Three Dimensional Monte Carlo Simulation Of Ion Implantation With Octree Based Point Location. , 0, , .		9
188	Device modelling for the 1990s. Microelectronics Journal, 1995, 26, 217-233.	2.0	9
189	An interpolation based MOSFET model for low-voltage applications. Microelectronics Journal, 1998, 29, 529-534.	2.0	9
190	Mixed-mode device simulation. , 0, , .		9
191	Development of global calibration for accurate GaAs-PHEMT simulation. IEEE Transactions on Electron Devices, 2000, 47, 1957-1964.	3.0	9
192	A Monte Carlo method for small signal analysis of the Boltzmann equation. Journal of Applied Physics, 2000, 87, 4308-4314.	2.5	9
193	Analysis of HBT behavior after strong electrothermal stress. , 2000, , .		9
194	Modeling of retention time degradation due to inelastic trap-assisted tunneling in EEPROM devices. Microelectronics Reliability, 2003, 43, 1495-1500.	1.7	9
195	Enhancement of breakdown voltage for Ni-SiC Schottky diodes utilizing field plate edge termination. Microelectronics Reliability, 2004, 44, 1473-1478.	1.7	9
196	Optimization of Single-Gate Carbon-Nanotube Field-Effect Transistors. IEEE Nanotechnology Magazine, 2005, 4, 533-538.	2.0	9
197	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
198	Spin injection and diffusion in silicon based devices from a space charge layer. Journal of Applied Physics, 2014, 115, 17C503.	2.5	9

#	Article	IF	Citations
199	Intersubband spin relaxation reduction and spin lifetime enhancement by strain in SOI structures. Microelectronic Engineering, 2015, 147, 89-91.	2.4	9
200	Efficient Demagnetizing Field Calculation for Disconnected Complex Geometries in STT-MRAM Cells. , 2020, , .		9
201	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
202	A novel method for extracting the two-dimensional doping profile of a sub-half micron MOSFET. , 0, , .		8
203	Grid generation for three-dimensional process and device simulation. , 0, , .		8
204	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
205	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
206	Three-Dimensional Analysis of a MAGFET at 300 K and 77 K. , 2002, , .		8
207	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
208	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
209	Extraction of material parameters based on inverse modeling of three-dimensional interconnect fusing structures. Microelectronics Journal, 2004, 35, 805-810.	2.0	8
210	Strain engineering for CMOS devices. , 2006, , .		8
211	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
212	Dissipative transport in CNTFETs. Journal of Computational Electronics, 2007, 6, 321-324.	2.5	8
213	Reduction of momentum and spin relaxation rate in strained thin silicon films. , 2013, , .		8
214	Stress evolution in the metal layers of TSVs with Bosch scallops. Microelectronics Reliability, 2013, 53, 1602-1605.	1.7	8
215	Spin injection in a semiconductor through a space-charge layer. Solid-State Electronics, 2014, 101, 116-121.	1.4	8
216	The meshing framework ViennaMesh for finite element applications. Journal of Computational and Applied Mathematics, 2014, 270, 166-177.	2.0	8

#	Article	IF	Citations
217	Statistical Accuracy and CPU Time Characteristic of Three Trajectory Split Methods for Monte Carlo Simulation of Ion Implantation. , 1995, , 492-495.		8
218	Two-dimensional simulation of thermal runaway in a nonplanar GTO-thyristor. IEEE Transactions on Electron Devices, 1995, 42, 2137-2146.	3.0	7
219	The Viennese integrated system for technology CAD applications. Microelectronics Journal, 1995, 26, 137-158.	2.0	7
220	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
221	Drive performance of an asymmetric MOSFET structure: the peak device. Microelectronics Journal, 1999, 30, 229-233.	2.0	7
222	A Backward Monte Carlo Method for Simulation of the Electron Quantum Kinetics in Semiconductors. VLSI Design, 2001, 13, 405-411.	0.5	7
223	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
224	Efficient inductance calculation in interconnect structures by applying the Monte Carlo method. Microelectronics Journal, 2003, 34, 815-821.	2.0	7
225	High-voltage lateral trench gate SOI-LDMOSFETs. Microelectronics Journal, 2004, 35, 299-304.	2.0	7
226	Rigorous modeling approach to numerical simulation of SiGe HBTs. Applied Surface Science, 2004, 224, 361-364.	6.1	7
227	Impact of NBTI-Driven Parameter Degradation on Lifetime of a 90nm p-MOSFET. , 0, , .		7
228	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
229	Three-dimensional topography simulation using advanced level set and ray tracing methods. , 2008, , .		7
230	Modeling of modern MOSFETs with strain. Journal of Computational Electronics, 2009, 8, 192-208.	2.5	7
231	A method for simulating Atomic Force Microscope nanolithography in the Level Set framework. Microelectronic Engineering, 2013, 107, 23-32.	2.4	7
232	Electromigration reliability of open TSV structures. Microelectronics Reliability, 2014, 54, 2133-2137.	1.7	7
233	Stochastic analysis of surface roughness models in quantum wires. Computer Physics Communications, 2018, 228, 30-37.	7.5	7
234	A computational approach for investigating Coulomb interaction using Wignerâ€“Poisson coupling. Journal of Computational Electronics, 2021, 20, 775-784.	2.5	7

#	Article	IF	Citations
235	Stochastic Approaches to Electron Transport in Micro- and Nanostructures. Modeling and Simulation in Science, Engineering and Technology, 2021, , .	0.6	7
236	Electro-Thermal-Mechanical Modeling of Gas Sensor Hotplates. , 2020, , 17-72.		7
237	Some Fundamental Properties. , 1984, , 8-45.		6
238	The extension of MINIMOS to a three dimensional simulation program. , 1987, , .		6
239	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
240	A New Method For Simulation Of Etching And Deposition Processes. , 0, , .		6
241	AMIGOS: Analytical model interface & general object-oriented solver. Journal of Technology Computer Aided Design TCAD, 1996, , 1-72.	0.0	6
242	High-precision interconnect analysis. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1998, 17, 1148-1159.	2.7	6
243	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
244	Simulation of heterojunction bipolar transistors on gallium-arsenide. , 0, , .		6
245	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
246	Simulation of InAlAs/InGaAs high electron mobility transistors with a single set of physical parameters. , 0, , .		6
247	Simulation of gallium-arsenide based high electron mobility transistors. , 2000, , .		6
248	The state of the art in interconnect simulation. , 0, , .		6
249	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
250	A Wigner equation for the nanometer and femtosecond transport regime. , 0, , .		6
251	Wigner transport through tunneling structures scattering interpretation of the potential operator. , 0, , .		6
252	On Increasing the Accuracy of Simulations of Deposition and Etching Processes Using Radiosity and the Level Set Method. , 2002, , .		6

#	Article	IF	Citations
253	Simulation of carrier transport in carbon nanotube field effect transistors. , 0, , .		6
254	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
255	The effect of device geometry on the static and dynamic response of carbon nanotube field effect transistors. , 0, , .		6
256	Improving DC and AC characteristics of ohmic contact carbon nanotube field effect transistors. , 0, , .		6
257	Electron Inversion Layer Mobility Enhancement by Uniaxial Stress on (001) and (110) Oriented MOSFETs. , 2006, , .		6
258	High-Field Electron Mobility Model for Strained-Silicon Devices. IEEE Transactions on Electron Devices, 2006, 53, 3054-3062.	3.0	6
259	Impact of Random Bit Values on NBTI Lifetime of an SRAM Cell. , 2006, , .		6
260	Transport modeling for nanoscale semiconductor devices. , 2010, , .		6
261	Thermo-mechanical simulations of an open tungsten TSV. , 2012, , .		6
262	Novel MTJ-based shift register for non-volatile logic applications. , 2013, , .		6
263	Global statistical methodology for the analysis of equipment parameter effects on TSV formation. , 2015, , .		6
264	The Wigner equation in the presence of electromagnetic potentials. Journal of Computational Electronics, 2015, 14, 888-893.	2.5	6
265	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
266	Investigation of Novel Silicon PV Cells of a Lateral Type. Silicon, 2015, 7, 283-291.	3.3	6
267	Anisotropic interpolation method of silicon carbide oxidation growth rates for three-dimensional simulation. Solid-State Electronics, 2017, 128, 135-140.	1.4	6
268	Study of the 1D Scattering Mechanisms' Impact on the Mobility in Si Nanowire Transistors. , 2018, , .		6
269	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
270	The Role of Annihilation in a Wigner Monte Carlo Approach. Lecture Notes in Computer Science, 2014, , 186-193.	1.3	6

#	Article	IF	Citations
271	On the Calculation of Quasi-Bound States and Their Impact on Direct Tunneling in CMOS Devices. , 2004, , 25-28.		6
272	3D TCAD at TU Vienna. , 1995, , 136-161.		6
273	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
274	Double Reference Layer STT-MRAM Structures with Improved Performance. Solid-State Electronics, 2022, 194, 108335.	1.4	6
275	Numerical Analysis of Acoustic Wave Generation in Anisotropic Piezoelectric Materials. , 1982, , .		5
276	MOS device modeling at liquid-nitrogen temperature. , 1988, , .		5
277	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
278	Two-dimensional numerical modeling of interband tunneling accounting for nonuniform electric field. , 1992, , .		5
279	Capacitance Calculation Of VLSI Multilevel Wiring Structures. , 0, , .		5
280	High-level TCAD task representation and automation. Journal of Technology Computer Aided Design TCAD, 1996, , 1-30.	0.0	5
281	Influence of Dopant Species on Electron Mobility in Heavily Doped Semiconductors. Materials Science Forum, 1997, 258-263, 939-944.	0.3	5
282	SAP-a program package for three-dimensional interconnect simulation. , 0, , .		5
283	Numerical study of partial-SOI LDMOSFET power devices. , 0, , .		5
284	A methodology for deep sub-0.25 Î¼m CMOS technology prediction. IEEE Transactions on Electron Devices, 2001, 48, 2331-2336.	3.0	5
285	An adaptive grid approach for the simulation of electromigration induced void migration. , 0, , .		5
286	Lateral Trench Gate Super-Junction SOI-LDMOSFETs with Low On-Resistance. , 2002, , .		5
287	Design optimization of multi-barrier tunneling devices using the transfer-matrix method. Solid-State Electronics, 2002, 46, 1545-1551.	1.4	5
288	Simulative prediction of the resistance change due to electromigration induced void evolution. Microelectronics Reliability, 2002, 42, 1457-1460.	1.7	5

#	Article	IF	Citations
289	A Space Dependent Wigner Equation Including Phonon Interaction. Journal of Computational Electronics, 2002, 1, 27-31.	2.5	5
290	Analysis of Gate Dielectric Stacks Using the Transmitting Boundary Method. Journal of Computational Electronics, 2003, 2, 219-223.	2.5	5
291	Stochastic interpretation of the Wigner transport in nanostructures. Microelectronics Journal, 2003, 34, 443-445.	2.0	5
292	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
293	Hydrodynamic Modeling of AlGaN/GaN HEMTs. , 2007, , 273-276.		5
294	Coupling of non-equilibrium Green’s function and Wigner function approaches. , 2008, , .		5
295	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
296	The Effect of Copper Grain Size Statistics on the Electromigration Lifetime Distribution. , 2009, , .		5
297	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
298	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
299	MTJ-based implication logic gates and circuit architecture for large-scale spintronic stateful logic systems. , 2012, , .		5
300	Modeling Emerging Non-volatile Memories: Current Trends and Challenges. Physics Procedia, 2012, 25, 99-104.	1.2	5
301	Two-dimensional transient wigner particle model. , 2013, , .		5
302	Reliability-Based Optimization of Spin-Transfer Torque Magnetic Tunnel Junction Implication Logic Gates. Advanced Materials Research, 0, 854, 89-95.	0.3	5
303	Decoherence and time reversibility: The role of randomness at interfaces. Journal of Applied Physics, 2013, 114, 174902.	2.5	5
304	Dependence of spin lifetime on spin injection orientation in strained silicon films. , 2015, , .		5
305	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
306	Modeling of electrical activation ratios of phosphorus and nitrogen doped silicon carbide. , 2017, , .		5

#	Article	IF	Citations
307	Physical Models for Silicon VLSI. , 1989, , 70-88.		5
308	The Simulation System for Three-Dimensional Capacitance and Current Density Calculation with a User Friendly GUI. , 1995, , 151-154.		5
309	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
310	Investigation of Spurious Velocity Overshoot Using Monte Carlo Data. , 2001, , 54-57.		5
311	Efficient Algorithms for Three-Dimensional Etching and Deposition Simulation. , 1998, , 16-19.		5
312	Two Dimensional MOS-Transistor Modeling. , 1983, , 490-581.		5
313	Temperature increase in STT-MRAM at writing: A fully three-dimensional finite element approach. Solid-State Electronics, 2022, 193, 108269.	1.4	5
314	Simple and accurate representation of implantation parameters by low order polynomals. Solid-State Electronics, 1981, 24, 591-593.	1.4	4
315	Numerical analysis of acoustic wave generation in anisotropic piezoelectric materials. Sensors and Actuators, 1983, 4, 71-76.	1.7	4
316	Surface and Bulk Wave Velocities in Arbitrary Anisotropic Piezoelectric Materials. , 1983, , .		4
317	The Discretization of the Basic Semiconductor Equations. , 1984, , 149-201.		4
318	3D MOSFET DEVICE EFFECTS DUE TO FIELD OXIDE. Journal De Physique Colloque, 1988, 49, C4-245-C4-248.	0.2	4
319	Three-dimensional process and device modeling. Microelectronics Journal, 1989, 20, 113-127.	2.0	4
320	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
321	Process simulation for the 1990s. Microelectronics Journal, 1995, 26, 203-215.	2.0	4
322	Modeling nonparabolicity effects in silicon inversion layers. , 0, , .		4
323	Practical inverse modeling with SIESTA. , 0, , .		4
324	Consistent comparison of drift-diffusion and hydro-dynamic device simulations. , 0, , .		4

#	Article	IF	Citations
325	Investigation of a mesh criterion for three-dimensional finite element diffusion simulation. , 0, , .		4
326	Extensible TCAD optimization framework combining gradient-based and genetic optimizers. , 2000, , .		4
327	Hydrodynamic modeling of avalanche breakdown in a gate overvoltage protection structure. Solid-State Electronics, 2000, 44, 1135-1143.	1.4	4
328	Simulation of a "Well Tempered" SOI MOSFET using an enhanced hydrodynamic transport model. , 0, , .		4
329	Enhanced advancing front Delaunay meshing in TCAD. , 0, , .		4
330	Small-signal analysis and direct S-parameter extraction. , 0, , .		4
331	Monte Carlo algorithms for stationary device simulations. Mathematics and Computers in Simulation, 2003, 62, 453-461.	4.4	4
332	Evolution of Current Transport Models for Engineering Applications. Journal of Computational Electronics, 2004, 3, 149-155.	2.5	4
333	Efficient Calculation of Quasi-Bound State Tunneling in CMOS Devices. , 2005, , .		4
334	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
335	Simulation of field-effect Biosensors (BioFETs). , 2008, , .		4
336	Domain separation with port interfaces for calculation of emissions from enclosure slots. , 2008, , .		4
337	Biotin-Streptavidin Sensitive BioFETs and Their Properties. Communications in Computer and Information Science, 2010, , 85-95.	0.5	4
338	Switching time and current reduction using a composite free layer in magnetic tunnel junctions. , 2011, , .		4
339	Properties of Silicon Ballistic Spin Fin-Based Field-Effect Transistors. ECS Transactions, 2011, 35, 277-282.	0.5	4
340	Interconnect reliability dependence on fast diffusivity paths. Microelectronics Reliability, 2012, 52, 1532-1538.	1.7	4
341	Valley splitting and spin lifetime enhancement in strained thin silicon films. , 2014, , .		4
342	Effects of sidewall scallops on open tungsten TSVs. , 2014, , .		4

#	Article	IF	Citations
343	Implications of the coherence length on the discrete Wigner potential. , 2014, , .		4
344	Stress Considerations in Thin Films for CMOS-Integrated Gas Sensors. ECS Transactions, 2015, 66, 243-250.	0.5	4
345	Electron mobility and spin lifetime enhancement in strained ultra-thin silicon films. Solid-State Electronics, 2015, 112, 46-50.	1.4	4
346	A comparison of approaches for the solution of the Wigner equation. Mathematics and Computers in Simulation, 2015, 107, 108-119.	4.4	4
347	Impact of the Effective Mass on the Mobility in Si Nanowire Transistors. , 2018, , .		4
348	Modeling and Simulation of Electrical Activation of Acceptor-Type Dopants in Silicon Carbide. Materials Science Forum, 2018, 924, 192-195.	0.3	4
349	Switching current reduction in advanced spin-orbit torque MRAM. , 2018, , .		4
350	Simulation of the Effects of Postimplantation Annealing on Silicon Carbide DMOSFET Characteristics. IEEE Transactions on Electron Devices, 2019, 66, 3060-3065.	3.0	4
351	Conductance in a Nanoribbon of Topologically Insulating MoS2 in the 1Tâ€™ Phase. IEEE Transactions on Electron Devices, 2020, 67, 4687-4690.	3.0	4
352	Complex Systems in Phase Space. Entropy, 2020, 22, 1103.	2.2	4
353	Emerging CMOS Compatible Magnetic Memories and Logic. , 2020, , .		4
354	Electron Transport in Silicon Dioxide at Intermediate and High Electric Fields. , 1993, , 65-68.		4
355	Modeling and Analysis of Spray Pyrolysis Deposited SnO2 Films for Gas Sensors. , 2014, , 295-310.		4
356	Evaluation of Mobile ARM-Based SoCs for High Performance Computing. , 2016, , .		4
357	Advanced Hybrid Cellular Based Approach for Three-Dimensional Etching and Deposition Simulation. , 2001, , 424-427.		4
358	A Dopant-Dependent Band Gap Narrowing Model Application for Bipolar Device Simulation. , 1998, , 105-108.		4
359	ON-RESISTANCE IN THE ALDMOST. Journal De Physique Colloque, 1988, 49, C4-629-C4-632.	0.2	4
360	Finite element modeling of spinâ€“orbit torques. Solid-State Electronics, 2022, 194, 108323.	1.4	4

#	Article	IF	Citations
361	Process Modeling. , 1984, , 46-79.		3
362	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
363	Efficient two-dimensional Monte Carlo simulation of ion implantation. , 1987, , .		3
364	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
365	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
366	Consistent User Interface and Task Level Architecture of a TCAD System. , 0, , .		3
367	Transient two-dimensional numerical analysis of the charge-pumping experiment. Microelectronic Engineering, 1992, 19, 687-690.	2.4	3
368	Analysis of geometric charge-pumping components in a thin-film SOI device. Microelectronic Engineering, 1992, 19, 819-822.	2.4	3
369	Optimum scaling of non-symmetric Jacobian matrices for threshold pivoting preconditioners. , 0, , .		3
370	Three-dimensional photolithography simulation. Journal of Technology Computer Aided Design TCAD, 1996, , 1-37.	0.0	3
371	AMIGOS: analytical model interface and general object-oriented solver. , 0, , .		3
372	Influence of T-gate shape and footprint length on PHEMT high frequency performance. , 0, , .		3
373	Single-Electron Memories. VLSI Design, 1998, 8, 219-223.	0.5	3
374	Parallelization of a Monte-Carlo ion implantation simulator for three-dimensional crystalline structures. , 0, , .		3
375	S-Para S-parameter simulation of HBTs on gallium arsenide. , 0, , .		3
376	Simulation of Polysilicon Emitter Bipolar Transistors. , 2000, , .		3
377	Two-dimensional simulation of ferroelectric memory cells. IEEE Transactions on Electron Devices, 2001, 48, 316-322.	3.0	3
378	Substrate orientation-dependence of electron mobility in strained SiGe layers. , 2003, , .		3

#	Article	IF	Citations
379	Simulation of thermal oxidation: a three-dimensional finite element approach. , 0, , .		3
380	Reformulation of macroscopic transport models based on the moments of the scattering integral [semiconductor device modeling applications]. , 2003, , .		3
381	Error estimated driven anisotropic mesh refinement for three-dimensional diffusion simulation. , 2003, , .		3
382	Energy transport gate current model accounting for non-Maxwellian energy distribution. Electronics Letters, 2003, 39, 691.	1.0	3
383	Simulation of void formation in interconnect lines. , 2003, 5117, 445.		3
384	An algorithm for smoothing three-dimensional Monte Carlo ion implantation simulation results. Mathematics and Computers in Simulation, 2004, 66, 219-230.	4.4	3
385	The state-of-the-art in simulation for optimization of SiGe-HBTs. Applied Surface Science, 2004, 224, 312-319.	6.1	3
386	Modeling of wearout, leakage, and breakdown of gate dielectrics [MOSFET]. , 0, , .		3
387	A quasi-particle model of the electronâ€“Wigner potential interaction. Semiconductor Science and Technology, 2004, 19, S226-S228.	2.0	3
388	Numerical Analysis of SiC Merged PiN Schottky Diodes. Materials Science Forum, 2005, 483-485, 949-952.	0.3	3
389	A comparison of quantum correction models for the three-dimensional simulation of FinFET structures. , 0, , .		3
390	Modeling of Tunneling Currents for Highly Degraded CMOS Devices. , 2005, , .		3
391	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
392	Device Simulation Demands of Upcoming Microelectronics Devices. International Journal of High Speed Electronics and Systems, 2006, 16, 115-136.	0.7	3
393	Foreword Special Issue on Simulation and Modeling of Nanoelectronics Devices. IEEE Transactions on Electron Devices, 2007, 54, 2072-2078.	3.0	3
394	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
395	Analysis of electromigration in redundant vias. , 2008, , .		3
396	Mobility enhancement in thin silicon films: Strain and thickness dependences of the effective masses and non-parabolicity parameter. , 2008, , .		3

#	Article	IF	Citations
397	Thickness Dependence of the Effective Masses in a Strained Thin Silicon Film. , 2009, , .		3
398	Modeling of Low Concentrated Buffer DNA Detection with Suspend Gate Field-Effect Transistors (SGFET). , 2009, , .		3
399	Simulation of Field-Effect Biosensors (BioFETs) for Biotin-Streptavidin Complexes. , 2010, , .		3
400	Stochastic modeling hysteresis and resistive switching in bipolar oxide-based memory. , 2010, , .		3
401	Impact of intermetallic compound on solder bump electromigration reliability. , 2013, , .		3
402	Performance analysis and comparison of two 1T/1MTJ-based logic gates. , 2013, , .		3
403	Quantum insights in gate oxide charge-trapping dynamics in nanoscale MOSFETs. , 2013, , .		3
404	The Wigner Monte Carlo method for accurate semiconductor device simulation. , 2014, , .		3
405	On the material depletion rate due to electromigration in a copper TSV structure. , 2014, , .		3
406	Effects of sidewall scallops on the performance and reliability of filled copper and open tungsten TSVs. , 2014, , .		3
407	High performance MRAM-based stateful logic. , 2014, , .		3
408	Variation of Spin Lifetime with Spin Injection Orientation in Strained Thin Silicon Films. ECS Transactions, 2015, 66, 233-240.	0.5	3
409	Processing of integrated gas sensor devices. , 2015, , .		3
410	Modelling of multipurpose spintronic devices. International Journal of Nanotechnology, 2015, 12, 313.	0.2	3
411	ViennaMaterials â€“ A dedicated material library for computational science and engineering. Applied Mathematics and Computation, 2015, 267, 282-293.	2.2	3
412	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
413	Stress in three-dimensionally integrated sensor systems. Microelectronics Reliability, 2016, 61, 3-10.	1.7	3
414	Evaluation of the shared-memory parallel Fast Marching Method for re-distancing problems. , 2017, , .		3

#	Article	IF	Citations
415	A shared memory parallel multi-mesh fast marching method for re-distancing. Advances in Computational Mathematics, 2019, 45, 2029-2045.	1.6	3
416	Integration of Gas Sensors with CMOS Technology. , 2020, , .		3
417	Microstructure and Granularity Effects in Electromigration. IEEE Journal of the Electron Devices Society, 2021, 9, 476-483.	2.1	3
418	Monte Carlo Analysis of the Small-Signal Response of Charge Carriers. Lecture Notes in Computer Science, 2001, , 175-182.	1.3	3
419	Efficient Coupling of Monte Carlo and Level Set Methods for Topography Simulation. , 2007, , 417-420.		3
420	A Stable Backward Monte Carlo Method for the Solution of the Boltzmann Equation. Lecture Notes in Computer Science, 2004, , 170-177.	1.3	3
421	A Weight Decomposition Approach to the Sign Problem in Wigner Transport Simulations. Lecture Notes in Computer Science, 2004, , 178-184.	1.3	3
422	A Zero Field Monte Carlo Algorithm Accounting for the Pauli Exclusion Principle. Lecture Notes in Computer Science, 2004, , 185-193.	1.3	3
423	A Physically-Based Electron Mobility Model for Silicon Device Simulation. , 1998, , 312-315.		3
424	Microstructural impact on electromigration: A TCAD study. Facta Universitatis - Series Electronics and Energetics, 2014, 27, 1-11.	0.9	3
425	Gas Sensing with Two-Dimensional Materials Beyond Graphene. , 2021, , .		3
426	Monitoring Arsenic In-Situ Doping with Advanced Models for Poly-Silicon CVD. , 2001, , 124-127.		3
427	Parallelization Strategy for Hierarchical Run Length Encoded Data Structures. , 2011, , .		3
428	Practical Use of a Hierarchical Linear Solver Concept for 3D MOS Device Simulation. , 1993, , 85-88.		3
429	Evaluation of Effective Device Parameters by Comparison of Measured and Simulated C-V Characteristics for Conventional and Pseudomorphic HEMTs. , 1993, , 461-464.		3
430	Polygonal Geometry Reconstruction after Cellular Etching or Deposition Simulation. , 1995, , 50-53.		3
431	Interface effects in ultra-scaled MRAM cells. Solid-State Electronics, 2022, 194, 108373.	1.4	3
432	Two-dimensional transient simulation of the turn-off behavior of a planar MOS-transistor. Solid-State Electronics, 1989, 32, 685-709.	1.4	2

#	Article	IF	Citations
433	Rta-simulations With the 2-d Process Simulator Promis. , 0, , .		2
434	A new open technology CAD system. Microelectronic Engineering, 1991, 15, 217-220.	2.4	2
435	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
436	Self-adaptive space and time grids in device simulation. International Journal for Numerical Methods in Engineering, 1991, 31, 1357-1374.	2.8	2
437	Adaptive Grid for Monte Carlo Simulation of Ion Implantation. , 0, , .		2
438	Trajectory split method for Monte Carlo simulation of ion implantation demonstrated by three-dimensional poly-buffered LOCOS field oxide corners. , 0, , .		2
439	VLSI performance analysis method for low-voltage circuit operation. , 0, , .		2
440	Optimized algorithms for three-dimensional cellular topography simulation. Journal of Technology Computer Aided Design TCAD, 1996, , 1-39.	0.0	2
441	Three-dimensional photoresist exposure and development simulation. , 0, , .		2
442	A new approach to fully unstructured three-dimensional Delaunay mesh generation with improved element quality. , 0, , .		2
443	Monte Carlo simulation of electron transport in doped silicon. , 0, , .		2
444	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
445	Three-dimensional photolithography simulator including rigorous nonplanar exposure simulation for off-axis illumination. , 1998, 3334, 764.		2
446	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
447	Thermal simulations of III/V HEMTs. , 0, , .		2
448	A computationally efficient method for three-dimensional simulation of ion implantation. , 1999, , .		2
449	Comparison of finite element and finite box discretization for three-dimensional diffusion modeling using AMIGOS. , 0, , .		2
450	Simulation of complete VLSI fabrication processes with heterogeneous simulation tools. IEEE Transactions on Semiconductor Manufacturing, 1999, 12, 76-86.	1.7	2

#	Article	IF	Citations
451	Three-dimensional resist development simulation â€" Benchmarks and integration with lithography. Microelectronic Engineering, 2000, 53, 449-452.	2.4	2
452	Electro-thermal effects in mixed-mode device simulation. , 0, , .		2
453	Industrial application of heterostructure device simulation. , 0, , .		2
454	Accurate Simulation of Substrate Currents by Accounting for the Hot Electron Tail Population. , 2001, , .		2
455	Improving SiC lateral DMOSFET reliability under high field stress. Microelectronics Reliability, 2003, 43, 1889-1894.	1.7	2
456	An event bias technique for Monte Carlo device simulation. Mathematics and Computers in Simulation, 2003, 62, 367-375.	4.4	2
457	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
458	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
459	Comparison of numerical quantum device models. , 2003, , .		2
460	Numerical analysis of compound semiconductor RF devices. , 2003, , .		2
461	Mobility modeling in presence of quantum effects. , 2003, , .		2
462	Solution of the Space-dependent Wigner Equation Using a Particle Model. Monte Carlo Methods and Applications, 2004, 10, .	0.8	2
463	Gate leakage models for device simulation. , 0, , .		2
464	Operator-Split Method for Variance Reduction in Stochastic Solutions of the Wigner Equation. Monte Carlo Methods and Applications, 2004, 10, .	0.8	2
465	Comprehensive analysis of vacancy dynamics due to electromigration. , 0, , .		2
466	A Finite Element Time-Domain Algorithm Based on the Alternating-Direction Implicit Method. , 2006, , .		2
467	A Study of Boron Implantation into High Ge Content SiGe Alloys. ECS Transactions, 2006, 3, 667-676.	0.5	2
468	Planarization of Silicon Dioxide and Silicon Nitride Passivation Layers. Journal of Physics: Conference Series, 2007, 61, 1051-1055.	0.4	2

#	Article	IF	Citations
469	Modeling current transport in ultra-scaled field-effect transistors. Microelectronics Reliability, 2007, 47, 11-19.	1.7	2
470	Geometry optimization for carbon nanotube transistors. Solid-State Electronics, 2007, 51, 1565-1571.	1.4	2
471	Electron subband dispersions in ultra-thin silicon films fromÂaÂtwo-band kâ‹…p theory. Journal of Computational Electronics, 2008, 7, 164-167.	2.5	2
472	Analysis of microstructure impact on electromigration. , 2008, , .		2
473	The effect of inelastic phonon scattering on carbon nanotube-based transistor performance. Journal of Physics: Conference Series, 2008, 109, 012029.	0.4	2
474	Stress-Induced Anisotropy of Electromigration in Copper Interconnects. , 2009, , .		2
475	Performance evaluation of graphene nanoribbon infrared photodetectors. , 2009, , .		2
476	The Effect of Microstructure on Electromigration-Induced Failure Development. ECS Transactions, 2009, 23, 345-352.	0.5	2
477	Impact of Confinement of Semiconductor and Band Engineering on Future Device Performance. ECS Transactions, 2009, 19, 15-26.	0.5	2
478	Copper Microstructure Impact on Evolution of Electromigration Induced Voids. , 2009, , .		2
479	The Linear Combination of Bulk Bands-Method for Electron and Hole Subband Calculations in Strained Silicon Films and Surface Layers. , 2009, , .		2
480	Dependence of Injection Velocity and Capacitance of Si Nanowires on Diameter, Orientation, and Gate Bias: An Atomistic Tight-Binding Study. , 2009, , .		2
481	A Modular Tool Chain for High Performance CFD Simulations in Intracranial Aneurysms. AIP Conference Proceedings, 2010, , .	0.4	2
482	Electromigration anisotropy and mechanical stress in modern copper interconnect. , 2010, , .		2
483	Three-dimensional simulation of focused ion beam processing using the level set method. , 2010, , .		2
484	Domain-wall spintronic memristor for capacitance and inductance sensing. , 2011, , .		2
485	Transport properties of spin field-effect transistors built on Si and InAs. , 2011, , .		2
486	A simulator for local anodic oxidation of silicon surfaces. , 2011, , .		2

#	Article	IF	Citations
487	Strained MOSFETs on ordered SiGe dots. Solid-State Electronics, 2011, 65-66, 81-87.	1.4	2
488	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
489	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
490	Acoustic Phonon and Surface Roughness Spin Relaxation Mechanisms in Strained Ultra-Scaled Silicon Films. Advanced Materials Research, 0, 854, 29-34.	0.3	2
491	Modeling the growth of thin SnO2 films using spray pyrolysis deposition. , 2013, , .		2
492	Electromigration induced resistance increase in open TSVs. , 2014, , .		2
493	Influence of device geometry on the non-volatile magnetic flip flop characteristics. , 2014, , .		2
494	ViennaX: a parallel plugin execution framework for scientific computing. Engineering With Computers, 2014, 30, 651-668.	6.1	2
495	Efficient calculation of the two-dimensional Wigner potential. , 2014, , .		2
496	Electromigration reliability of solder bumps. , 2014, , .		2
497	Influence of magnetization variations in the free layer on a non-volatile magnetic flip flop. , 2014, , .		2
498	Improved drive-current into nanoscaled channels using electrostatic lenses. , 2015, , .		2
499	Influence of valley splitting on spin relaxation time in a strained thin silicon film. , 2015, , .		2
500	SOT-MRAM based on 1Transistor-1MTJ-cell structure. , 2015, , .		2
501	Novel Buffered Magnetic Logic Gate Grid. ECS Transactions, 2015, 66, 295-303.	0.5	2
502	Parallelization of the Two-Dimensional Wigner Monte Carlo Method. Lecture Notes in Computer Science, 2015, , 309-316.	1.3	2
503	Using one-dimensional radiosity to model neutral particle flux in high aspect ratio holes. , 2016, , .		2
504	Three-dimensional growth rate modeling and simulation of silicon carbide thermal oxidation. , 2016, , .		2

#	Article	IF	Citations
505	Impact of across-wafer variation on the electrical performance of TSVs. , 2016, , .		2
506	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
507	Current and shot noise at spin-dependent hopping through magnetic tunnel junctions. , 2018, , .		2
508	Accelerating Flux Calculations Using Sparse Sampling. Micromachines, 2018, 9, 550.	2.9	2
509	Parallelized Level-Set Velocity Extension Algorithm for Nanopatterning Applications. , 2019, , .		2
510	CMOS Technology Compatible Magnetic Memories. , 2019, , .		2
511	Emerging CMOS Compatible Magnetic Memories and Logic. IEEE Journal of the Electron Devices Society, 2021, 9, 456-463.	2.1	2
512	Subbands in a nanoribbon of topologically insulating MoS2 in the 1Tâ€² phase. Solid-State Electronics, 2021, 184, 108081.	1.4	2
513	Evaluation of Spin Lifetime in Thin-Body FETs: A High Performance Computing Approach. Lecture Notes in Computer Science, 2015, , 285-292.	1.3	2
514	Phonon-Induced Decoherence in Electron Evolution. Lecture Notes in Computer Science, 2012, , 472-479.	1.3	2
515	An Impact Ionization Model Including Non-Maxwellian And Non-Parabolicity Effects. , 2001, , 46-49.		2
516	Analytical Model for Phosphorus Large Angle Tilted Implantation. , 1995, , 488-491.		2
517	Concept of a Bias-Field-Free Spin-Torque Oscillator Based on Two MgO-MTJs. , 2013, , .		2
518	Full Three-Dimensional Analysis of a Non-Volatile Memory Cell. , 2004, , 129-132.		2
519	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
520	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
521	Efficient Coupling of Monte Carlo and Drift Diffusion Method with Applications to MOSFETs. , 1990, , .		2
522	TCAD Optimization Based on Task-Level Framework Services. , 1995, , 70-73.		2

#	Article	IF	Citations
523	Computation of Torques in Magnetic Tunnel Junctions through Spin and Charge Transport Modeling. , 2020, , .		2
524	Geometric Advection Algorithm for Process Emulation. , 2020, , .		2
525	Atlas, matrices et similaritÃ©s: Petit aperÃ§u dialectomÃ©trique. Computers and the Humanities, 1982, 16, 69-84.	1.4	1
526	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
527	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
528	Process modeling. Microelectronic Engineering, 1989, 9, 605-610.	2.4	1
529	Connection of Network and Device Simulation. , 0, , .		1
530	High performance preconditioning on supercomputers for the 3D device simulator MINIMOS. , 0, , .		1
531	Monte-Carlo â€" Poisson coupling using transport coefficients. Microelectronic Engineering, 1991, 15, 53-56.	2.4	1
532	Device modeling and physics. Physica Scripta, 1991, T35, 293-298.	2.5	1
533	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
534	Dynamic grain-growth and static clustering effects on dopant diffusion in polysilicon. , 0, , .		1
535	Two-dimensional hydrodynamic simulation of High Electron Mobility Transistors using a block iterative scheme in combination with full Newton method. , 0, , .		1
536	A consistent dynamic MOSFET model for low-voltage applications. , 0, , .		1
537	Simulation environment for semiconductor technology analysis. , 0, , .		1
538	A method for unified treatment of interface conditions suitable for device simulation. , 0, , .		1
539	A new approach to ionized-impurity scattering. , 0, , .		1
540	Technology CAD: process and device simulation. , 0, , .		1

#	Article	IF	Citations
541	Technology CAD for smart power devices. , 0, , .		1
542	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
543	Linking three-dimensional topography simulation with high pressure CVD reaction kinetics. , 0, , .		1
544	Monte-Carlo method for direct computation of the small signal kinetic coefficients. , 0, , .		1
545	A Global Self-Heating Model for Device Simulation. , 2000, , .		1
546	Transient model for terminal current noise. Applied Physics Letters, 2002, 80, 607-609.	3.3	1
547	Investigation of the electron mobility in strained Si/sub 1-x/Ge/sub x/ at high Ge composition. , 0, , .		1
548	Effects of Stress-Induced Bandgap Narrowing on Reverse-Bias Junction Behavior. , 2002, , .		1
549	Recent advances in transport modeling for miniaturized CMOS devices. , 0, , .		1
550	An Improved Energy Transport Model Suitable for Simulation of Partially Depleted SOI MOSFETs. Journal of Computational Electronics, 2002, 1, 371-374.	2.5	1
551	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
552	Evaluation of ZrO/sub 2/ gate dielectrics for advanced CMOS devices. , 0, , .		1
553	Silicon carbide accumulation-mode laterally diffused MOSFET. , 0, , .		1
554	Optimization of electrothermal material parameters using inverse modeling [polysilicon fuse interconnects]. , 0, , .		1
555	Three-dimensional topography simulation for deposition and etching processes using a level set method. , 0, , .		1
556	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
557	Interconnects and Propagation of High Frequency Signals. Springer Series in Materials Science, 2004, , 357-385.	0.6	1
558	Analysis of high speed heterostructure devices. , 0, , .		1

#	Article	IF	Citations
559	Numerical Simulation and Optimization for 900V 4H-SiC DiMOSFET Fabrication. Materials Science Forum, 2005, 483-485, 793-796.	0.3	1
560	Three-Dimensional Simulation of Stress Dependent Thermal Oxidation. , 2005, , .		1
561	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
562	Applications of Three-Dimensional Topography Simulation in the Design of Interconnect Lines. , 2005, , .		1
563	Dynamic Mesh Adaptation for Three-Dimensional Electromigration Simulation. , 2005, , .		1
564	Inverse modeling of oxid deposition using measurements of a TEOS CVD process. , 0, , .		1
565	Optimal Design for Carbon Nanotube Transistors. , 2006, , .		1
566	Three-Dimensional Transient Interconnect Analysis With Regard to Mechanical Stress. , 2006, , .		1
567	Simulation of Texture Development Caused Stress Build-Up in Electroplated Copper Lines. , 2006, , .		1
568	Analytical Modeling of Electron Mobility in Strained Germanium. , 2006, , .		1
569	Current Transport in Nanoelectronic Semiconductor Devices. , 0, , .		1
570	Analysis of Hole Transport in Arbitrarily Strained Germanium. ECS Transactions, 2006, 3, 443-450.	0.5	1
571	Low-Field Electron Mobility in Stressed UTB SOI MOSFETs for Different Substrate Orientations. ECS Transactions, 2006, 3, 45-54.	0.5	1
572	Numerical Analysis of Gate Stacks. ECS Transactions, 2006, 3, 299-308.	0.5	1
573	A Comprehensive Study of Carbon Nanotube Based Transistors: The Effects of Geometrical, Interface Barrier, and Scattering Parameters. , 2006, , .		1
574	Three-Dimensional Simulation of Intrinsic Stress Build-Up in Thin Films. , 2006, , .		1
575	Strain-induced anisotropy of electromigration in copper interconnect. , 2007, , .		1
576	The role of inelastic electron-phonon interaction on the on-current and gate delay time of CNT FETs. , 2007, , .		1

#	Article	IF	Citations
577	Carbon Nanotube Based Transistors: A Computational Study. AIP Conference Proceedings, 2007, , .	0.4	1
578	Self-Consistent Wigner Monte Carlo Simulations of Current in Emerging Nanodevices: Role of Tunneling and Scattering. AIP Conference Proceedings, 2007, , .	0.4	1
579	A robust parallel delaunay mesh generation approach suitable for three-dimensional TCAD. , 2008, , .		1
580	Reduction of the dark-current in carbon nanotube photo-detectors. , 2008, , .		1
581	Modeling current transport in carbon nanotube transistors. , 2008, , .		1
582	The effect of microstructure on electromigration induced voids. , 2009, , .		1
583	Three-Dimensional Plasma Etching Simulation using Advanced Ray Tracing and Level Set Techniques. ECS Transactions, 2009, 23, 61-68.	0.5	1
584	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
585	Modeling floating body Z-RAM storage cells. , 2010, , .		1
586	A stochastic model of bipolar resistive switching in metal-oxide-based memory. , 2010, , .		1
587	A Unified Topological Layer for Finite Element Space Discretization. , 2010, , .		1
588	Modeling demands for nanoscale devices. , 2010, , .		1
589	Stochastic modeling of the resistive switching mechanism in oxide-based memory. , 2010, , .		1
590	Strained MOSFETs on ordered SiGe dots. , 2010, , .		1
591	High-quality mesh generation based on orthogonal software modules. , 2011, , .		1
592	A compact model for early electromigration lifetime estimation. , 2011, , .		1
593	Integration of atomistic and continuum-level electromigration models. , 2011, , .		1
594	Compact modeling of interconnect reliability. , 2011, , .		1

#	Article	IF	Citations
595	Modeling Electromigration Lifetimes of Copper Interconnects. ECS Transactions, 2011, 39, 163-169.	0.5	1
596	Subband Structure Engineering in Silicon-On-Insulator FinFETs Using Confinement. ECS Transactions, 2011, 35, 117-122.	0.5	1
597	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
598	Towards a free open source process and device simulation framework. , 2012, , .		1
599	MTJs with a composite free layer for high-speed spin transfer torque RAM: Micromagnetic simulations. , 2012, , .		1
600	Reduction of surface roughness induced spin relaxation in SOI MOSFETs. , 2012, , .		1
601	Formation and movement of voids in copper interconnect structures. , 2012, , .		1
602	Physically based models of electromigration. , 2013, , .		1
603	Stress estimation in open tungsten TSV. , 2013, , .		1
604	Influence of temperature on the standard deviation of electromigration lifetimes. , 2013, , .		1
605	Simulation study of an electrically read- and writable magnetic logic gate. Microelectronic Engineering, 2013, 112, 188-192.	2.4	1
606	Strain-induced reduction of surface roughness dominated spin relaxation in MOSFETs. , 2013, , .		1
607	Using strain to increase the reliability of scaled spin MOSFETs. , 2013, , .		1
608	Template-based mesh generation for semiconductor devices. , 2014, , .		1
609	Manufacturing of 3D integrated sensors and circuits. , 2014, , .		1
610	Increasing mobility and spin lifetime with shear strain in thin silicon films. , 2014, , .		1
611	Highly flexible and reusable finite element simulations with ViennaX. Journal of Computational and Applied Mathematics, 2014, 270, 484-495.	2.0	1
612	Process and reliability of SF<inf>6</inf>/O<inf>2</inf> plasma etched copper TSVs. , 2014, , .		1

#	Article	IF	Citations
613	Magnetic tunnel junctions for future memory and logic-in-memory applications. , 2014, , .		1
614	Spray pyrolysis deposition for gas sensor integration in the backend of standard CMOS processes. , 2014, , .		1
615	Compact model for solder bump electromigration failure. , 2015, , .		1
616	Injection direction sensitive spin lifetime model in a strained thin silicon film. , 2015, , .		1
617	Transformation invariant local element size specification. Applied Mathematics and Computation, 2015, 267, 195-206.	2.2	1
618	Silicon-on-insulator for spintronic applications: spin lifetime and electric spin manipulation. ChemistrySelect, 2016, 1, .	1.5	1
619	Stress Evolution During Nanoindentation in Open TSVs. IEEE Transactions on Device and Materials Reliability, 2016, 16, 470-474.	2.0	1
620	The exploitation of magnetization orientation encoded spin-transfer torque for an ultra dense non-volatile magnetic shift register. , 2016, , .		1
621	Neumann Series Analysis of the Wigner Equation Solution. Mathematics in Industry, 2016, , 701-707.	0.3	1
622	Modeling electromigration in nanoscaled copper interconnects. , 2017, , .		1
623	Non-volatility by spin in modern nanoelectronics. , 2017, , .		1
624	Steady-State Empirical Model for Electrical Activation of Silicon-Implanted Gallium Nitride. , 2018, , .		1
625	Enhanced Sensing Performance of Integrated Gas Sensor Devices. Proceedings (mdpi), 2018, 2, 1508.	0.2	1
626	Field-free Fast Reliable Deterministic Switching in Perpendicular Spin-Orbit Torque MRAM Cells. , 2018, , .		1
627	Unified feature scale model for etching in SF<inf>6</inf> and Cl plasma chemistries. , 2018, , .		1
628	CMOS-Compatible Gas Sensors. , 2019, , .		1
629	Surface Morphology of 4H-SiC after Thermal Oxidation. Materials Science Forum, 0, 963, 180-183.	0.3	1
630	Evaluation of Serial and Parallel Shared-Memory Distance-1 Graph Coloring Algorithms. Lecture Notes in Computer Science, 2019, , 106-114.	1.3	1

#	Article	IF	Citations
631	Perpendicular STT-MRAM Switching at Fixed Voltage and at Fixed Current. , 2020, , .		1
632	Free Open Source Mesh Healing for TCAD Device Simulations. Lecture Notes in Computer Science, 2015, , 293-300.	1.3	1
633	On the Validity of the Relaxation Time Approximation for Macroscopic Transport Models. , 2004, , 109-112.		1
634	Monte Carlo Simulation of Ion Implantation in Silicon-Germanium Alloys. , 2004, , 169-172.		1
635	Variance and Covariance Estimation in Stationary Monte Carlo Device Simulation. , 2001, , 140-143.		1
636	Topologically Protected and Conventional Subbands in a 1Tâ€™ -MoS2 Nanoribbon Channel. , 2020, , .		1
637	Comprehensive Modeling of Coupled Spin and Charge Transport through Magnetic Tunnel Junctions. , 2020, , .		1
638	HOT CARRIER EFFECTS WITHIN MACROSCOPIC TRANSPORT MODELS. Selected Topics in Electornics and Systems, 2003, , 173-201.	0.2	1
639	Concept of a SOT-MRAM Based on 1Transistor-1MTJ-Cell Structure. , 2015, , .		1
640	A Methodology for Deep Sub-Quartermicron CMOS Technology Characterization. , 2001, , 428-431.		1
641	Three-Dimensional Analysis of Schottky Barrier Carbon Nanotube Field Effect Transistors. , 2004, , 149-152.		1
642	Particle Model of the Scattering-Induced Wigner Function Correction. Lecture Notes in Computer Science, 2010, , 411-418.	1.3	1
643	A Monte Carlo Simulator for Non-contact Mode Atomic Force Microscopy. Lecture Notes in Computer Science, 2012, , 447-454.	1.3	1
644	A Lightweight Task Graph Scheduler for Distributed High-Performance Scientific Computing. Lecture Notes in Computer Science, 2013, , 563-566.	1.3	1
645	Distributed High-Performance Parallel Mesh Generation with ViennaMesh. Lecture Notes in Computer Science, 2013, , 548-552.	1.3	1
646	JANAP â€" Ein Programm Zur Simulation Des Zeitverhaltens Von Nichtlinearen Elektrischen Schaltungen. Informatik-Fachberichte, 1984, , 149-153.	0.2	1
647	Parallel and Distributed TCAD Simulations using Dynamic Load Balancing. , 1998, , 89-92.		1
648	Accurate Layout-Based Interconnect Analysis. , 1998, , 336-339.		1

#	Article	IF	Citations
649	The Influence of Electrostatic Lenses on Wave Packet Dynamics. Lecture Notes in Computer Science, 2015, , 277-284.	1.3	1
650	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
651	Influence of Current Redistribution in Switching Models for Perpendicular STT-MRAM. ECS Meeting Abstracts, 2020, MA2020-01, 1389-1389.	0.0	1
652	Parallel Correction for Hierarchical Re-Distancing Using the Fast Marching Method. Studies in Computational Intelligence, 2021, , 438-451.	0.9	1
653	Parallelized Construction of Extension Velocities for the Level-Set Method. Lecture Notes in Computer Science, 2020, , 348-358.	1.3	1
654	Combined Process Simulation and Emulation of an SRAM Cell of the 5nm Technology Node. , 2021, , .		1
655	Finite Element Method Approach to MRAM Modeling. , 2021, , .		1
656	Chapter 22. Monte Carlo Investigations of Electron Decoherence due to Phonons. , 2012, , 203-212.		1
657	Chapter 11. A Two-Dimensional Lorentzian Distribution for an Atomic Force Microscopy Simulator. , 2012, , 97-104.		1
658	Advances in modeling emerging magnetoresistive random access memories: from finite element methods to machine learning approaches. , 2022, , .		1
659	Spin Transfer Torques in Ultra-Scaled MRAM Cells. , 2022, , .		1
660	Three-dimensional topography simulation based on a level set method [deposition and etching processes]. , 0, , .		0
661	The Solution of Systems of Nonlinear Algebraic Equations. , 1984, , 202-213.		0
662	The Solution of Sparse Systems of Linear Equations. , 1984, , 214-257.		0
663	A Glimpse on Results. , 1984, , 258-285.		0
664	MESFET Analysis with MINIMOS. , 1989, , 92-96.		0
665	GaAs MESFET simulation with MINIMOS. , 0, , .		0
666	An integrated technology CAD environment. , 0, , .		0

#	Article	IF	Citations
667	Three-dimensional simulation of semiconductor devices on supercomputers. , 1991, , .		0
668	Two Dimensional Simulation of Thermal Runaway in a Nonplanar GTO-Thyristor. , 0, , .		0
669	A Monte Carlo MOSFET simulator based on a new method for the Poisson-transport iteration. , 0, , .		0
670	Electrothermai Analysis Oflatch-up In An IGT. , 0, , .		0
671	Simulation of ion implantation using the four-parameter kappa distribution function. , 0, , .		0
672	Adaptive tessellation for the three-dimensional simulation of doping profiles. , 0, , .		0
673	Investigation of channeling in field oxide corners by three-dimensional Monte Carlo simulation of ion implantation. , 0, , .		0
674	ProzeÃŸsimulation: Stand der Technik. , 1997, , 203-243.		0
675	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
676	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
677	VLSI performance metric based on minimum TCAD simulations. Journal of Technology Computer Aided Design TCAD, 1996, , 1-29.	0.0	0
678	Influence of backside doping on the nonlinear capacitances of a PHEMT affecting the VCO frequency characteristics. , 1997, , .		0
679	Influence of dopant species on electron mobility in InP. , 0, , .		0
680	VLSI performance metric based on minimum TCAD simulations. , 0, , .		0
681	A backward Monte Carlo method for simulation of electron quantum kinetics in semiconductors. , 0, , .		0
682	Incorporation of Equipment Simulation into Integrated Feature Scale Profile Evolution. , 2000, , .		0
683	Design optimization of multi-barrier tunneling devices using the transfer-matrix method. , 0, , .		0
684	Optimization of high-speed SiGe HBTs. , 0, , .		0

#	Article	IF	Citations
685	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
686	Simulation of ferroelectric thin films. Radiation Effects and Defects in Solids, 2001, 156, 157-161.	1.2	0
687	Reliable prediction of deep sub-quarter micron CMOS technology performance. , 0, , .		0
688	Optimization of Industrial High Voltage Structures by Three-Dimensional Diffusion Simulation. , 2001, , .		0
689	Three-dimensional analysis of leakage currents in III-V HBTs. , 0, , .		0
690	A new gate current model accounting for a non-Maxwellian electron energy distribution function. , 0, , .		0
691	A strategy to enforce the discrete minimax principle on finite element meshes. , 0, , .		0
692	A calibrated model for silicon self-interstitial cluster formation and dissolution. , 0, , .		0
693	Electromigration induced evolution of voids in current crowding areas of interconnects. , 0, , .		0
694	Macro-modeling for MOS device simulation. , 0, , .		0
695	From feature scale simulation to backend simulation for a 100 nm CMOS process. , 0, , .		0
696	Rigorous modeling of high-speed semiconductor devices. , 0, , .		0
697	A multistage smoothing algorithm for coupling cellular and polygonal datastructures. , 2003, , .		0
698	A method for generating structurally aligned high quality grids and its application to the simulation of a trench gate MOSFET. , 0, , .		0
699	Statistical simulation of gate dielectric wearout, leakage, and breakdown. Microelectronics Reliability, 2004, 44, 1879-1884.	1.7	0
700	Rigorous modeling of high-speed semiconductor devices. Microelectronics Reliability, 2004, 44, 889-897.	1.7	0
701	Direct extraction feature for scattering parameters of SiGe-HBTs. Applied Surface Science, 2004, 224, 365-369.	6.1	0
702	Gate current modeling for MOSFETs. , 0, , .		0

#	Article	IF	Citations
703	<title>Transient electro-thermal investigations of interconnect structures exposed to mechanical stress</title>. , 2005, , .		0
704	An advanced equation assembly module. Engineering With Computers, 2005, 21, 151-163.	6.1	0
705	Shot Noise Suppression and Enhancement at 2D Hopping and in Single-Electron Arrays. AIP Conference Proceedings, 2005, , .	0.4	0
706	Tunneling and intersubband coupling in ultra-thin body double-gate mosfets. , 0, , .		0
707	Numerical simulation of selected semiconductor devices. , 0, , .		0
708	Monte Carlo Simulation of Ion Implantation for Doping of Strained Silicon MOSFETs. , 2005, , .		0
709	Modeling Current Transport in Ultra-Scaled Field Effect Transistors. , 0, , .		0
710	A Tensorial High-Field Electron Mobility Model for Strained Silicon. , 2006, , .		0
711	Planarization of Passivation Layers during Manufacturing Processes of Image Sensors. , 2006, , .		0
712	Current Flow in Upcoming Microelectronic Devices. , 2006, , .		0
713	The Effect of Electron-Phonon Interaction on the Static and Dynamic Response of CNTFETs. , 2006, , .		0
714	Monte Carlo Simulation of Boron Implantation into (100) Germanium. , 2006, , .		0
715	Strain Effects on Quasi-Bound State Tunneling in Advanced SOI CMOS Technologies. , 2006, , .		0
716	Optimization Issue in Interconnect Analysis. , 0, , .		0
717	Optimizing the Performance of Carbon Nanotube Transistors. , 0, , .		0
718	A Tensorial High-Field Electron Mobility Model for Strained Silicon. , 0, , .		0
719	Efficient Calculation of Lifetime Based Direct Tunneling Through Stacked Dielectrics. ECS Transactions, 2006, 1, 693-703.	0.5	0
720	Optimizing the Performance of Carbon Nanotube Transistors. , 2006, , .		0

#	Article	IF	Citations
721	Three-dimensional on-chip inductance and resistance extraction. , 2007, , .		0
722	Modeling of Advanced Semiconductor Devices. ECS Transactions, 2007, 4, 207-216.	0.5	0
723	Electromigration Modeling for Interconnect Structures in Microelectronics. ECS Transactions, 2007, 9, 295-304.	0.5	0
724	Three-dimensional simulation of sacrificial etching. , 2007, , .		0
725	Investigation of Intrinsic Stress Effects in Cantilever Structures. , 2007, , .		0
726	Two-Band k·p model for the conduction band in silicon: impact of Strain and confinement on band structure and mobility. , 2007, , .		0
727	Low-Field Mobility in Strained Silicon Inversion Layers and UTB MOSFETs for Different Substrate Orientations. AIP Conference Proceedings, 2007, , .	0.4	0
728	Comparison of deposition models for a TEOS LPCVD process. Microelectronics Reliability, 2007, 47, 623-625.	1.7	0
729	VSP â€“ A gate stack analyzer. Microelectronics Reliability, 2007, 47, 704-708.	1.7	0
730	Three-dimensional simulation of sacrificial etching. Microsystem Technologies, 2008, 14, 665-671.	2.0	0
731	<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
732	Stress-induced valley splitting in silicon thin films. , 2008, , .		0
733	Current transport in carbon nanotube transistors. , 2008, , .		0
734	Radiated emission from the slot of a slim cubical enclosure with multiple sources inside. , 2008, , .		0
735	Comprehensive modeling of electromigration induced interconnect degradation mechanisms. , 2008, , .		0
736	Mobility Modeling in Advanced MOSFETs with Ultra-Thin Silicon Body under Stress. ECS Transactions, 2008, 14, 159-168.	0.5	0
737	Current transport in carbon nanotube transistors. , 2008, , .		0
738	Calculation of the radiation from the slot of a slim enclosure with a cavity resonator model. , 2008, , .		0

#	Article	IF	Citations
739	Analysis of Electromigration in Dual-Damascene Interconnect Structures. ECS Transactions, 2008, 14, 337-348.	0.5	0
740	TCAD solutions for submicron copper interconnect. , 2008, , .		0
741	Subband parameters in strained (110) silicon films from the Hensel-Hasegawa-Nakayama model of the conduction band. , 2009, , .		0
742	The effect of microstructure on the electromigration lifetime distribution. , 2009, , .		0
743	Modeling Techniques for Strained CMOS Technology. ECS Transactions, 2009, 25, 3-18.	0.5	0
744	Impact of Confinement and Stress on the Subband Parameters in Ultra-Thin Silicon Films. ECS Transactions, 2009, 23, 389-396.	0.5	0
745	Classical Approximation of the Scattering Induced Wigner Correction Equation. , 2009, , .		0
746	Electromigration failure development in modern dual-damascene interconnects. , 2009, , .		0
747	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
748	Valley splitting in thin silicon films from a two-band k·p model. , 2009, , .		0
749	A Fast Void Detection Algorithm for Three-Dimensional Deposition Simulation. , 2009, , .		0
750	Scaling of advanced floating body Z-RAM storage cells: A modeling approach. , 2009, , .		0
751	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
752	Relation between the PCB near field and the common mode coupling from the PCB to cables. , 2010, , .		0
753	A Dispatched Covariant Type System for Numerical Applications in C++. , 2010, , .		0
754	A Monte Carlo simulation of reproducible hysteresis in RRAM. , 2010, , .		0
755	Impact of parameter variability on electromigration lifetime distribution. , 2010, , .		0
756	Multilevel simulation for the investigation of fast diffusivity paths. , 2011, , .		0

#	Article	IF	Citations
757	Properties of InAs- and silicon-based ballistic spin field-effect transistors. , 2011, , .		0
758	A Level Set simulator for nanooxidation using non-contact atomic force microscopy. , 2011, , .		0
759	Modeling of advanced memories. , 2011, , .		0
760	Properties of InAs- and silicon-based ballistic spin field-effect transistors operated at elevated temperature. , 2011, , .		0
761	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
762	Ballistic Transport Properties of Spin Field-Effect Transistors Built on Silicon and InAs Fins. ECS Transactions, 2011, 39, 155-162.	0.5	0
763	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
764	Role of the physical scales on the transport regime. , 2012, , .		0
765	Atomistic method for analysis of electromigration. , 2012, , .		0
766	Particle-grid techniques for semiclassical and quantum transport simulations. , 2012, , .		0
767	New trends in microelectronics: Towards an ultimate memory concept. , 2012, , .		0
768	Electrothermal analysis of In<inf>0.12</inf>Al<inf>0.88</inf>N/GaN HEMTs. , 2012, , .		0
769	Recent developments in advanced memory modeling. , 2012, , .		0
770	New trends in microelectronics: Towards an ultimate memory concept. , 2012, , .		0
771	Ab initio method for electromigration analysis. , 2012, , .		0
772	Electromigration induced stress in open TSVs. , 2013, , .		0
773	Electromigration enhanced growth of intermetallic compound in solder bumps. , 2013, , .		0
774	Transverse domain wall formation in a free layer: A mechanism for switching failure in a MTJ-based STT-MRAM. , 2013, , .		0

#	Article	IF	Citations
775	Electromigration analyses of open TSVs. , 2013, , .		0
776	Spin Lifetime Enhancement by Shear Strain in Thin Silicon-On-Insulator Films. ECS Transactions, 2013, 53, 203-208.	0.5	0
777	Influence of the valley degeneracy on spin relaxation in thin silicon films. , 2013, , .		0
778	Analysis of solder bump electromigration reliability. , 2013, , .		0
779	Evaluation of spin lifetime in strained UT2B silicon-on-insulator MOSFETs. , 2013, , .		0
780	Structural optimization of MTJs with a composite free layer. Proceedings of SPIE, 2013, , .	0.8	0
781	Electromigration induced failure of solder bumps and the role of IMC. , 2014, , .		0
782	Modeling of microstructural effects on electromigration failure. , 2014, , .		0
783	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
784	Electromigration in solder bumps: A mean-time-to-failure TCAD study. , 2014, , .		0
785	Spin lifetime in strained silicon films. , 2014, , .		0
786	Electromigration reliability of open TSV structures. , 2014, , .		0
787	Spin diffusion and the role of screening effects in semiconductors. , 2014, , .		0
788	Three-dimensional simulation for the reliability and electrical performance of through-silicon vias. , 2014, , .		0
789	Frequency dependence study of a bias field-free nano-scale oscillator. , 2014, , .		0
790	Modeling of spin-based silicon technology. , 2014, , .		0
791	Compact modeling of memristive IMP gates for reliable stateful logic design. , 2014, , .		0
792	Modeling spin-based electronic devices. , 2014, , .		0

#	Article	IF	Citations
793	Memory-efficient particle annihilation algorithm for Wigner Monte Carlo simulations. , 2015, , .		0
794	Improving the performance of a non-volatile magnetic flip flop by exploiting the spin Hall effect. , 2015, , .		0
795	Progress in Magnetoresistive Memory: Magnetic Tunnel Junctions with a Composite Free Layer. , 2015, , .		0
796	Spin-based devices for future microelectronics. , 2015, , .		0
797	(Invited) Spin-Based Silicon and CMOS-Compatible Devices. ECS Transactions, 2015, 66, 223-231.	0.5	0
798	CMOS-compatible spintronic devices. , 2015, , .		0
799	Effects of the Deposition Process Variation on the Performance of Open TSVs. , 2016, , .		0
800	Direction dependent three-dimensional silicon carbide oxidation growth rate calculations. , 2016, , .		0
801	Influence of spin relaxation on trap-assisted resonant tunneling in ferromagnet-oxide-semiconductor structures. , 2016, , .		0
802	Using one-dimensional radiosity to model neutral flux in convex high aspect ratio structures. , 2016, , .		0
803	Magnetic field dependent tunneling magnetoresistance through a quantum well between ferromagnetic contacts. , 2016, , .		0
804	Layer coupling and read disturbances in a buffered magnetic logic environment. Proceedings of SPIE, 2016, , .	0.8	0
805	Electron Momentum and Spin Relaxation in Silicon Films. Mathematics in Industry, 2016, , 695-700.	0.3	0
806	Silicon-on-Insulator for Spintronic Applications: Spin Lifetime and Electric Spin Manipulation. , 0, , .		0
807	Accelerated direct flux calculations using an adaptively refined icosahedron. , 2017, , .		0
808	Nanowire FETs. , 2018, , .		0
809	Simulation of Injection Currents into Disordered Molecular Conductors. Materials Today: Proceedings, 2018, 5, 17472-17477.	1.8	0
810	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

#	Article	IF	Citations
811	Process Simulation in the Browser: Porting ViennaTS using WebAssembly. , 2019, , .		0
812	Spin-Based CMOS-Compatible Memories. , 2019, , .		0
813	Novel Numerical Dissipation Scheme for Level-Set Based Anisotropic Etching Simulations. , 2019, , .		0
814	Combining Perpendicular and Shape Anisotropy for Optimal Switching of Advanced Spin-Orbit Torque Memory Cells. , 2019, , .		0
815	Current and shot noise at spin-dependent hopping through junctions with ferromagnetic contacts. Solid-State Electronics, 2019, 159, 43-50.	1.4	0
816	Efficient Magnetic Field-Free Switching of a Symmetric Perpendicular Magnetic Free Layer for Advanced SOT-MRAM. , 2019, , .		0
817	A Flexible Shared-Memory Parallel Mesh Adaptation Framework. , 2019, , .		0
818	Switching Speedup of the Magnetic Free Layer of Advanced SOT-MRAM. , 2019, , .		0
819	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
820	Ballistic Conductance in a Topological 1T '-MoS2 Nanoribbon. Semiconductors, 2020, 54, 1713-1715.	0.5	0
821	Influence of Current Redistribution in Switching Models for Perpendicular STT-MRAM. ECS Transactions, 2020, 97, 159-164.	0.5	0
822	Event Biasing. Modeling and Simulation in Science, Engineering and Technology, 2021, , 107-115.	0.6	0
823	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
824	Stationary Quantum Particle Attributes. Modeling and Simulation in Science, Engineering and Technology, 2021, , 153-173.	0.6	0
825	Small Signal Analysis. Modeling and Simulation in Science, Engineering and Technology, 2021, , 63-72.	0.6	0
826	Monte Carlo Computing. Modeling and Simulation in Science, Engineering and Technology, 2021, , 39-43.	0.6	0
827	Concepts of Device Modeling. Modeling and Simulation in Science, Engineering and Technology, 2021, , 3-14.	0.6	0
828	Hierarchy of Kinetic Models. Modeling and Simulation in Science, Engineering and Technology, 2021, , 147-152.	0.6	0

#	Article	IF	Citations
829	General Transport: Self-Consistent Mixed Problem. Modeling and Simulation in Science, Engineering and Technology, 2021, , 93-105.	0.6	0
830	The Semiconductor Model: Fundamentals. Modeling and Simulation in Science, Engineering and Technology, 2021, , 15-23.	0.6	0
831	Transport Theories in Phase Space. Modeling and Simulation in Science, Engineering and Technology, 2021, , 25-38.	0.6	0
832	Wigner Function Modeling. Modeling and Simulation in Science, Engineering and Technology, 2021, , 119-121.	0.6	0
833	Electromagnetic Coherent Electron Control. , 2021, , .		0
834	Reinforcement learning approach for deterministic SOT-MRAM switching. , 2021, , .		0
835	Two-pulse switching scheme and reinforcement learning for energy efficient SOT-MRAM simulations. Solid-State Electronics, 2021, 185, 108075.	1.4	0
836	Homogeneous Transport: Stochastic Approach. Modeling and Simulation in Science, Engineering and Technology, 2021, , 55-61.	0.6	0
837	Evolution in a Quantum Wire. Modeling and Simulation in Science, Engineering and Technology, 2021, , 123-145.	0.6	0
838	Temperature Increase in MRAM at Writing: A Finite Element Approach. , 2021, , .		0
839	Improving failure rates in pulsed SOT-MRAM switching by reinforcement learning. Microelectronics Reliability, 2021, 126, 114231.	1.7	0
840	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
841	Analysis of Ultra Short MOSFETs with High-k Gate Dielectrics. , 2001, , 412-415.		0
842	A Review of Modeling Issues for RF Heterostructure Device Simulation. , 2001, , 432-435.		0
843	A Comparative Study Of Two Numerical Techniques For Inductance Calculation In Interconnect Structures. , 2001, , 254-257.		0
844	Greenâ€™s Function Approach for Three-Dimensional Diffusion Simulation of Industrial High Voltage Applications. , 2001, , 408-411.		0
845	Three-dimensional device optimization by Green's functions. EPJ Applied Physics, 2003, 21, 103-106.	0.7	0
846	Grafische Darstellungsmittel. , 2003, , 9-17.		0

#	Article	IF	Citations
847	Numerik. , 2003, , 311-318.		0
848	Datenstrukturen. , 2003, , 261-297.		0
849	Ein exemplarisches Software-Projekt. , 2003, , 331-352.		0
850	Abgeleitete Datentypen. , 2003, , 211-237.		0
851	Dateien. , 2003, , 239-252.		0
852	Die Entwicklungsumgebung. , 2003, , 19-32.		0
853	Dynamischer Speicher. , 2003, , 299-310.		0
854	Eingabe â€" Ausgabe. , 2003, , 67-76.		0
855	Zeichenketten. , 2003, , 195-210.		0
856	Zeiger. , 2003, , 175-193.		0
857	Erste Schritte. , 2003, , 33-40.		0
858	Iterationen. , 2003, , 109-129.		0
859	Accurate Modeling of Lattice Site-Dependent Ionization Level of Impurities in Î±-SiC Devices. , 2004, , 295-298.		0
860	Anisotropic Laplace Refinement for Three-Dimensional Oxidation Simulation. , 2004, , 165-168.		0
861	Quantum Correction to the Semiclassical Electron-Phonon Scattering Operator. Lecture Notes in Computer Science, 2006, , 594-601.	1.3	0
862	A Computational Framework for Topological Operations. Lecture Notes in Computer Science, 2007, , 781-790.	1.3	0
863	Numerical Simulation Of Biochemical Behaviour Of Biosensors With Perforated Membrane. , 2007, , .		0
864	Analysis of Electromigration in Dual-Damascene Interconnect Structures. Journal of Integrated Circuits and Systems, 2009, 4, 67-72.	0.4	0

#	Article	IF	Citations
865	Dynamischer Speicher. , 2010, , 303-314.		0
866	Grafische Darstellungsmittel. , 2010, , 9-17.		0
867	Zeichenketten. , 2010, , 199-214.		0
868	Felder. , 2010, , 163-178.		0
869	Eingabe â€" Ausgabe. , 2010, , 67-76.		0
870	Rekursive Funktionen. , 2010, , 257-264.		0
871	Numerik. , 2010, , 315-322.		0
872	Fehlerbehandlung. , 2010, , 323-334.		0
873	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
874	Die Entwicklungsumgebung. , 2010, , 19-32.		0
875	Iterationen. , 2010, , 113-133.		0
876	Stochastic Algorithm for Solving the Wigner-Boltzmann Correction Equation. Lecture Notes in Computer Science, 2011, , 95-102.	1.3	0
877	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
878	Multiple purpose spin transfer torque operated devices. Facta Universitatis - Series Electronics and Energetics, 2013, 26, 227-238.	0.9	0
879	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
880	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
881	Numerische Simulation Von Halbleiterbauelementen. , 1984, , 154-158.		0
882	Die Erweiterung von MINIMOS auf ein 3D Simulationsprogramm. , 1987, , 116-121.		0

#	Article	IF	Citations
883	Zwei-Dimensionale Transiente Simulation des Einschaltverhaltens eines Planaren MOS-Transistors. , 1987, , 100-105.		0
884	Analysis of a CMOS-Compatible Vertical Bipolar Transistor. , 1993, , 261-264.		0
885	A Programmable Tool for Interactive Wafer-State Level Data Processing. , 1995, , 58-61.		0
886	Two-Dimensional Transient Simulation of Charge-Coupled Devices Using MINIMOS NT. , 1995, , 440-443.		0
887	Two-Dimensional Simulation of Ferroelectric Nonvolatile Memory Cells. , 1998, , 368-371.		0
888	Simulation of AVC Measurements. , 1998, , 284-287.		0
889	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
890	Two-Dimensional Simulation of Ferroelectric Memory Cells. Journal of the Korean Physical Society, 1999, 35, S104-S106.	0.7	0
891	Spin-Based CMOS-Compatible Devices. Lecture Notes in Computer Science, 2015, , 42-49.	1.3	0
892	INSTITUT FÃœR MIKROELEKTRONIK / INSTITUTE FOR MICROELECTRONICS. , 2016, , 57-62.		0
893	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
894	Spin correlations at hopping in magnetic structures: from tunneling magnetoresistance to single-spin transistor. , 2018, , .		0
895	Magnetic field-free deterministic switching of a perpendicular magnetic layer by spin-orbit torques. , 2019, , .		0
896	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
897	Subband Structure and Ballistic Conductance of a Molybdenum Disulfide Nanoribbon in Topological 1Tâ€™ Phase: A kÂ·p Study. , 2020, , .		0
898	Comprehensive modeling of coupled spin-charge transport and magnetization dynamics in STT-MRAM cells. , 2020, , .		0
899	Reduced Current Spin-Orbit Torque Switching of a Perpendicularly Magnetized Free Layer. , 2020, , .		0
900	Reinforcement Learning Approach for Sub-Critical Current SOT-MRAM Switching. , 2021, , .		0

#	Article	IF	Citations
901	Spin and Charge Drift-Diffusion Approach to Torque Computation in Magnetic Tunnel Junctions. , 2021, , .		0
902	Three-Dimensional Sacrificial Etching. , 2007, , 433-436.		0
903	On the Magnetic Field Extraction for On-Chip Inductance Calculation. , 2007, , 349-352.		0
904	Intrinsic Stress Build-Up During Volmer-Weber Crystal Growth. , 2007, , 37-40.		0
905	Reinforcement Learning to Reduce Failures in SOT-MRAM Switching. , 2021, , .		0
906	Reinforcement learning to reduce failures in SOT-MRAM switching. Microelectronics Reliability, 2022, 135, 114570.	1.7	0