

Siegfried Selberherr

List of Publications by Year in descending order

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905
papers

9,818
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81434

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120465

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g-index

973
all docs

973
docs citations

973
times ranked

5510
citing authors

#	ARTICLE	IF	CITATIONS
1	Advances in modeling emerging magnetoresistive random access memories: from finite element methods to machine learning approaches. , 2022, , .		1
2	A review of quantum transport in field-effect transistors. Semiconductor Science and Technology, 2022, 37, 043001.	1.0	11
3	Temperature increase in STT-MRAM at writing: A fully three-dimensional finite element approach. Solid-State Electronics, 2022, 193, 108269.	0.8	5
4	Interface effects in ultra-scaled MRAM cells. Solid-State Electronics, 2022, 194, 108373.	0.8	3
5	Finite element modeling of spin-orbit torques. Solid-State Electronics, 2022, 194, 108323.	0.8	4
6	Double Reference Layer STT-MRAM Structures with Improved Performance. Solid-State Electronics, 2022, 194, 108335.	0.8	6
7	Reinforcement learning to reduce failures in SOT-MRAM switching. Microelectronics Reliability, 2022, 135, 114570.	0.9	0
8	Spin Transfer Torques in Ultra-Scaled MRAM Cells. , 2022, , .		1
9	Numerical Analysis of Deterministic Switching of a Perpendicularly Magnetized Spin-Orbit Torque Memory Cell. IEEE Journal of the Electron Devices Society, 2021, 9, 61-67.	1.2	6
10	Microstructure and Granularity Effects in Electromigration. IEEE Journal of the Electron Devices Society, 2021, 9, 476-483.	1.2	3
11	Event Biasing. Modeling and Simulation in Science, Engineering and Technology, 2021, , 107-115.	0.4	0
12	Self-consistent Monte Carlo Solution of Wigner and Poisson Equations Using an Efficient Multigrid Approach. Studies in Computational Intelligence, 2021, , 60-67.	0.7	0
13	Stationary Quantum Particle Attributes. Modeling and Simulation in Science, Engineering and Technology, 2021, , 153-173.	0.4	0
14	Small Signal Analysis. Modeling and Simulation in Science, Engineering and Technology, 2021, , 63-72.	0.4	0
15	Monte Carlo Computing. Modeling and Simulation in Science, Engineering and Technology, 2021, , 39-43.	0.4	0
16	A computational approach for investigating Coulomb interaction using Wigner-Poisson coupling. Journal of Computational Electronics, 2021, 20, 775-784.	1.3	7
17	Concepts of Device Modeling. Modeling and Simulation in Science, Engineering and Technology, 2021, , 3-14.	0.4	0
18	Hierarchy of Kinetic Models. Modeling and Simulation in Science, Engineering and Technology, 2021, , 147-152.	0.4	0

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19	General Transport: Self-Consistent Mixed Problem. Modeling and Simulation in Science, Engineering and Technology, 2021, , 93-105.	0.4	0
20	The Semiconductor Model: Fundamentals. Modeling and Simulation in Science, Engineering and Technology, 2021, , 15-23.	0.4	0
21	Transport Theories in Phase Space. Modeling and Simulation in Science, Engineering and Technology, 2021, , 25-38.	0.4	0
22	Wigner Function Modeling. Modeling and Simulation in Science, Engineering and Technology, 2021, , 119-121.	0.4	0
23	Emerging CMOS Compatible Magnetic Memories and Logic. IEEE Journal of the Electron Devices Society, 2021, 9, 456-463.	1.2	2
24	Reviewâ€™ Modeling Methods for Analysis of Electromigration Degradation in Nano-Interconnects. ECS Journal of Solid State Science and Technology, 2021, 10, 035003.	0.9	10
25	Electromagnetic Coherent Electron Control. , 2021, , .		0
26	Optimization of a Spin-Orbit Torque Switching Scheme Based on Micromagnetic Simulations and Reinforcement Learning. Micromachines, 2021, 12, 443.	1.4	10
27	Reinforcement learning approach for deterministic SOT-MRAM switching. , 2021, , .		0
28	Subbands in a nanoribbon of topologically insulating MoS2 in the 1Tâ€™ phase. Solid-State Electronics, 2021, 184, 108081.	0.8	2
29	Two-pulse switching scheme and reinforcement learning for energy efficient SOT-MRAM simulations. Solid-State Electronics, 2021, 185, 108075.	0.8	0
30	Coupled spin and charge drift-diffusion approach applied to magnetic tunnel junctions. Solid-State Electronics, 2021, 186, 108103.	0.8	17
31	Homogeneous Transport: Stochastic Approach. Modeling and Simulation in Science, Engineering and Technology, 2021, , 55-61.	0.4	0
32	Evolution in a Quantum Wire. Modeling and Simulation in Science, Engineering and Technology, 2021, , 123-145.	0.4	0
33	Stochastic Approaches to Electron Transport in Micro- and Nanostructures. Modeling and Simulation in Science, Engineering and Technology, 2021, , .	0.4	7
34	Gas Sensing with Two-Dimensional Materials Beyond Graphene. , 2021, , .		3
35	Temperature Increase in MRAM at Writing: A Finite Element Approach. , 2021, , .		0
36	Improving failure rates in pulsed SOT-MRAM switching by reinforcement learning. Microelectronics Reliability, 2021, 126, 114231.	0.9	0

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37	Geometric advection and its application in the emulation of high aspect ratio structures. Computer Methods in Applied Mechanics and Engineering, 2021, 386, 114196.	3.4	0
38	Parallel Correction for Hierarchical Re-Distancing Using the Fast Marching Method. Studies in Computational Intelligence, 2021, , 438-451.	0.7	1
39	Combined Process Simulation and Emulation of an SRAM Cell of the 5nm Technology Node. , 2021, , .		1
40	Reinforcement Learning Approach for Sub-Critical Current SOT-MRAM Switching. , 2021, , .		0
41	Spin and Charge Drift-Diffusion Approach to Torque Computation in Magnetic Tunnel Junctions. , 2021, , .		0
42	Reinforcement Learning to Reduce Failures in SOT-MRAM Switching. , 2021, , .		0
43	Finite Element Method Approach to MRAM Modeling. , 2021, , .		1
44	Robust magnetic field-free switching of a perpendicularly magnetized free layer for SOT-MRAM. Solid-State Electronics, 2020, 168, 107730.	0.8	10
45	Integration of Gas Sensors with CMOS Technology. , 2020, , .		3
46	Analysis of Switching Under Fixed Voltage and Fixed Current in Perpendicular STT-MRAM. IEEE Journal of the Electron Devices Society, 2020, 8, 1249-1256.	1.2	0
47	Ballistic Conductance in a Topological 1T'-MoS2 Nanoribbon. Semiconductors, 2020, 54, 1713-1715.	0.2	0
48	Conductance in a Nanoribbon of Topologically Insulating MoS2 in the 1Tâ€™ Phase. IEEE Transactions on Electron Devices, 2020, 67, 4687-4690.	1.6	4
49	Complex Systems in Phase Space. Entropy, 2020, 22, 1103.	1.1	4
50	Influence of Current Redistribution in Switching Models for Perpendicular STT-MRAM. ECS Transactions, 2020, 97, 159-164.	0.3	0
51	Perpendicular STT-MRAM Switching at Fixed Voltage and at Fixed Current. , 2020, , .		1
52	The Level-Set Method for Multi-Material Wet Etching and Non-Planar Selective Epitaxy. IEEE Access, 2020, 8, 115406-115422.	2.6	16
53	Emerging CMOS Compatible Magnetic Memories and Logic. , 2020, , .		4
54	Electro-Thermal-Mechanical Modeling of Gas Sensor Hotplates. , 2020, , 17-72.		7

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55	Topologically Protected and Conventional Subbands in a 1Tâ€™-MoS2 Nanoribbon Channel. , 2020, , .		1
56	Comprehensive Modeling of Coupled Spin and Charge Transport through Magnetic Tunnel Junctions. , 2020, , .		1
57	A Monte Carlo Evaluation of the Current and Low Frequency Current Noise at Spin-Dependent Hopping. Lecture Notes in Computer Science, 2020, , 446-453.	1.0	0
58	Influence of Current Redistribution in Switching Models for Perpendicular STT-MRAM. ECS Meeting Abstracts, 2020, MA2020-01, 1389-1389.	0.0	1
59	Subband Structure and Ballistic Conductance of a Molybdenum Disulfide Nanoribbon in Topological 1Tâ€™ Phase: A kÂ-p Study. , 2020, , .		0
60	Comprehensive modeling of coupled spin-charge transport and magnetization dynamics in STT-MRAM cells. , 2020, , .		0
61	Reduced Current Spin-Orbit Torque Switching of a Perpendicularly Magnetized Free Layer. , 2020, , .		0
62	Parallelized Construction of Extension Velocities for the Level-Set Method. Lecture Notes in Computer Science, 2020, , 348-358.	1.0	1
63	Computation of Torques in Magnetic Tunnel Junctions through Spin and Charge Transport Modeling. , 2020, , .		2
64	Efficient Demagnetizing Field Calculation for Disconnected Complex Geometries in STT-MRAM Cells. , 2020, , .		9
65	Geometric Advection Algorithm for Process Emulation. , 2020, , .		2
66	Thermo-Electro-Mechanical Simulation of Semiconductor Metal Oxide Gas Sensors. Materials, 2019, 12, 2410.	1.3	20
67	Process Simulation in the Browser: Porting ViennaTS using WebAssembly. , 2019, , .		0
68	CMOS-Compatible Gas Sensors. , 2019, , .		1
69	Spin-Based CMOS-Compatible Memories. , 2019, , .		0
70	Novel Numerical Dissipation Scheme for Level-Set Based Anisotropic Etching Simulations. , 2019, , .		0
71	Parallelized Level-Set Velocity Extension Algorithm for Nanopatterning Applications. , 2019, , .		2
72	Combining Perpendicular and Shape Anisotropy for Optimal Switching of Advanced Spin-Orbit Torque Memory Cells. , 2019, , .		0

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73	Mobility of Circular and Elliptical Si Nanowire Transistors Using a Multi-Subband 1D Formalism. IEEE Electron Device Letters, 2019, 40, 1571-1574.	2.2	15
74	Improved Sensing Capability of Integrated Semiconducting Metal Oxide Gas Sensor Devices. Sensors, 2019, 19, 374.	2.1	21
75	Wigner equation for general electromagnetic fields: The Weyl-Stratonovich transform. Physical Review B, 2019, 99, .	1.1	11
76	Simulation of the Impact of Ionized Impurity Scattering on the Total Mobility in Si Nanowire Transistors. Materials, 2019, 12, 124.	1.3	21
77	Evaluation of Serial and Parallel Shared-Memory Distance-1 Graph Coloring Algorithms. Lecture Notes in Computer Science, 2019, , 106-114.	1.0	1
78	Current and shot noise at spin-dependent hopping through junctions with ferromagnetic contacts. Solid-State Electronics, 2019, 159, 43-50.	0.8	0
79	Simulation of the Effects of Postimplantation Annealing on Silicon Carbide DMOSFET Characteristics. IEEE Transactions on Electron Devices, 2019, 66, 3060-3065.	1.6	4
80	Two-pulse sub-ns switching scheme for advanced spin-orbit torque MRAM. Solid-State Electronics, 2019, 155, 49-56.	0.8	21
81	A shared memory parallel multi-mesh fast marching method for re-distancing. Advances in Computational Mathematics, 2019, 45, 2029-2045.	0.8	3
82	Efficient Magnetic Field-Free Switching of a Symmetric Perpendicular Magnetic Free Layer for Advanced SOT-MRAM. , 2019, , .		0
83	CMOS Technology Compatible Magnetic Memories. , 2019, , .		2
84	A Flexible Shared-Memory Parallel Mesh Adaptation Framework. , 2019, , .		0
85	Switching Speedup of the Magnetic Free Layer of Advanced SOT-MRAM. , 2019, , .		0
86	Magnetic field-free deterministic switching of a perpendicular magnetic layer by spin-orbit torques. , 2019, , .		0
87	Empirical Model for Electrical Activation of Aluminum- and Boron-Implanted Silicon Carbide. IEEE Transactions on Electron Devices, 2018, 65, 674-679.	1.6	10
88	Modeling and Simulation of Novel Semiconducting Metal Oxide Gas Sensors for Wearable Devices. IEEE Sensors Journal, 2018, 18, 1960-1970.	2.4	30
89	Stochastic analysis of surface roughness models in quantum wires. Computer Physics Communications, 2018, 228, 30-37.	3.0	7
90	Current and shot noise at spin-dependent hopping through magnetic tunnel junctions. , 2018, , .		2

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91	Accelerating Flux Calculations Using Sparse Sampling. <i>Micromachines</i> , 2018, 9, 550.	1.4	2
92	Nanowire FETs. , 2018, , .		0
93	Modeling of Gate Stack Patterning for Advanced Technology Nodes: A Review. <i>Micromachines</i> , 2018, 9, 631.	1.4	27
94	Simulation of Injection Currents into Disordered Molecular Conductors. <i>Materials Today: Proceedings</i> , 2018, 5, 17472-17477.	0.9	0
95	Steady-State Empirical Model for Electrical Activation of Silicon-Implanted Gallium Nitride. , 2018, , .		1
96	Impact of the Effective Mass on the Mobility in Si Nanowire Transistors. , 2018, , .		4
97	Enhanced Sensing Performance of Integrated Gas Sensor Devices. <i>Proceedings (mdpi)</i> , 2018, 2, 1508.	0.2	1
98	Field-free Fast Reliable Deterministic Switching in Perpendicular Spin-Orbit Torque MRAM Cells. , 2018, , .		1
99	Modeling and Simulation of Electrical Activation of Acceptor-Type Dopants in Silicon Carbide. <i>Materials Science Forum</i> , 2018, 924, 192-195.	0.3	4
100	Study of the 1D Scattering Mechanisms' Impact on the Mobility in Si Nanowire Transistors. , 2018, , .		6
101	Switching current reduction in advanced spin-orbit torque MRAM. , 2018, , .		4
102	Unified feature scale model for etching in SF ₆ and Cl plasma chemistries. , 2018, , .		1
103	Transient model for electrical activation of aluminium and phosphorus-implanted silicon carbide. <i>Journal of Applied Physics</i> , 2018, 123, .	1.1	14
104	Ultra-Fast Switching of a Free Magnetic Layer with Out-of-Plane Magnetization in Spin-Orbit Torque MRAM Cells. <i>ECS Transactions</i> , 2018, 85, 213-218.	0.3	0
105	Demands for spin-based nonvolatility in emerging digital logic and memory devices for low power computing. <i>Facta Universitatis - Series Electronics and Energetics</i> , 2018, 31, 529-545.	0.6	0
106	Sparse Surface Speed Evaluation on a Dynamic Three-Dimensional Surface Using an Iterative Partitioning Scheme. <i>Lecture Notes in Computer Science</i> , 2018, , 694-707.	1.0	1
107	Spin correlations at hopping in magnetic structures: from tunneling magnetoresistance to single-spin transistor. , 2018, , .		0
108	Framework to model neutral particle flux in convex high aspect ratio structures using one-dimensional radiosity. <i>Solid-State Electronics</i> , 2017, 128, 141-147.	0.8	5

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109	Analysis of lenseâ€governed Wigner signed particle quantum dynamics. <i>Physica Status Solidi - Rapid Research Letters</i> , 2017, 11, 1700102.	1.2	10
110	Using Temporary Explicit Meshes for Direct Flux Calculation on Implicit Surfaces. <i>Procedia Computer Science</i> , 2017, 108, 245-254.	1.2	10
111	Evaluation of the shared-memory parallel Fast Marching Method for re-distancing problems. , 2017, , .		3
112	ReaxFF Reactive Molecular Dynamics Study of Orientation Dependence of Initial Silicon Carbide Oxidation. <i>Journal of Physical Chemistry A</i> , 2017, 121, 8791-8798.	1.1	25
113	Anisotropic interpolation method of silicon carbide oxidation growth rates for three-dimensional simulation. <i>Solid-State Electronics</i> , 2017, 128, 135-140.	0.8	6
114	Modeling electromigration in nanoscaled copper interconnects. , 2017, , .		1
115	Modeling of electrical activation ratios of phosphorus and nitrogen doped silicon carbide. , 2017, , .		5
116	Non-volatility by spin in modern nanoelectronics. , 2017, , .		1
117	Accelerated direct flux calculations using an adaptively refined icosahedron. , 2017, , .		0
118	Silicon-on-insulator for spintronic applications: spin lifetime and electric spin manipulation. <i>ChemistrySelect</i> , 2016, 1, .	0.7	1
119	Stress Evolution During Nanoindentation in Open TSVs. <i>IEEE Transactions on Device and Materials Reliability</i> , 2016, 16, 470-474.	1.5	1
120	Effects of the Deposition Process Variation on the Performance of Open TSVs. , 2016, , .		0
121	Direction dependent three-dimensional silicon carbide oxidation growth rate calculations. , 2016, , .		0
122	Using one-dimensional radiosity to model neutral particle flux in high aspect ratio holes. , 2016, , .		2
123	Influence of spin relaxation on trap-assisted resonant tunneling in ferromagnet-oxide-semiconductor structures. , 2016, , .		0
124	CMOS-compatible spintronic devices: a review. <i>Semiconductor Science and Technology</i> , 2016, 31, 113006.	1.0	85
125	ViennaCL—Linear Algebra Library for Multi- and Many-Core Architectures. <i>SIAM Journal of Scientific Computing</i> , 2016, 38, S412-S439.	1.3	64
126	The exploitation of magnetization orientation encoded spin-transfer torque for an ultra dense non-volatile magnetic shift register. , 2016, , .		1

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127	Three-dimensional growth rate modeling and simulation of silicon carbide thermal oxidation. , 2016, , .		2
128	Using one-dimensional radiosity to model neutral flux in convex high aspect ratio structures. , 2016, , .		0
129	Magnetic field dependent tunneling magnetoresistance through a quantum well between ferromagnetic contacts. , 2016, , .		0
130	Stress Considerations for System-on-Chip Gas Sensor Integration in CMOS Technology. IEEE Transactions on Device and Materials Reliability, 2016, 16, 483-495.	1.5	3
131	Impact of across-wafer variation on the electrical performance of TSVs. , 2016, , .		2
132	Layer coupling and read disturbances in a buffered magnetic logic environment. Proceedings of SPIE, 2016, , .	0.8	0
133	Growth rates of dry thermal oxidation of 4H-silicon carbide. Journal of Applied Physics, 2016, 120, .	1.1	30
134	Electron Momentum and Spin Relaxation in Silicon Films. Mathematics in Industry, 2016, , 695-700.	0.1	0
135	Neumann Series Analysis of the Wigner Equation Solution. Mathematics in Industry, 2016, , 701-707.	0.1	1
136	Enhancement of Electron Spin Relaxation Time in Thin SOI Films by Spin Injection Orientation and Uniaxial Stress. Journal of Nano Research, 2016, 39, 34-42.	0.8	2
137	Stress in three-dimensionally integrated sensor systems. Microelectronics Reliability, 2016, 61, 3-10.	0.9	3
138	Evaluation of Mobile ARM-Based SoCs for High Performance Computing. , 2016, , .		4
139	INSTITUT FÜR MIKROELEKTRONIK / INSTITUTE FOR MICROELECTRONICS. , 2016, , 57-62.		0
140	Improved drive-current into nanoscaled channels using electrostatic lenses. , 2015, , .		2
141	Influence of valley splitting on spin relaxation time in a strained thin silicon film. , 2015, , .		2
142	Stress Considerations in Thin Films for CMOS-Integrated Gas Sensors. ECS Transactions, 2015, 66, 243-250.	0.3	4
143	Global statistical methodology for the analysis of equipment parameter effects on TSV formation. , 2015, , .		6
144	SOT-MRAM based on 1Transistor-1MTJ-cell structure. , 2015, , .		2

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145	Novel Buffered Magnetic Logic Gate Grid. ECS Transactions, 2015, 66, 295-303.	0.3	2
146	Silicon spintronics: Progress and challenges. Physics Reports, 2015, 585, 1-40.	10.3	56
147	Electron mobility and spin lifetime enhancement in strained ultra-thin silicon films. Solid-State Electronics, 2015, 112, 46-50.	0.8	4
148	Variation of Spin Lifetime with Spin Injection Orientation in Strained Thin Silicon Films. ECS Transactions, 2015, 66, 233-240.	0.3	3
149	Dependence of spin lifetime on spin injection orientation in strained silicon films. , 2015, , .		5
150	Compact model for solder bump electromigration failure. , 2015, , .		1
151	Memory-efficient particle annihilation algorithm for Wigner Monte Carlo simulations. , 2015, , .		0
152	Improving the performance of a non-volatile magnetic flip flop by exploiting the spin Hall effect. , 2015, , .		0
153	Processing of integrated gas sensor devices. , 2015, , .		3
154	Injection direction sensitive spin lifetime model in a strained thin silicon film. , 2015, , .		1
155	Parallelization of the Two-Dimensional Wigner Monte Carlo Method. Lecture Notes in Computer Science, 2015, , 309-316.	1.0	2
156	Modelling of multipurpose spintronic devices. International Journal of Nanotechnology, 2015, 12, 313.	0.1	3
157	Progress in Magnetoresistive Memory: Magnetic Tunnel Junctions with a Composite Free Layer. , 2015, , .		0
158	Intrinsic stress analysis of tungsten-lined open TSVs. Microelectronics Reliability, 2015, 55, 1843-1848.	0.9	10
159	The Wigner equation in the presence of electromagnetic potentials. Journal of Computational Electronics, 2015, 14, 888-893.	1.3	6
160	Influence of magnetization variations in the free layer on a non-volatile magnetic flip flop. Solid-State Electronics, 2015, 108, 2-7.	0.8	6
161	Coupled simulation to determine the impact of across wafer variations in oxide PECVD on electrical and reliability parameters of through-silicon vias. Microelectronic Engineering, 2015, 137, 141-145.	1.1	10
162	Performance and Stress Analysis of Metal Oxide Films for CMOS-Integrated Gas Sensors. Sensors, 2015, 15, 7206-7227.	2.1	50

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163	Boundary conditions and the Wigner equation solution. Journal of Computational Electronics, 2015, 14, 859-863.	1.3	11
164	Transformation invariant local element size specification. Applied Mathematics and Computation, 2015, 267, 195-206.	1.4	1
165	Spin-based devices for future microelectronics. , 2015, , .		0
166	(Invited) Spin-Based Silicon and CMOS-Compatible Devices. ECS Transactions, 2015, 66, 223-231.	0.3	0
167	Intersubband spin relaxation reduction and spin lifetime enhancement by strain in SOI structures. Microelectronic Engineering, 2015, 147, 89-91.	1.1	9
168	ViennaMaterials â€“ A dedicated material library for computational science and engineering. Applied Mathematics and Computation, 2015, 267, 282-293.	1.4	3
169	CMOS-compatible spintronic devices. , 2015, , .		0
170	Distributed-memory parallelization of the Wigner Monte Carlo method using spatial domain decomposition. Journal of Computational Electronics, 2015, 14, 151-162.	1.3	18
171	A comparison of approaches for the solution of the Wigner equation. Mathematics and Computers in Simulation, 2015, 107, 108-119.	2.4	4
172	Investigation of Novel Silicon PV Cells of a Lateral Type. Silicon, 2015, 7, 283-291.	1.8	6
173	Evaluation of Spin Lifetime in Thin-Body FETs: A High Performance Computing Approach. Lecture Notes in Computer Science, 2015, , 285-292.	1.0	2
174	Free Open Source Mesh Healing for TCAD Device Simulations. Lecture Notes in Computer Science, 2015, , 293-300.	1.0	1
175	Concept of a SOT-MRAM Based on 1Transistor-1MTJ-Cell Structure. , 2015, , .		1
176	Spin-Based CMOS-Compatible Devices. Lecture Notes in Computer Science, 2015, , 42-49.	1.0	0
177	The Influence of Electrostatic Lenses on Wave Packet Dynamics. Lecture Notes in Computer Science, 2015, , 277-284.	1.0	1
178	Template-based mesh generation for semiconductor devices. , 2014, , .		1
179	Electromigration induced failure of solder bumps and the role of IMC. , 2014, , .		0
180	Manufacturing of 3D integrated sensors and circuits. , 2014, , .		1

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181	Modeling of microstructural effects on electromigration failure. , 2014, , .		0
182	Progress in Magnetoresistive Memory: Magnetic Tunnel Junctions with a Composite Free Layer. International Journal of High Speed Electronics and Systems, 2014, 23, 1450014.	0.3	0
183	Electromigration induced resistance increase in open TSVs. , 2014, , .		2
184	Electromigration in solder bumps: A mean-time-to-failure TCAD study. , 2014, , .		0
185	Influence of device geometry on the non-volatile magnetic flip flop characteristics. , 2014, , .		2
186	The Wigner Monte Carlo method for accurate semiconductor device simulation. , 2014, , .		3
187	Increasing mobility and spin lifetime with shear strain in thin silicon films. , 2014, , .		1
188	Spin lifetime in strained silicon films. , 2014, , .		0
189	Implementation and analysis of an adaptive multilevel Monte Carlo algorithm. Monte Carlo Methods and Applications, 2014, 20, 1-41.	0.3	30
190	The effects of etching and deposition on the performance and stress evolution of open through silicon vias. Microelectronics Reliability, 2014, 54, 1953-1958.	0.9	11
191	A benchmark study of the Wigner Monte Carlo method. Monte Carlo Methods and Applications, 2014, 20, 43-51.	0.3	29
192	On the material depletion rate due to electromigration in a copper TSV structure. , 2014, , .		3
193	Methods of simulating thin film deposition using spray pyrolysis techniques. Microelectronic Engineering, 2014, 117, 57-66.	1.1	42
194	Highly flexible and reusable finite element simulations with ViennaX. Journal of Computational and Applied Mathematics, 2014, 270, 484-495.	1.1	1
195	Electron dynamics in nanoscale transistors by means of Wigner and Boltzmann approaches. Physica A: Statistical Mechanics and Its Applications, 2014, 398, 194-198.	1.2	11
196	ViennaX: a parallel plugin execution framework for scientific computing. Engineering With Computers, 2014, 30, 651-668.	3.5	2
197	Spin injection and diffusion in silicon based devices from a space charge layer. Journal of Applied Physics, 2014, 115, 17C503.	1.1	9
198	Novel bias-field-free spin transfer oscillator. Journal of Applied Physics, 2014, 115, 17C901.	1.1	10

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199	Electromigration reliability of open TSV structures. , 2014, , .		0
200	Valley splitting and spin lifetime enhancement in strained thin silicon films. , 2014, , .		4
201	Effects of sidewall scallops on the performance and reliability of filled copper and open tungsten TSVs. , 2014, , .		3
202	Efficient calculation of the two-dimensional Wigner potential. , 2014, , .		2
203	Effects of sidewall scallops on open tungsten TSVs. , 2014, , .		4
204	Spin diffusion and the role of screening effects in semiconductors. , 2014, , .		0
205	Three-dimensional simulation for the reliability and electrical performance of through-silicon vias. , 2014, , .		0
206	Frequency dependence study of a bias field-free nano-scale oscillator. , 2014, , .		0
207	Process and reliability of SF ₆ /O ₂ plasma etched copper TSVs. , 2014, , .		1
208	Electromigration reliability of open TSV structures. Microelectronics Reliability, 2014, 54, 2133-2137.	0.9	7
209	Modeling of spin-based silicon technology. , 2014, , .		0
210	High performance MRAM-based stateful logic. , 2014, , .		3
211	Electromigration reliability of solder bumps. , 2014, , .		2
212	Compact modeling of memristive IMP gates for reliable stateful logic design. , 2014, , .		0
213	Implications of the coherence length on the discrete Wigner potential. , 2014, , .		4
214	Magnetic tunnel junctions for future memory and logic-in-memory applications. , 2014, , .		1
215	Influence of magnetization variations in the free layer on a non-volatile magnetic flip flop. , 2014, , .		2
216	Spin injection in a semiconductor through a space-charge layer. Solid-State Electronics, 2014, 101, 116-121.	0.8	8

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217	Modeling spin-based electronic devices. , 2014, , .		0
218	Modeling the Growth of Tin Dioxide Using Spray Pyrolysis Deposition for Gas Sensor Applications. IEEE Transactions on Semiconductor Manufacturing, 2014, 27, 269-277.	1.4	13
219	The meshing framework ViennaMesh for finite element applications. Journal of Computational and Applied Mathematics, 2014, 270, 166-177.	1.1	8
220	Spray pyrolysis deposition for gas sensor integration in the backend of standard CMOS processes. , 2014, , .		1
221	The Role of Annihilation in a Wigner Monte Carlo Approach. Lecture Notes in Computer Science, 2014, , 186-193.	1.0	6
222	Modeling and Analysis of Spray Pyrolysis Deposited SnO2 Films for Gas Sensors. , 2014, , 295-310.		4
223	Microstructural impact on electromigration: A TCAD study. Facta Universitatis - Series Electronics and Energetics, 2014, 27, 1-11.	0.6	3
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