

Roger Lake

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

183
papers

6,270
citations

41
h-index

72
g-index

206
ext. papers

7,357
ext. citations

5.2
avg. IF

5.91
L-index

#	Paper	IF	Citations
183	Thermal conductivity of the quasi-one-dimensional materials TaSe3 and ZrTe3. <i>Physical Review Materials</i> , 2021 , 5,	3.2	1
182	Room temperature depinning of the charge-density waves in quasi-two-dimensional 1T-TaS2 devices. <i>Applied Physics Letters</i> , 2021 , 118, 223101	3.4	5
181	Skyrmion-Based Programmable Logic Device with Complete Boolean Logic Functions. <i>Physical Review Applied</i> , 2021 , 15,	4.3	5
180	Magnetic properties of NbSi2N4, VSi2N4, and VSi2P4 monolayers. <i>Applied Physics Letters</i> , 2021 , 119, 052402	3.4	9
179	Substrate-Dependent Band Structures in Trilayer Graphene/h-BN Heterostructures. <i>Physical Review Letters</i> , 2020 , 125, 246401	7.4	1
178	High-frequency current oscillations in charge-density-wave 1T-TaS2 devices: Revisiting the Barrow band noise concept. <i>Applied Physics Letters</i> , 2020 , 116, 163101	3.4	10
177	Large spin Hall effect in Si at room temperature. <i>Physical Review B</i> , 2020 , 101,	3.3	8
176	Synthetic antiferromagnet-based spin Josephson oscillator. <i>Applied Physics Letters</i> , 2020 , 116, 132409	3.4	2
175	Growth of High-Quality Hexagonal Boron Nitride Single-Layer Films on Carburized Ni Substrates for Metal-Insulator-Metal Tunneling Devices. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 35318-35327	9.5	5
174	Room-Temperature Electrodeposition of Aluminum via Manipulating Coordination Structure in AlCl3 Solutions. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 1589-1593	6.4	12
173	Phonon and Thermal Properties of Quasi-Two-Dimensional FePS and MnPS Antiferromagnetic Semiconductors. <i>ACS Nano</i> , 2020 , 14, 2424-2435	16.7	24
172	Phononic and photonic properties of shape-engineered silicon nanoscale pillar arrays. <i>Nanotechnology</i> , 2020 , 31, 30LT01	3.4	6
171	Interfacial Dzyaloshinskii-Moriya interaction of antiferromagnetic materials. <i>Physical Review B</i> , 2020 , 102,	3.3	10
170	Effects of filling, strain, and electric field on the Néel vector in antiferromagnetic CrSb. <i>Physical Review B</i> , 2020 , 102,	3.3	2
169	Robust Skyrmion Shift Device Through Engineering the Local Exchange-Bias Field. <i>Physical Review Applied</i> , 2020 , 14,	4.3	6
168	Electron transport through antiferromagnetic spin textures and skyrmions in a magnetic tunnel junction. <i>Physical Review B</i> , 2020 , 102,	3.3	2
167	Strain-Controlled Superconductivity in Few-Layer NbSe. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 38744-38750	9.5	2

166	Fractional and Symmetry-Broken Chern Insulators in Tunable Moiré Superlattices. <i>Nano Letters</i> , 2019 , 19, 4321-4326	11.5	2
165	Bias-Voltage Driven Switching of the Charge-Density-Wave and Normal Metallic Phases in 1T-TaS Thin-Film Devices. <i>ACS Nano</i> , 2019 , 13, 7231-7240	16.7	38
164	Quantum parity Hall effect in Bernal-stacked trilayer graphene. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 10286-10290	11.5	5
163	A brain-plausible neuromorphic on-the-fly learning system implemented with magnetic domain wall analog memristors. <i>Science Advances</i> , 2019 , 5, eaau8170	14.3	36
162	Planar Hall Effect in Antiferromagnetic MnTe Thin Films. <i>Physical Review Letters</i> , 2019 , 122, 106602	7.4	12
161	Strain control of the Néel vector in Mn-based antiferromagnets. <i>Applied Physics Letters</i> , 2019 , 114, 142403	3.4	10
160	Charged impurity scattering in two-dimensional materials with ring-shaped valence bands: GaS, GaSe, InS, and InSe. <i>Physical Review B</i> , 2019 , 99,	3.3	9
159	Growth Dynamics of Millimeter-Sized Single-Crystal Hexagonal Boron Nitride Monolayers on Secondary Recrystallized Ni (100) Substrates. <i>Advanced Materials Interfaces</i> , 2019 , 6, 1901198	4.6	13
158	Tunable Lifshitz Transitions and Multiband Transport in Tetralayer Graphene. <i>Physical Review Letters</i> , 2018 , 120, 096802	7.4	15
157	Chemical vapor deposition and phase stability of pyrite on SiO ₂ . <i>Journal of Materials Chemistry C</i> , 2018 , 6, 4753-4759	7.1	2
156	Electrically driven plasmon-exciton coupled random lasing in ZnO metal-semiconductor-metal devices. <i>Applied Surface Science</i> , 2018 , 439, 525-532	6.7	7
155	A Study of Vertical Transport through Graphene toward Control of Quantum Tunneling. <i>Nano Letters</i> , 2018 , 18, 682-688	11.5	9
154	Role of Carbon Interstitials in Transition Metal Substrates on Controllable Synthesis of High-Quality Large-Area Two-Dimensional Hexagonal Boron Nitride Layers. <i>Nano Letters</i> , 2018 , 18, 3352-3361	11.5	25
153	Shape dependent resonant modes of skyrmions in magnetic nanodisks. <i>Journal of Magnetism and Magnetic Materials</i> , 2018 , 455, 9-13	2.8	10
152	High figure of merit magneto-optics from interfacial skyrmions on topological insulators. <i>Physical Review B</i> , 2018 , 98,	3.3	2
151	Gate controlled Majorana zero modes of a two-dimensional topological superconductor. <i>Applied Physics Letters</i> , 2018 , 113, 012601	3.4	6
150	Exchange-biasing topological charges by antiferromagnetism. <i>Nature Communications</i> , 2018 , 9, 2767	17.4	46
149	Commensurate lattice constant dependent thermal conductivity of misoriented bilayer graphene. <i>Carbon</i> , 2018 , 138, 451-457	10.4	21

148	Long-distance spin transport through a graphene quantum Hall antiferromagnet. <i>Nature Physics</i> , 2018 , 14, 907-911	16.2	47
147	Binding a hopfion in a chiral magnet nanodisk. <i>Physical Review B</i> , 2018 , 98,	3.3	41
146	Thermal Percolation Threshold and Thermal Properties of Composites with High Loading of Graphene and Boron Nitride Fillers. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 37555-37565	9.5	173
145	Role of dimensional crossover on spin-orbit torque efficiency in magnetic insulator thin films. <i>Nature Communications</i> , 2018 , 9, 3612	17.4	53
144	Topological Transitions Induced by Antiferromagnetism in a Thin-Film Topological Insulator. <i>Physical Review Letters</i> , 2018 , 121, 096802	7.4	32
143	Interlayer transport through a graphene/rotated boron nitride/graphene heterostructure. <i>Physical Review B</i> , 2017 , 95,	3.3	8
142	Magnonic interferometric switch for multi-valued logic circuits. <i>Journal of Applied Physics</i> , 2017 , 121, 024504	2.5	25
141	Graphene contacts to a HfSe/SnS heterostructure. <i>Journal of Chemical Physics</i> , 2017 , 146, 064701	3.9	6
140	Strain Gated Bilayer Molybdenum Disulfide Field Effect Transistor with Edge Contacts. <i>Scientific Reports</i> , 2017 , 7, 41593	4.9	6
139	Interlayer resistance of misoriented MoS. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 10406-10412	3.6	12
138	Effect of intervalley interaction on band topology of commensurate graphene/EuO heterostructures. <i>Physical Review B</i> , 2017 , 95,	3.3	20
137	Magnonic holographic imaging of magnetic microstructures. <i>Journal of Magnetism and Magnetic Materials</i> , 2017 , 428, 348-356	2.8	6
136	Hot carrier-enhanced interlayer electron-hole pair multiplication in 2D semiconductor heterostructure photocells. <i>Nature Nanotechnology</i> , 2017 , 12, 1134-1139	28.7	56
135	Variable-temperature inelastic light scattering spectroscopy of nickel oxide: Disentangling phonons and magnons. <i>Applied Physics Letters</i> , 2017 , 110, 202406	3.4	29
134	Raman spectra of twisted CVD bilayer graphene. <i>Carbon</i> , 2017 , 123, 302-306	10.4	35
133	Strong cavity-pseudospin coupling in monolayer transition metal dichalcogenides. <i>Physical Review B</i> , 2017 , 96,	3.3	2
132	Exciton condensate in bilayer transition metal dichalcogenides: Strong coupling regime. <i>Physical Review B</i> , 2017 , 96,	3.3	24
131	Electrically driven deep ultraviolet MgZnO lasers at room temperature. <i>Scientific Reports</i> , 2017 , 7, 2677	4.9	17

130	Deficiency of the bulk spin Hall effect model for spin-orbit torques in magnetic-insulator/heavy-metal heterostructures. <i>Physical Review B</i> , 2017 , 95,	3.3	19
129	Spin-phonon coupling in antiferromagnetic nickel oxide. <i>Applied Physics Letters</i> , 2017 , 111, 252402	3.4	70
128	Two-Dimensional Layered Semiconductor Tungsten Disulfide and Molybdenum-Tungsten Disulfide: Synthesis, Materials Properties and Electronic Structure. <i>Journal of Nanoscience and Nanotechnology</i> , 2016 , 16, 8419-8423	1.3	2
127	Thermal conductivity of graphene with defects induced by electron beam irradiation. <i>Nanoscale</i> , 2016 , 8, 14608-16	7.7	144
126	Topological charge analysis of ultrafast single skyrmion creation. <i>Physical Review B</i> , 2016 , 93,	3.3	39
125	Direct observation of confined acoustic phonon polarization branches in free-standing semiconductor nanowires. <i>Nature Communications</i> , 2016 , 7, 13400	17.4	51
124	Uniform Benchmarking of Low-Voltage van der Waals FETs. <i>IEEE Journal on Exploratory Solid-State Computational Devices and Circuits</i> , 2016 , 2, 28-35	2.4	16
123	Fundamentals of lateral and vertical heterojunctions of atomically thin materials. <i>Nanoscale</i> , 2016 , 8, 3870-87	7.7	90
122	Strong Circularly Polarized Photoluminescence from Multilayer MoS ₂ Through Plasma Driven Direct-Gap Transition. <i>ACS Photonics</i> , 2016 , 3, 310-314	6.3	9
121	Phase Engineering of 2D Tin Sulfides. <i>Small</i> , 2016 , 12, 2998-3004	11	37
120	A charge-density-wave oscillator based on an integrated tantalum disulfide-boron nitride-graphene device operating at room temperature. <i>Nature Nanotechnology</i> , 2016 , 11, 845-850	28.7	123
119	Observation of magnon-mediated current drag in Pt/yttrium iron garnet/Pt(Ta) trilayers. <i>Nature Communications</i> , 2016 , 7, 10858	17.4	81
118	Making one-dimensional electrical contacts to molybdenum disulfide-based heterostructures through plasma etching. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2016 , 213, 1358-1364	1.6	22
117	Spin-Josephson effects in exchange coupled antiferromagnetic insulators. <i>Physical Review B</i> , 2016 , 94,	3.3	7
116	Direct bandgap transition in many-layer MoS ₂ by plasma-induced layer decoupling. <i>Advanced Materials</i> , 2015 , 27, 1573-8	24	90
115	A Material Framework for Beyond-CMOS Devices. <i>IEEE Journal on Exploratory Solid-State Computational Devices and Circuits</i> , 2015 , 1, 19-27	2.4	3
114	Zone-Folded Phonons and the Commensurate-Incommensurate Charge-Density-Wave Transition in 1T-TaSe ₂ Thin Films. <i>Nano Letters</i> , 2015 , 15, 2965-73	11.5	73
113	Topological Winding Number Change and Broken Inversion Symmetry in a Hofstadter's Butterfly. <i>Nano Letters</i> , 2015 , 15, 6395-9	11.5	18

112	Electronic and thermoelectric properties of van der Waals materials with ring-shaped valence bands. <i>Journal of Applied Physics</i> , 2015 , 118, 075101	2.5	79
111	Effect of strain on the electronic and optical properties of Ge-Si dome shaped nanocrystals. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 2484-93	3.6	4
110	Topological spin Hall effect resulting from magnetic skyrmions. <i>Physical Review B</i> , 2015 , 92,	3.3	37
109	Acoustic phonon spectrum and thermal transport in nanoporous alumina arrays. <i>Applied Physics Letters</i> , 2015 , 107, 171904	3.4	32
108	Two step growth phenomena of molybdenum disulfide-tungsten disulfide heterostructures. <i>Chemical Communications</i> , 2015 , 51, 11213-6	5.8	21
107	Theoretical and experimental study of highly textured GaAs on silicon using a graphene buffer layer. <i>Journal of Crystal Growth</i> , 2015 , 425, 268-273	1.6	20
106	Low-Power Heterogeneous Graphene Nanoribbon-CMOS Multistate Volatile Memory Circuit. <i>ACM Journal on Emerging Technologies in Computing Systems</i> , 2015 , 12, 1-18	1.7	0
105	Gate tunable quantum oscillations in air-stable and high mobility few-layer phosphorene heterostructures. <i>2D Materials</i> , 2015 , 2, 011001	5.9	172
104	Skyrmion creation and annihilation by spin waves. <i>Applied Physics Letters</i> , 2015 , 107, 152411	3.4	25
103	Effect of Random, Discrete Source Dopant Distributions on Nanowire Tunnel FETs. <i>IEEE Transactions on Electron Devices</i> , 2014 , 61, 2208-2214	2.9	14
102	Nanoscale phononic interconnects in THz frequencies. <i>Physical Chemistry Chemical Physics</i> , 2014 , 16, 23355-64	3.6	7
101	Tin disulfide-an emerging layered metal dichalcogenide semiconductor: materials properties and device characteristics. <i>ACS Nano</i> , 2014 , 8, 10743-55	16.7	341
100	Synthesis, characterization, and electronic structure of few-layer MoSe ₂ granular films. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2014 , 211, 2671-2676	1.6	10
99	Synthesis of Atomically Thin MoS_2 Triangles and Hexagams and Their Electrical Transport Properties. <i>IEEE Nanotechnology Magazine</i> , 2014 , 13, 749-754	2.6	20
98	Towards van der Waals Epitaxial Growth of GaAs on Si using a Graphene Buffer Layer. <i>Advanced Functional Materials</i> , 2014 , 24, 6629-6638	15.6	93
97	Coulomb impurity scattering in topological insulator thin films. <i>Applied Physics Letters</i> , 2014 , 105, 033118	3.4	8
96	Electronic and thermoelectric properties of few-layer transition metal dichalcogenides. <i>Journal of Chemical Physics</i> , 2014 , 140, 124710	3.9	243
95	All-metallic electrically gated 2H-TaSe ₂ thin-film switches and logic circuits. <i>Journal of Applied Physics</i> , 2014 , 115, 034305	2.5	35

94	Interlayer magnetoconductance of misoriented bilayer graphene ribbons. <i>Journal of Applied Physics</i> , 2013 , 114, 183711	2.5	4
93	Multi-state current switching by voltage controlled coupling of crossed graphene nanoribbons. <i>Journal of Applied Physics</i> , 2013 , 114, 153710	2.5	5
92	Tunneling spectroscopy of chiral states in ultra-thin topological insulators. <i>Journal of Applied Physics</i> , 2013 , 113, 063707	2.5	6
91	The coherent interlayer resistance of a single, rotated interface between two stacks of AB graphite. <i>Applied Physics Letters</i> , 2013 , 103, 243114	3.4	19
90	Graphene-based non-Boolean logic circuits. <i>Journal of Applied Physics</i> , 2013 , 114, 154310	2.5	47
89	Material Selection for Minimizing Direct Tunneling in Nanowire Transistors. <i>IEEE Transactions on Electron Devices</i> , 2012 , 59, 2064-2069	2.9	38
88	Charge density waves in exfoliated films of van der Waals materials: evolution of Raman spectrum in TiSe ₂ . <i>Nano Letters</i> , 2012 , 12, 5941-5	11.5	132
87	Monolayer MoS ₂ Transistors Beyond the Technology Road Map. <i>IEEE Transactions on Electron Devices</i> , 2012 , 59, 3250-3254	2.9	132
86	Anomalous electron transport in back-gated field-effect transistors with TiTe ₂ semimetal thin-film channels. <i>Applied Physics Letters</i> , 2012 , 100, 043109	3.4	46
85	Current modulation by voltage control of the quantum phase in crossed graphene nanoribbons. <i>Physical Review B</i> , 2012 , 86,	3.3	16
84	Doping, Tunnel Barriers, and Cold Carriers in InAs and InSb Nanowire Tunnel Transistors. <i>IEEE Transactions on Electron Devices</i> , 2012 , 59, 2996-3001	2.9	16
83	Electronic states of Ge/Si nanocrystals with crescent-shaped Ge-cores. <i>Journal of Applied Physics</i> , 2012 , 112, 024326	2.5	4
82	Negative differential resistance in bilayer graphene nanoribbons. <i>Applied Physics Letters</i> , 2011 , 98, 192112	3.4	49
81	Permanent electric dipole moments of carboxyamides in condensed media: what are the limitations of theory and experiment?. <i>Journal of Physical Chemistry B</i> , 2011 , 115, 9473-90	3.4	34
80	Hybrid Graphene Nanoribbon-CMOS tunneling volatile memory fabric 2011 ,		10
79	Carrier leakage in Ge/Si core-shell nanocrystals for lasers: core size and strain effects 2011 ,		3
78	Core size dependence of the confinement energies, barrier heights, and hole lifetimes in Ge-core/Si-shell nanocrystals. <i>Journal of Applied Physics</i> , 2011 , 110, 074306	2.5	11
77	Numerical study of electronic transport through bilayer graphene nanoribbons 2011 ,		2

76	TiSi_2 Nanocrystal Metal Oxide Semiconductor Field Effect Transistor Memory. <i>IEEE Nanotechnology Magazine</i> , 2011 , 10, 499-505	2.6	10
75	Graphene nanoribbon crossbar nanomesh 2011 ,		1
74	Effects of heavily doped source on the subthreshold characteristics of nanowire tunneling transistors 2011 ,		1
73	Computational study of negative differential resistance in graphene bilayer nanostructures 2011 ,		3
72	Effects of band-tails on the subthreshold characteristics of nanowire band-to-band tunneling transistors. <i>Journal of Applied Physics</i> , 2011 , 110, 074508	2.5	47
71	DNA Gating effect from single layer graphene. <i>Materials Research Society Symposia Proceedings</i> , 2011 , 1344, 1		
70	Conductance switching in diarylethenes bridging carbon nanotubes. <i>Journal of Chemical Physics</i> , 2011 , 134, 024524	3.9	32
69	Diameter dependent performance of high-speed, low-power InAs nanowire field-effect transistors. <i>Journal of Applied Physics</i> , 2010 , 107, 014502	2.5	23
68	Thermoelectric properties of Bi ₂ Te ₃ atomic quintuple thin films. <i>Applied Physics Letters</i> , 2010 , 97, 212103	3.4	85
67	Modeling and performance analysis of GaN nanowire field-effect transistors and band-to-band tunneling field-effect transistors. <i>Journal of Applied Physics</i> , 2010 , 108, 104503	2.5	11
66	Modeling and performance analysis of high-speed, low-power InAs nanowire field-effect transistors. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010 , 7, 2514-2517		
65	Gating of single-layer graphene with single-stranded deoxyribonucleic acids. <i>Small</i> , 2010 , 6, 1150-5	11	48
64	Performance analysis of InP nanowire band-to-band tunneling field-effect transistors. <i>Applied Physics Letters</i> , 2009 , 95, 073504	3.4	8
63	High-Speed and Low-Power Performance of n-type InSb/InP and InAs/InP Core/Shell Nanowire Field Effect Transistors for CMOS Logic Applications. <i>Materials Research Society Symposia Proceedings</i> , 2009 , 1178, 26		
62	The Quantum and Classical Capacitance Limits of InSb and InAs Nanowire FETs. <i>IEEE Transactions on Electron Devices</i> , 2009 , 56, 2215-2223	2.9	21
61	Theoretical design of bioinspired macromolecular electrets based on anthranilamide derivatives. <i>Biotechnology Progress</i> , 2009 , 25, 915-22	2.8	22
60	Conductance of a conjugated molecule with carbon nanotube contacts. <i>Physical Review B</i> , 2009 , 80,	3.3	20
59	Effect of localized oxygen functionalization on the conductance of metallic carbon nanotubes. <i>Physical Review B</i> , 2009 , 79,	3.3	18

58	Drive Currents and Leakage Currents in InSb and InAs Nanowire and Carbon Nanotube Band-to-Band Tunneling FETs. <i>IEEE Electron Device Letters</i> , 2009 , 30, 1257-1259	4.4	26
57	Gating of single layer graphene using DNA 2009 ,		1
56	Performance of n -Type InSb and InAs Nanowire Field-Effect Transistors. <i>IEEE Transactions on Electron Devices</i> , 2008 , 55, 2939-2945	2.9	43
55	The quantum capacitance limit of high-speed, low-power InSb nanowire field effect transistors 2008 ,		3
54	Performance Metrics of a 5 nm, Planar, Top Gate, Carbon Nanotube on Insulator (COI) Transistor. <i>IEEE Nanotechnology Magazine</i> , 2007 , 6, 186-190	2.6	13
53	Role of Doping in Carbon Nanotube Transistors With Source/Drain Underlaps. <i>IEEE Nanotechnology Magazine</i> , 2007 , 6, 652-658	2.6	11
52	Electronic properties of carbon nanotubes calculated from density functional theory and the empirical E _{bond} model. <i>Journal of Computational Electronics</i> , 2007 , 6, 395-400	1.8	10
51	Electron transport through a conjugated molecule with carbon nanotube leads. <i>Physical Review B</i> , 2007 , 76,	3.3	33
50	Synthesis and characterization of peptide nucleic acid-platinum nanoclusters. <i>Nanotechnology</i> , 2006 , 17, 1177-1183	3.4	14
49	Dielectric scaling of a zero-Schottky-barrier, 5nm gate, carbon nanotube transistor with source/drain underlaps. <i>Journal of Applied Physics</i> , 2006 , 100, 024317	2.5	15
48	Carbon nanotube-DNA nanoarchitectures and electronic functionality. <i>Small</i> , 2006 , 2, 1356-65	11	51
47	Carbon nanotube molecular resonant tunneling diode. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2006 , 203, R5-R7	1.6	13
46	Covalent functionalization of single walled carbon nanotubes with peptide nucleic acid: Nanocomponents for molecular level electronics. <i>Carbon</i> , 2006 , 44, 1730-1739	10.4	84
45	Self-Assembled Carbon Nanotubes for Electronic Circuit and Device Applications. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2006 , 1, 74-81	1.3	6
44	Leakage and performance of zero-Schottky-barrier carbon nanotube transistors. <i>Journal of Applied Physics</i> , 2005 , 98, 064307	2.5	37
43	Electronic transport through a CNT-Pseudopeptide-CNT hybrid material. <i>Molecular Simulation</i> , 2005 , 31, 859-864	2	7
42	Performance of 2 nm gate length carbon nanotube field-effect transistors with source-drain underlaps. <i>Applied Physics Letters</i> , 2005 , 87, 073104	3.4	43
41	Quantum cascade laser gain medium modeling using a second-nearest-neighbor sp ³ s* tight-binding model. <i>Superlattices and Microstructures</i> , 2005 , 37, 410-424	2.8	1

40	Electronic properties of silicon nanowires. <i>IEEE Transactions on Electron Devices</i> , 2005 , 52, 1097-1103	2.9	151
39	Functionally Engineered Carbon Nanotubes-Peptide Nucleic Acid Nanocomponents. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 872, 1		1
38	Oligonucleotide Metallization for Conductive Bio-Inorganic Interfaces in Self Assembled Nanoelectronics and Nanosystems. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 872, 1		1
37	Three-terminal Si-based negative differential resistance circuit element with adjustable peak-to-valley current ratios using a monolithic vertical integration. <i>Applied Physics Letters</i> , 2004 , 84, 2688-2690	3.4	28
36	Self-consistent transit-time model for a resonant tunnel diode. <i>IEEE Transactions on Electron Devices</i> , 2004 , 51, 535-541	2.9	4
35	NON-EQUILIBRIUM GREENS FUNCTIONS IN SEMICONDUCTOR DEVICE MODELING 2003 ,		3
34	A physics based model for the RTD quantum capacitance. <i>IEEE Transactions on Electron Devices</i> , 2003 , 50, 785-789	2.9	26
33	. <i>IEEE Transactions on Electron Devices</i> , 2003 , 50, 1876-1884	2.9	35
32	Barrier asymmetry and the mm-wave performance of resonant tunnel diodes. <i>Superlattices and Microstructures</i> , 2003 , 34, 355-360	2.8	1
31	Non-equilibrium Green function implementation of boundary conditions for full band simulations of substrate-nanowire structures. <i>Physica Status Solidi (B): Basic Research</i> , 2003 , 239, 94-102	1.3	29
30	151 kA/cm ² peak current densities in Si/SiGe resonant interband tunneling diodes for high-power mixed-signal applications. <i>Applied Physics Letters</i> , 2003 , 83, 3308-3310	3.4	26
29	Full band modeling of the excess current in a delta-doped silicon tunnel diode. <i>Journal of Applied Physics</i> , 2003 , 94, 5005	2.5	25
28	The effect of interface quality on Si / SiO ₂ resonant tunnel diodes. <i>Superlattices and Microstructures</i> , 2001 , 30, 201-204	2.8	3
27	Full-band simulation of indirect phonon assisted tunneling in a silicon tunnel diode with delta-doped contacts. <i>Applied Physics Letters</i> , 2001 , 78, 814-816	3.4	50
26	Epitaxial Si-based tunnel diodes. <i>Thin Solid Films</i> , 2000 , 380, 145-150	2.2	12
25	Current-voltage characteristics of high current density silicon Esaki diodes grown by molecular beam epitaxy and the influence of thermal annealing. <i>IEEE Transactions on Electron Devices</i> , 2000 , 47, 1707-1714	2.9	42
24	Epitaxially grown Si resonant interband tunnel diodes exhibiting high current densities. <i>IEEE Electron Device Letters</i> , 1999 , 20, 329-331	4.4	26
23	Interface effects in tunneling models with identical real and complex dispersions. <i>Physical Review B</i> , 1999 , 59, 7316-7319	3.3	1

22	Si resonant interband tunnel diodes grown by low-temperature molecular-beam epitaxy. <i>Applied Physics Letters</i> , 1999 , 75, 1308-1310	3.4	27
21	Room temperature operation of epitaxially grown Si/Si _{0.5} Ge _{0.5} /Si resonant interband tunneling diodes. <i>Applied Physics Letters</i> , 1998 , 73, 2191-2193	3.4	87
20	Role of interface roughness scattering in self-consistent resonant-tunneling-diode simulations. <i>Physical Review B</i> , 1998 , 58, 7279-7285	3.3	30
19	Numerical approximations to the treatment of interface roughness scattering in resonant tunnelling diodes. <i>Semiconductor Science and Technology</i> , 1998 , 13, A165-A168	1.8	4
18	Writing Research Software in a Large Group for the NEMO Project. <i>VLSI Design</i> , 1998 , 8, 79-86		4
17	A Generalized Tunneling Formula for Quantum Device Modeling. <i>VLSI Design</i> , 1998 , 6, 9-12		3
16	Resolution of Resonances in a General Purpose Quantum Device Simulator (NEMO). <i>VLSI Design</i> , 1998 , 6, 107-110		11
15	Effective-mass reproducibility of the nearest-neighbor sp ³ s* models: Analytic results. <i>Physical Review B</i> , 1997 , 56, 4102-4107	3.3	48
14	Single and multiband modeling of quantum electron transport through layered semiconductor devices. <i>Journal of Applied Physics</i> , 1997 , 81, 7845-7869	2.5	595
13	Quantitative simulation of a resonant tunneling diode. <i>Journal of Applied Physics</i> , 1997 , 81, 3207-3213	2.5	111
12	Quantum Transport with Band-Structure and Schottky Contacts. <i>Physica Status Solidi (B): Basic Research</i> , 1997 , 204, 354-357	1.3	21
11	The Effects of Electron Screening Length and Emitter Quasi-Bound States on the Polar-Optical Phonon Scattering in Resonant Tunneling Diodes. <i>Physica Status Solidi (B): Basic Research</i> , 1997 , 204, 408-411	1.3	5
10	Transmission resonances and zeros in multiband models. <i>Physical Review B</i> , 1995 , 52, 2754-2765	3.3	48
9	Quantum device simulation with a generalized tunneling formula. <i>Applied Physics Letters</i> , 1995 , 67, 2539-2541	3.4	84
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5	Rate equations for the phonon peak in resonant-tunneling structures. <i>Physical Review B</i> , 1993 , 48, 15132-15137	3.3	13

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2	Quantum kinetic analysis of mesoscopic systems: Linear response. <i>Superlattices and Microstructures</i> , 1992 , 11, 137-140	2.8	6
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