

Massimo Fischetti

List of Publications by Citations

Source: <https://exaly.com/author-pdf/443145/massimo-fischetti-publications-by-citations.pdf>

Version: 2024-04-24

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

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

193
papers

10,632
citations

50
h-index

100
g-index

225
ext. papers

11,915
ext. citations

2.8
avg, IF

6.35
L-index

#	Paper	IF	Citations
193	Band structure, deformation potentials, and carrier mobility in strained Si, Ge, and SiGe alloys. <i>Journal of Applied Physics</i> , 1996 , 80, 2234-2252	2.5	1147
192	Monte Carlo analysis of electron transport in small semiconductor devices including band-structure and space-charge effects. <i>Physical Review B</i> , 1988 , 38, 9721-9745	3.3	723
191	Effective electron mobility in Si inversion layers in metal-oxide-semiconductor systems with a high- ϵ insulator: The role of remote phonon scattering. <i>Journal of Applied Physics</i> , 2001 , 90, 4587-4608	2.5	588
190	. <i>IEEE Transactions on Electron Devices</i> , 1991 , 38, 634-649	2.9	447
189	Six-band $k \cdot p$ calculation of the hole mobility in silicon inversion layers: Dependence on surface orientation, strain, and silicon thickness. <i>Journal of Applied Physics</i> , 2003 , 94, 1079-1095	2.5	386
188	Monte Carlo study of electron transport in silicon inversion layers. <i>Physical Review B</i> , 1993 , 48, 2244-2274	3.3	379
187	Silicon CMOS devices beyond scaling. <i>IBM Journal of Research and Development</i> , 2006 , 50, 339-361	2.5	282
186	Modeling of electron mobility in gated silicon nanowires at room temperature: Surface roughness scattering, dielectric screening, and band nonparabolicity. <i>Journal of Applied Physics</i> , 2007 , 102, 083715	2.5	253
185	Charge trapping related threshold voltage instabilities in high permittivity gate dielectric stacks. <i>Journal of Applied Physics</i> , 2003 , 93, 9298-9303	2.5	248
184	Theory of high-field electron transport in silicon dioxide. <i>Physical Review B</i> , 1985 , 31, 8124-8142	3.3	232
183	Quantum effects in the early universe. I. Influence of trace anomalies on homogeneous, isotropic, classical geometries. <i>Physical Review D</i> , 1979 , 20, 1757-1771	4.9	231
182	On the enhanced electron mobility in strained-silicon inversion layers. <i>Journal of Applied Physics</i> , 2002 , 92, 7320-7324	2.5	179
181	Understanding hot-electron transport in silicon devices: Is there a shortcut?. <i>Journal of Applied Physics</i> , 1995 , 78, 1058-1087	2.5	176
180	Generation of positive charge in silicon dioxide during avalanche and tunnel electron injection. <i>Journal of Applied Physics</i> , 1985 , 57, 2860-2879	2.5	152
179	Long-range Coulomb interactions in small Si devices. Part I: Performance and reliability. <i>Journal of Applied Physics</i> , 2001 , 89, 1205-1231	2.5	138
178	Long-range Coulomb interactions in small Si devices. Part II. Effective electron mobility in thin-oxide structures. <i>Journal of Applied Physics</i> , 2001 , 89, 1232-1250	2.5	134
177	Impact ionization in silicon. <i>Applied Physics Letters</i> , 1993 , 62, 3339-3341	3.4	132

176	Hybrid-orientation technology (HOT): opportunities and challenges. <i>IEEE Transactions on Electron Devices</i> , 2006 , 53, 965-978	2.9	131
175	Modeling of Surface-Roughness Scattering in Ultrathin-Body SOI MOSFETs. <i>IEEE Transactions on Electron Devices</i> , 2007 , 54, 2191-2203	2.9	121
174	Model for the generation of positive charge at the Si-SiO ₂ interface based on hot-hole injection from the anode. <i>Physical Review B</i> , 1985 , 31, 2099-2113	3.3	120
173	Monte Carlo simulation of double-gate silicon-on-insulator inversion layers: The role of volume inversion. <i>Journal of Applied Physics</i> , 2001 , 89, 5478-5487	2.5	116
172	Monte Carlo analysis of semiconductor devices: The DAMOCLES program. <i>IBM Journal of Research and Development</i> , 1990 , 34, 466-494	2.5	116
171	. <i>IEEE Transactions on Electron Devices</i> , 1991 , 38, 650-660	2.9	115
170	Direct measurement of the energy distribution of hot electrons in silicon dioxide. <i>Journal of Applied Physics</i> , 1985 , 58, 1302-1313	2.5	110
169	The effect of gate metal and SiO ₂ thickness on the generation of donor states at the Si-SiO ₂ interface. <i>Journal of Applied Physics</i> , 1985 , 57, 418-425	2.5	105
168	Monte Carlo Solution to the Problem of High-Field Electron Heating in SiO ₂ . <i>Physical Review Letters</i> , 1984 , 53, 1755-1758	7.4	104
167	Master-equation approach to the study of electronic transport in small semiconductor devices. <i>Physical Review B</i> , 1999 , 59, 4901-4917	3.3	98
166	Ballistic electron transport in thin silicon dioxide films. <i>Physical Review B</i> , 1987 , 35, 4404-4415	3.3	90
165	Mobility enhancement and temperature dependence in top-gated single-layer MoS ₂ . <i>Physical Review B</i> , 2013 , 88,	3.3	89
164	Impact of field-induced quantum confinement in tunneling field-effect devices. <i>Applied Physics Letters</i> , 2011 , 98, 143503	3.4	89
163	Theory of electron transport in small semiconductor devices using the Pauli master equation. <i>Journal of Applied Physics</i> , 1998 , 83, 270-291	2.5	88
162	Monte-Carlo simulation of submicrometer Si n-MOSFETs at 77 and 300 K. <i>IEEE Electron Device Letters</i> , 1988 , 9, 467-469	4.4	87
161	Electron interference effects in quantum wells: Observation of bound and resonant states. <i>Physical Review Letters</i> , 1987 , 58, 816-819	7.4	86
160	Analysis of quantum ballistic electron transport in ultrasmall silicon devices including space-charge and geometric effects. <i>Journal of Applied Physics</i> , 2004 , 95, 5545-5582	2.5	85
159	Effect of the electron-plasmon interaction on the electron mobility in silicon. <i>Physical Review B</i> , 1991 , 44, 5527-5534	3.3	85

158	. <i>IEEE Transactions on Electron Devices</i> , 2007 , 54, 2116-2136	2.9	84
157	SiO ₂ -induced substrate current and its relation to positive charge in field-effect transistors. <i>Journal of Applied Physics</i> , 1986 , 59, 824-832	2.5	80
156	Electronic band structure calculations for biaxially strained Si, Ge, and III-V semiconductors. <i>Journal of Applied Physics</i> , 2010 , 108, 013710	2.5	77
155	Figure of merit for and identification of sub-60 mV/decade devices. <i>Applied Physics Letters</i> , 2013 , 102, 013510	3.4	72
154	Coulombic and neutral trapping centers in silicon dioxide. <i>Physical Review B</i> , 1991 , 43, 1471-1486	3.3	72
153	Simulation of Silicon Nanowire Transistors Using Boltzmann Transport Equation Under Relaxation Time Approximation. <i>IEEE Transactions on Electron Devices</i> , 2008 , 55, 727-736	2.9	69
152	Simulation of Electron Transport in High-Mobility MOSFETs: Density of States Bottleneck and Source Starvation 2007 ,		66
151	Slow and fast states induced by hot electrons at Si-SiO ₂ interface. <i>Journal of Applied Physics</i> , 1982 , 53, 3136-3144	2.5	66
150	Investigation of the SiO ₂ -induced substrate current in silicon field-effect transistors. <i>Journal of Applied Physics</i> , 1985 , 57, 443-452	2.5	65
149	Ballistic hot-electron transistors. <i>IBM Journal of Research and Development</i> , 1990 , 34, 530-549	2.5	58
148	. <i>IEEE Transactions on Electron Devices</i> , 1994 , 41, 1646-1654	2.9	57
147	Theory of interfacial plasmon-phonon scattering in supported graphene. <i>Physical Review B</i> , 2012 , 86,	3.3	56
146	Mermin-Wagner theorem, flexural modes, and degraded carrier mobility in two-dimensional crystals with broken horizontal mirror symmetry. <i>Physical Review B</i> , 2016 , 93,	3.3	55
145	Scaling MOSFETs to 10 nm: Coulomb effects, source starvation, and virtual source model. <i>Journal of Computational Electronics</i> , 2009 , 8, 60-77	1.8	55
144	Quantum Monte Carlo simulation of high-field electron transport: An application to silicon dioxide. <i>Physical Review Letters</i> , 1985 , 55, 2475-2478	7.4	52
143	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
142	Imperfect two-dimensional topological insulator field-effect transistors. <i>Nature Communications</i> , 2017 , 8, 14184	17.4	49
141	Pseudopotential-based studies of electron transport in graphene and graphene nanoribbons. <i>Journal of Physics Condensed Matter</i> , 2013 , 25, 473202	1.8	47

140	Hot-carrier charge trapping and trap generation in HfO ₂ and Al ₂ O ₃ field-effect transistors. <i>Journal of Applied Physics</i> , 2003 , 94, 1728-1737	2.5	45
139	Direct observation of the threshold for electron heating in silicon dioxide. <i>Physical Review Letters</i> , 1986 , 56, 1284-1286	7.4	44
138	The importance of the anode field in controlling the generation rate of the donor states at the Si/SiO ₂ interface. <i>Journal of Applied Physics</i> , 1984 , 56, 575-577	2.5	43
137	Theoretical studies of electronic transport in monolayer and bilayer phosphorene: A critical overview. <i>Physical Review B</i> , 2018 , 98,	3.3	43
136	Generalized phonon-assisted Zener tunneling in indirect semiconductors with non-uniform electric fields: A rigorous approach. <i>Journal of Applied Physics</i> , 2011 , 109, 124503	2.5	42
135	Positive charge effects on the flatband voltage shift during avalanche injection on Al-SiO ₂ -Si capacitors. <i>Journal of Applied Physics</i> , 1982 , 53, 3129-3135	2.5	42
134	Remote Coulomb scattering in metal-oxide-semiconductor field effect transistors: Screening by electrons in the gate. <i>Applied Physics Letters</i> , 2003 , 83, 4848-4850	3.4	41
133	Hot-electron-induced defects at the Si-SiO ₂ interface at high fields at 295 and 77 K. <i>Journal of Applied Physics</i> , 1985 , 57, 2854-2859	2.5	41
132	Electron heating studies in silicon dioxide: Low fields and thick films. <i>Journal of Applied Physics</i> , 1986 , 60, 1719-1726	2.5	40
131	Direct observation of ballistic electrons in silicon dioxide. <i>Physical Review Letters</i> , 1986 , 57, 3213-3216	7.4	40
130	The physics of hot-electron degradation of Si MOSFET's: Can we understand it?. <i>Applied Surface Science</i> , 1989 , 39, 578-596	6.7	38
129	Theoretical Study of Carrier Transport in Silicon Nanowire Transistors Based on the Multisubband Boltzmann Transport Equation. <i>IEEE Transactions on Electron Devices</i> , 2008 , 55, 2886-2897	2.9	37
128	Vacuum emission of hot electrons from silicon dioxide at low temperatures. <i>Journal of Applied Physics</i> , 1988 , 64, 4683-4691	2.5	37
127	Ballistic FET modeling using QDAME: quantum device analysis by modal evaluation. <i>IEEE Nanotechnology Magazine</i> , 2002 , 1, 255-259	2.6	36
126	Advanced Physics of Electron Transport in Semiconductors and Nanostructures. <i>Graduate Texts in Physics</i> , 2016 ,	0.3	36
125	Theoretical analysis of high-field transport in graphene on a substrate. <i>Journal of Applied Physics</i> , 2014 , 116, 034507	2.5	33
124	Light emission during direct and Fowler-Nordheim tunneling in ultra thin MOS tunnel junctions. <i>Microelectronic Engineering</i> , 1997 , 36, 103-106	2.5	33
123	Theory and Calculation of the Deformation Potential Electron-Phonon Scattering Rates in Semiconductors 1991 , 123-160		29

122	Ab initio study of the electronic properties and thermodynamic stability of supported and functionalized two-dimensional Sn films. <i>Physical Review B</i> , 2015 , 91,	3.3	28
121	Structural, electronic, and transport properties of silicane nanoribbons. <i>Physical Review B</i> , 2012 , 86,	3.3	28
120	Fundamental limitations of hot-carrier solar cells. <i>Physical Review B</i> , 2012 , 86,	3.3	28
119	Physical modeling of strain-dependent hole mobility in Ge p-channel inversion layers. <i>Journal of Applied Physics</i> , 2009 , 106, 083704	2.5	28
118	Polarization analysis of hot-carrier light emission in silicon. <i>Semiconductor Science and Technology</i> , 1994 , 9, 674-676	1.8	28
117	Performance degradation of small silicon devices caused by long-range Coulomb interactions. <i>Applied Physics Letters</i> , 2000 , 76, 2277-2279	3.4	27
116	Calculation of the electron mobility in III-V inversion layers with high- ϵ dielectrics. <i>Journal of Applied Physics</i> , 2010 , 108, 103705	2.5	26
115	Microscopic dielectric permittivities of graphene nanoribbons and graphene. <i>Physical Review B</i> , 2016 , 94,	3.3	24
114	Charged impurity scattering in top-gated graphene nanostructures. <i>Physical Review B</i> , 2012 , 86,	3.3	23
113	Modeling the capacitance-voltage response of In _{0.53} Ga _{0.47} As metal-oxide-semiconductor structures: Charge quantization and nonparabolic corrections. <i>Applied Physics Letters</i> , 2010 , 96, 213514	3.4	23
112	Soft-x-ray-induced core-level photoemission as a probe of hot-electron dynamics in SiO ₂ . <i>Physical Review Letters</i> , 1990 , 65, 1937-1940	7.4	23
111	Theoretical Study of the Gate Leakage Current in Sub-10-nm Field-Effect Transistors. <i>IEEE Transactions on Electron Devices</i> , 2013 , 60, 3862-3869	2.9	22
110	An empirical pseudopotential approach to surface and line-edge roughness scattering in nanostructures: Application to Si thin films and nanowires and to graphene nanoribbons. <i>Journal of Applied Physics</i> , 2011 , 110, 083713	2.5	22
109	Scaling MOSFETs to the Limit: A Physicists's Perspective. <i>Journal of Computational Electronics</i> , 2003 , 2, 73-79	1.8	22
108	The use of simulation in semiconductor technology development. <i>Solid-State Electronics</i> , 1990 , 33, 591-623	2.3	22
107	Hot electrons in silicon dioxide: Ballistic to steady-state transport. <i>Applied Surface Science</i> , 1987 , 30, 2786-2797	2.9	21
106	Deformation potentials for band-to-band tunneling in silicon and germanium from first principles. <i>Applied Physics Letters</i> , 2015 , 106, 013505	3.4	20
105	Theory of remote phonon scattering in top-gated single-layer graphene. <i>Physical Review B</i> , 2013 , 88,	3.3	19

104	Two-dimensional quantum mechanical modeling of band-to-band tunneling in indirect semiconductors 2011 ,		19
103	Direct and heterodyne detection of microwaves in a metallic single wall carbon nanotube. <i>Applied Physics Letters</i> , 2006 , 89, 083502	3.4	19
102	Theoretical Study of Ballistic Transport in Silicon Nanowire and Graphene Nanoribbon Field-Effect Transistors Using Empirical Pseudopotentials. <i>IEEE Transactions on Electron Devices</i> , 2017 , 64, 2758-2764	2.9	18
101	Signatures of dynamic screening in interfacial thermal transport of graphene. <i>Physical Review B</i> , 2013 , 87,	3.3	18
100	Hot electrons in SiO ₂ : ballistic to steady-state transport. <i>Solid-State Electronics</i> , 1988 , 31, 629-636	1.7	18
99	Pseudopotential-based electron quantum transport: Theoretical formulation and application to nanometer-scale silicon nanowire transistors. <i>Journal of Applied Physics</i> , 2016 , 119, 035701	2.5	18
98	Interfacial graphene growth in the Ni/SiO ₂ system using pulsed laser deposition. <i>Applied Physics Letters</i> , 2013 , 103, 134102	3.4	17
97	Hole mobility improvement in silicon-on-insulator and bulk silicon transistors using local strain 1997 ,		17
96	Temperature dependence of the current in SiO ₂ in the high field tunneling regime. <i>Journal of Applied Physics</i> , 1984 , 55, 4322-4329	2.5	17
95	Numerical Aspects and Implementation of the Damocles Monte Carlo Device Simulation Program 1991 , 1-26		16
94	Monte-Carlo study of electronic transport in non- $\bar{\Gamma}$ -symmetric two-dimensional materials: Silicene and germanene. <i>Journal of Applied Physics</i> , 2018 , 124, 044306	2.5	15
93	Full-band-structure theory of high-field transport and impact ionization of electrons and holes in Ge, Si, and GaAs. <i>Journal of Technology Computer Aided Design TCAD</i> , 1996 , 1-50		15
92	Electrical characterization of Al ₂ O ₃ n-channel MOSFETs with aluminum gates. <i>IEEE Electron Device Letters</i> , 2001 , 22, 490-492	4.4	15
91	Monte Carlo and hydrodynamic simulation of a one dimensional n+ ? n ? n+ silicon diode. <i>VLSI Design</i> , 1998 , 6, 247-250		15
90	Thickness and temperature dependence of the leakage current in hafnium-based Si SOI MOSFETs. <i>Microelectronics Reliability</i> , 2012 , 52, 2907-2913	1.2	14
89	Theory of hole mobility in strained Ge and III-V p-channel inversion layers with high- $\bar{\Gamma}$ insulators. <i>Journal of Applied Physics</i> , 2010 , 108, 123713	2.5	14
88	Numerical modeling of advanced semiconductor devices. <i>IBM Journal of Research and Development</i> , 1992 , 36, 208-232	2.5	14
87	Monte Carlo simulations of p- and n-channel dual-gate Si MOSFET's at the limits of scaling. <i>IEEE Transactions on Electron Devices</i> , 1993 , 40, 2103	2.9	14

86	Monte Carlo simulation of hot-carrier transport in real semiconductor devices. <i>Solid-State Electronics</i> , 1989 , 32, 1723-1729	1.7	14
85	Calculation of room temperature conductivity and mobility in tin-based topological insulator nanoribbons. <i>Journal of Applied Physics</i> , 2014 , 116, 173707	2.5	13
84	Thirty Years of Monte Carlo Simulations of Electronic Transport in Semiconductors: Their Relevance to Science and Mainstream VLSI Technology. <i>Journal of Computational Electronics</i> , 2004 , 3, 287-293	1.8	13
83	Scalable atomistic simulations of quantum electron transport using empirical pseudopotentials. <i>Computer Physics Communications</i> , 2019 , 244, 156-169	4.2	12
82	Differential conductance fluctuations in silicon nanowire transistors caused by quasiballistic transport and scattering induced intersubband transitions. <i>Applied Physics Letters</i> , 2008 , 92, 082103	3.4	12
81	Electronic Transport Properties of Silicane Determined from First Principles. <i>Materials</i> , 2019 , 12,	3.5	11
80	Electron Transport Properties of Al _x Ga _{1-x} N/GaN Transistors Based on First-Principles Calculations and Boltzmann-Equation Monte Carlo Simulations. <i>Physical Review Applied</i> , 2019 , 11,	4.3	11
79	Top oxide thickness dependence of remote phonon and charged impurity scattering in top-gated graphene. <i>Applied Physics Letters</i> , 2013 , 102, 183506	3.4	11
78	Empirical pseudopotential calculations of the band structure and ballistic conductance of strained [001], [110], and [111] silicon nanowires. <i>Journal of Applied Physics</i> , 2011 , 110, 033716	2.5	11
77	Field induced quantum confinement in Indirect Semiconductors: Quantum mechanical and modified semiclassical model 2011 ,		10
76	Self-consistent calculation for valence subband structure and hole mobility in p-channel inversion layers. <i>Journal of Computational Electronics</i> , 2008 , 7, 176-180	1.8	10
75	Dual stress liner enhancement in hybrid orientation technology		10
74	Comment on [Influence of the doping element on the electron mobility in n silicon]. <i>J. Appl. Phys.</i> 83 , 3096 (1998)]. <i>Journal of Applied Physics</i> , 1999 , 85, 7984-7985	2.5	10
73	Understanding the Average Electron-Hole Pair-Creation Energy in Silicon and Germanium Based on Full-Band Monte Carlo Simulations. <i>IEEE Transactions on Nuclear Science</i> , 2019 , 66, 444-451	1.7	10
72	Semiclassical and Quantum Electronic Transport in Nanometer-Scale Structures: Empirical Pseudopotential Band Structure, Monte Carlo Simulations and Pauli Master Equation 2011 , 183-247		10
71	Hot electrons in Si lose energy mostly to optical phonons—Truth or myth?. <i>Applied Physics Letters</i> , 2019 , 114, 222104	3.4	9
70	Electron avalanche injection on 10-nm dielectric films. <i>Journal of Applied Physics</i> , 1987 , 61, 1910-1915	2.5	9
69	Monte Carlo Study of Electronic Transport in Monolayer InSe. <i>Materials</i> , 2019 , 12,	3.5	9

68	Limitations of ab initio methods to predict the electronic-transport properties of two-dimensional semiconductors: the computational example of 2H-phase transition metal dichalcogenides. <i>Journal of Computational Electronics</i> , 2021 , 20, 49-59	1.8	9
67	Electron mobility in silicon and germanium inversion layers: The role of remote phonon scattering. <i>Journal of Computational Electronics</i> , 2007 , 6, 81-84	1.8	8
66	Coulombic and neutral electron trapping centers in SiO ₂ . <i>Applied Surface Science</i> , 1989 , 39, 420-428	6.7	8
65	Scaling MOSFETs to 10 nm: Coulomb Effects, Source Starvation, and Virtual Source 2009 ,		7
64	Why hot carrier emission based timing probes will work for 50 nm, 1V CMOS technologies. <i>Microelectronics Reliability</i> , 2001 , 41, 1465-1470	1.2	7
63	Inter-ribbon tunneling in graphene: An atomistic Bardeen approach. <i>Journal of Applied Physics</i> , 2016 , 119, 214306	2.5	7
62	Theoretical simulation of negative differential transconductance in lateral quantum well nMOS devices. <i>Journal of Applied Physics</i> , 2017 , 121, 044501	2.5	6
61	Master-Equation Study of Quantum Transport in Realistic Semiconductor Devices Including Electron-Phonon and Surface-Roughness Scattering. <i>Physical Review Applied</i> , 2020 , 13,	4.3	6
60	Intrinsic broadening of the mobility spectrum of bulk n-type GaAs. <i>New Journal of Physics</i> , 2014 , 16, 113033	2.3	6
59	Depression of the normal-superfluid transition temperature in gated bilayer graphene. <i>Journal of Applied Physics</i> , 2014 , 115, 163711	2.5	6
58	Monte Carlo study of velocity overshoot in switching a 0.1-micron CMOS inverter		6
57	Remote Phonon Scattering in Si and Ge with SiO ₂ and HfO ₂ Insulators: Does the Electron Mobility Determine Short Channel Performance?. <i>Japanese Journal of Applied Physics</i> , 2007 , 46, 3265-3272	1.4	6
56	Transport models for advanced device simulation-truth or consequences?		6
55	Ballistic Electron Transport in Hot Electron Transistors. <i>Springer Series in Electrophysics</i> , 1990 , 271-320		6
54	Theoretical study of scattering in graphene ribbons in the presence of structural and atomistic edge roughness. <i>Physical Review Materials</i> , 2019 , 3,	3.2	6
53	Si-based tunnel field-effect transistors for low-power nano-electronics 2011 ,		5
52	Investigation of CMOS devices with embedded SiGe source/drain on hybrid orientation substrates		5
51	Hot-carrier charge trapping and reliability in high-k dielectrics		5

50	Theoretical study of electron transport in silicene and germanene using full-band Monte Carlo simulations 2016 ,		4
49	Anatomy of Carrier Backscattering in Silicon Nanowire Transistors 2009 ,		4
48	Technology development & design for 22 nm InGaAs/InP-channel MOSFETs 2008 ,		4
47	Band-Structure and Quantum Effects on Hole Transport in p-MOSFETs. <i>Journal of Computational Electronics</i> , 2005 , 4, 27-30	1.8	4
46	Physical characterization of deep bulk levels by the MOS conductance technique. <i>Solid-State Electronics</i> , 1982 , 25, 5-14	1.7	4
45	3-D Full-Band Monte Carlo Simulation of Hot-Electron Energy Distributions in Gate-All-Around Si Nanowire MOSFETs. <i>IEEE Transactions on Electron Devices</i> , 2021 , 68, 2556-2563	2.9	4
44	Energies of the X- and L-valleys in In _{0.53} Ga _{0.47} As from electronic structure calculations. <i>Journal of Applied Physics</i> , 2016 , 119, 055707	2.5	4
43	Real-time ab initio simulation of inelastic electron scattering using the exact, density functional, and alternative approaches. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 8616-8624	3.6	4
42	Determining bound states in a semiconductor device with contacts using a nonlinear eigenvalue solver. <i>Journal of Computational Electronics</i> , 2014 , 13, 753-762	1.8	3
41	(Invited) Scaling FETs to 10 nm: Coulomb Effects, Source Starvation, and Virtual Source. <i>ECS Transactions</i> , 2010 , 28, 15-26	1	3
40	Calculation of Hole Mobility in Ge and III-V p-Channels 2009 ,		3
39	Study of performance and leakage currents in nanometer-scale bulk, SOI and double-gate MOSFETs. <i>Journal of Computational Electronics</i> , 2008 , 7, 24-27	1.8	3
38	Monte Carlo calculations of laser-induced free-electron heating in SiO ₂ 1991 ,		3
37	Hot Electrons in SiO ₂ : Ballistic and Steady-State Transport 1988 , 375-389		3
36	Calculation of electron-phonon interaction strength from first principles in graphene and silicon 2014 ,		2
35	2014 ,		2
34	Modeling p-channel SiGe MOSFETs by taking into account the band-structure and the size quantization effects self-consistently. <i>Journal of Computational Electronics</i> , 2007 , 5, 435-438	1.8	2
33	Does Circulation in Individual Current States Survive in the Total Current Density?. <i>Journal of Computational Electronics</i> , 2003 , 2, 105-108	1.8	2

32	. <i>IEEE Transactions on Electron Devices</i> , 1994 , 41, 1680-1683	2.9	2
31	The DAMOCLES Monte Carlo Device Simulation Program 1991 , 87-92		2
30	Channel Length Scaling Limit for LDMOS Field-Effect Transistors: Semi-classical and Quantum Analysis 2020 ,		2
29	Scattering with Ionized Impurities. <i>Graduate Texts in Physics</i> , 2016 , 315-325	0.3	2
28	* Electronic Structure of Low-Dimensionality Systems. <i>Graduate Texts in Physics</i> , 2016 , 111-162	0.3	2
27	Quantum transport simulation of graphene-nanoribbon field-effect transistors with defects. <i>Journal of Computational Electronics</i> , 2021 , 20, 21-37	1.8	2
26	Superconductivity induced by flexural modes in non- \bar{C} -symmetric Dirac-like two-dimensional materials: A theoretical study for silicene and germanene. <i>Physical Review B</i> , 2018 , 97,	3.3	1
25	Modeling of inter-ribbon tunneling in graphene 2015 ,		1
24	One-flux theory of saturated drain current in nanoscale transistors. <i>Solid-State Electronics</i> , 2012 , 78, 115-120		1
23	Backscattering coefficient in MOSFETs from an extended one-flux theory 2009 ,		1
22	Electronic and transport properties of armchair and zigzag sp^3 -hybridized silicene nanoribbons 2012 ,		1
21	Empirical Pseudopotential Calculation of Band Structure and Deformation Potentials of Biaxially Strained Semiconductors 2009 ,		1
20	Dissipative Quantum Transport using the Pauli Master Equation 2009 ,		1
19	Self-consistent full band two-dimensional Monte Carlo two-dimensional Poisson device solver for modeling SiGe p-channel devices. <i>Journal of Vacuum Science & Technology B</i> , 2006 , 24, 1997		1
18	Comment on Unified compact theory of tunneling gate current in metal-oxide-semiconductor structures: Quantum and image force barrier lowering[J. Appl. Phys. 92, 3724 (2002)]. <i>Journal of Applied Physics</i> , 2003 , 93, 3123-3124	2.5	1
17	Hole transport in p-channel Si MOSFETs. <i>Microelectronics Journal</i> , 2005 , 36, 323-326	1.8	1
16	Hot Electron Transport in Silicon Dioxide 1988 , 509-518		1
15	Dielectric Properties of Semiconductors. <i>Graduate Texts in Physics</i> , 2016 , 223-251	0.3	1

14	Overview of Quantum-Transport Formalisms. <i>Graduate Texts in Physics</i> , 2016 , 361-380	0.3	1
13	First-principles Study of the Electron and Hole Mobility in Silicane 2019 ,		1
12	Simulation of Quantum Current in Double Gate MOSFETs: Vortices in Electron Transport 2018 ,		1
11	Monte Carlo Simulation of High-Energy Electron Transport in Silicon: Is There a Short-Cut to Happiness? 1996 , 475-480		1
10	SEMICONDUCTOR DEVICE PHYSICS AND THE MODELING OF SMALL SEMICONDUCTOR DEVICES 1997 , 114-144		0
9	Monte Carlo analysis of phosphorene nanotransistors. <i>Journal of Computational Electronics</i> , 2021 , 20, 60-69	1.8	0
8	Stannene: A Likely 2D Topological Insulator. <i>Series in Materials Science and Engineering</i> , 2016 , 379-408		
7	Response to [Comment on [Theoretical analysis of high-field transport in graphene on a substrate] [J. Appl. Phys. 116, 236101 (2014)]. <i>Journal of Applied Physics</i> , 2014 , 116, 236102	2.5	
6	Surface Roughness Scattering in Ultrathin-Body SOI MOSFETs 2007 , 61-64		
5	Generalities About Scattering in Semiconductors. <i>Graduate Texts in Physics</i> , 2016 , 255-268	0.3	
4	Electron-Phonon Interactions. <i>Graduate Texts in Physics</i> , 2016 , 269-314	0.3	
3	Coulomb Interactions Among Free Carriers. <i>Graduate Texts in Physics</i> , 2016 , 327-349	0.3	
2	Solution Methods for Semiclassical Transport. <i>Graduate Texts in Physics</i> , 2016 , 407-436	0.3	
1	The Electronic Structure of Crystals: Computational Methods. <i>Graduate Texts in Physics</i> , 2016 , 71-97	0.3	