

Gregory L Snider

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139
papers

4,911
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h-index

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151
ext. papers

5,452
ext. citations

3.4
avg, IF

4.81
L-index

#	Paper	IF	Citations
139	A self-consistent solution of Schrödinger-Poisson equations using a nonuniform mesh. <i>Journal of Applied Physics</i> , 1990 , 68, 4071-4076	2.5	552
138	Realization of a Functional Cell for Quantum-Dot Cellular Automata. <i>Science</i> , 1997 , 277, 928-930	33.3	489
137	Digital logic gate using quantum-Dot cellular automata. <i>Science</i> , 1999 , 284, 289-91	33.3	451
136	InAlN/AlN/GaN HEMTs With Regrown Ohmic Contacts and f_{T} of 370 GHz. <i>IEEE Electron Device Letters</i> , 2012 , 33, 988-990	4.4	252
135	Molecular quantum cellular automata cells. Electric field driven switching of a silicon surface bound array of vertically oriented two-dot molecular quantum cellular automata. <i>Journal of the American Chemical Society</i> , 2003 , 125, 15250-9	16.4	180
134	Electron transport in AlGaIn/GaN heterostructures grown on 6H-SiC substrates. <i>Applied Physics Letters</i> , 1998 , 72, 707-709	3.4	170
133	Electron mobility in modulation-doped AlGaIn/GaN heterostructures. <i>Applied Physics Letters</i> , 1999 , 74, 287-289	3.4	138
132	Experimental demonstration of a binary wire for quantum-dot cellular automata. <i>Applied Physics Letters</i> , 1999 , 74, 2875-2877	3.4	117
131	Gate-Recessed Enhancement-Mode InAlN/AlN/GaN HEMTs With 1.9-A/mm Drain Current Density and 800-mS/mm Transconductance. <i>IEEE Electron Device Letters</i> , 2010 , 31, 1383-1385	4.4	111
130	Dependence of field switched ordered arrays of dinuclear mixed-valence complexes on the distance between the redox centers and the size of the counterions. <i>Journal of the American Chemical Society</i> , 2005 , 127, 15218-27	16.4	105
129	Quantum-dot cellular automata: Review and recent experiments (invited). <i>Journal of Applied Physics</i> , 1999 , 85, 4283-4285	2.5	101
128	Quantum-dot cellular automata: computing with coupled quantum dots. <i>International Journal of Electronics</i> , 1999 , 86, 549-590	1.2	99
127	Experimental demonstration of clocked single-electron switching in quantum-dot cellular automata. <i>Applied Physics Letters</i> , 2000 , 77, 295-297	3.4	97
126	Electron states in mesa-etched one-dimensional quantum well wires. <i>Journal of Applied Physics</i> , 1990 , 68, 2849-2853	2.5	97
125	Operation of a quantum-dot cellular automata (QCA) shift register and analysis of errors. <i>IEEE Transactions on Electron Devices</i> , 2003 , 50, 1906-1913	2.9	95
124	Experimental demonstration of a leadless quantum-dot cellular automata cell. <i>Applied Physics Letters</i> , 2000 , 77, 738-740	3.4	93
123	Quantum-Dot Cellular Automata at a Molecular Scale. <i>Annals of the New York Academy of Sciences</i> , 2006 , 960, 225-239	6.5	91

122	Single particle transport in two-dimensional heterojunction interlayer tunneling field effect transistor. <i>Journal of Applied Physics</i> , 2014 , 115, 074508	2.5	85
121	Demonstration of a six-dot quantum cellular automata system. <i>Applied Physics Letters</i> , 1998 , 72, 2179-2181	3.4	80
120	Power gain in a quantum-dot cellular automata latch. <i>Applied Physics Letters</i> , 2002 , 81, 1332-1334	3.4	77
119	. <i>IEEE Electron Device Letters</i> , 2011 , 32, 892-894	4.4	72
118	Experimental demonstration of a latch in clocked quantum-dot cellular automata. <i>Applied Physics Letters</i> , 2001 , 78, 1625-1627	3.4	65
117	Quantum-Dot Cellular Automata: Line and Majority Logic Gate. <i>Japanese Journal of Applied Physics</i> , 1999 , 38, 7227-7229	1.4	60
116	220-GHz Quaternary Barrier InAlGa _N /AlN/GaN HEMTs. <i>IEEE Electron Device Letters</i> , 2011 , 32, 1215-1217	4.4	58
115	. <i>IEEE Electron Device Letters</i> , 2011 , 32, 309-311	4.4	57
114	Clocked quantum-dot cellular automata shift register. <i>Surface Science</i> , 2003 , 532-535, 1193-1198	1.8	56
113	Ultrascaled InAlN/GaN High Electron Mobility Transistors with Cutoff Frequency of 400 GHz. <i>Japanese Journal of Applied Physics</i> , 2013 , 52, 08JN14	1.4	55
112	Quaternary Barrier InAlGa _N HEMTs With f_{T}/f_{max} of 230/300 GHz. <i>IEEE Electron Device Letters</i> , 2013 , 34, 378-380	4.4	42
111	Experimental Test of Landauer's Principle at the Sub-kBT Level. <i>Japanese Journal of Applied Physics</i> , 2012 , 51, 06FE10	1.4	37
110	An electron wave directional coupler and its analysis. <i>Journal of Applied Physics</i> , 1991 , 69, 1047-1051	2.5	35
109	Practical issues in the realization of quantum-dot cellular automata. <i>Superlattices and Microstructures</i> , 1996 , 20, 447-459	2.8	33
108	Quantized conductance in ballistic constrictions at 30 K. <i>Applied Physics Letters</i> , 1991 , 59, 2727-2729	3.4	32
107	InGa _N Channel High-Electron-Mobility Transistors with InAlGa _N Barrier and f_{T}/f_{max} of 260/220 GHz. <i>Applied Physics Express</i> , 2013 , 6, 016503	2.4	30
106	Fanout gate in quantum-dot cellular automata. <i>Nanotechnology</i> , 2007 , 18, 375401	3.4	29
105	Formation, Characterization, and Sub-50-nm Patterning of Organosilane Monolayers with Embedded Disulfide Bonds: An Engineered Self-Assembled Monolayer Resist for Electron-Beam Lithography. <i>Langmuir</i> , 2003 , 19, 9748-9758	4	29

104	Partially suppressed shot noise in hopping conduction: observation in SiGe quantum wells. <i>Physical Review Letters</i> , 2000 , 85, 397-400	7.4	27
103	Demonstration of a functional quantum-dot cellular automata cell. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1998 , 16, 3795		27
102	On the possibility of sub 60 mV/decade subthreshold switching in piezoelectric gate barrier transistors. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2013 , 10, 1469-1472		24
101	Fundamental limits of energy dissipation in charge-based computing. <i>Applied Physics Letters</i> , 2010 , 97, 103502	3.4	24
100	External charge state detection of a double-dot system. <i>Applied Physics Letters</i> , 1997 , 71, 1730-1732	3.4	23
99	Experimental demonstration of quantum-dot cellular automata. <i>Semiconductor Science and Technology</i> , 1998 , 13, A130-A134	1.8	23
98	Observation of switching in a quantum-dot cellular automata cell. <i>Nanotechnology</i> , 1999 , 10, 166-173	3.4	23
97	Experimental Test of Landauer's Principle at the Sub- $k_B T$ Level. <i>Japanese Journal of Applied Physics</i> , 2012 , 51, 06FE10	1.4	21
96	Correlated electron transport in coupled metal double dots. <i>Applied Physics Letters</i> , 1998 , 73, 2787-2789	3.4	20
95	Experimental demonstration of electron switching in a quantum-dot cellular automata (QCA) cell. <i>Superlattices and Microstructures</i> , 1999 , 25, 273-278	2.8	19
94	Scanning tunneling microscopy and spectroscopy investigations of QCA molecules. <i>Ultramicroscopy</i> , 2003 , 97, 55-63	3.1	17
93	A functional cell for quantum-dot cellular automata. <i>Solid-State Electronics</i> , 1998 , 42, 1355-1359	1.7	16
92	A two-stage shift register for clocked Quantum-Dot Cellular Automata. <i>Journal of Nanoscience and Nanotechnology</i> , 2002 , 2, 351-5	1.3	15
91	Direct detection of a transport-blocking trap in a nanoscaled silicon single-electron transistor by radio-frequency reflectometry. <i>Applied Physics Letters</i> , 2014 , 104, 233503	3.4	14
90	Subcritical barrier AlN/GaN E/D-mode HFETs and inverters. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2011 , 208, 1620-1622	1.6	14
89	Novel method for fabrication of nanoscale single-electron transistors: Electron beam induced deposition of Pt and atomic layer deposition of tunnel barriers. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2011 , 29, 06FB01	1.3	13
88	Operation of single-walled carbon nanotube as a radio-frequency single-electron transistor. <i>Nanotechnology</i> , 2007 , 18, 445203	3.4	13
87	Single-electron tunneling effects in a metallic double dot device. <i>Applied Physics Letters</i> , 2002 , 80, 667-669	3.4	13

86	Critical behavior of epitaxial antiferromagnetic insulators: Interdigital capacitance measurement of magnetic specific heat of FeF ₂ thin films. <i>Physical Review B</i> , 1989 , 40, 4898-4903	3.3	13
85	Large subband spacings in doped quantum wires. <i>Journal of Applied Physics</i> , 1990 , 68, 5922-5924	2.5	13
84	Metal-Insulator-Metal Single Electron Transistors with Tunnel Barriers Prepared by Atomic Layer Deposition. <i>Applied Sciences (Switzerland)</i> , 2017 , 7, 246	2.6	12
83	Conductance suppression due to correlated electron transport in coupled double quantum dots. <i>Physical Review B</i> , 1999 , 60, 16906-16912	3.3	12
82	Application of negative differential conductance in Al/AlO _x single-electron transistors for background charge characterization. <i>Applied Physics Letters</i> , 2010 , 96, 042114	3.4	11
81	Defect detection in nano-scale transistors based on radio-frequency reflectometry. <i>Applied Physics Letters</i> , 2011 , 99, 152106	3.4	11
80	Single electron memory devices: Toward background charge insensitive operation. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2003 , 21, 2860		11
79	Carbon nanotube gated lateral resonant tunneling field-effect transistors. <i>Applied Physics Letters</i> , 2005 , 87, 152102	3.4	11
78	Minimum energy for computation, theory vs. experiment 2011 ,		10
77	Differential charge detection for quantum-dot cellular automata. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1997 , 15, 2832		10
76	Molecular cellular networks: A non von Neumann architecture for molecular electronics 2016 ,		10
75	Si-Containing Recessed Ohmic Contacts and 210 GHz Quaternary Barrier InAlGa _N High-Electron-Mobility Transistors. <i>Applied Physics Express</i> , 2011 , 4, 096502	2.4	9
74	Experimental demonstration of hybrid CMOS-single electron transistor circuits. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2011 , 29, 041004	1.3	9
73	The Development of Quantum-Dot Cellular Automata. <i>Lecture Notes in Computer Science</i> , 2014 , 3-20	0.9	8
72	Energy-Efficient Clocking Based on Resonant Switching for Low-Power Computation. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2014 , 61, 1400-1408	3.9	8
71	Platinum single-electron transistors with tunnel barriers made by atomic layer deposition. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2010 , 28, C6L6-C6L8	1.3	8
70	High-performance monolithically-integrated E/D mode InAlN/AlN/GaN HEMTs for mixed-signal applications 2010 ,		8
69	Implementations of Quantum-dot Cellular Automata 2006 ,		8

68	Residual arsenic site in oxidized Al _x Ga _{1-x} As (x=0.96). <i>Applied Physics Letters</i> , 2001 , 78, 2458-2460	3.4	8
67	Effect of band structure on etch-stop layers in the photoelectrochemical etching of GaAs/AlGaAs semiconductor structures. <i>Applied Physics Letters</i> , 1993 , 62, 1809-1811	3.4	8
66	Design and fabrication of ballistic constrictions for high temperature operation. <i>Superlattices and Microstructures</i> , 1992 , 11, 297-301	2.8	8
65	A Mini-MIPS microprocessor for adiabatic computing 2016 ,		7
64	Fabrication of nanodamascene metallic single electron transistors with atomic layer deposition of tunnel barrier. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2015 , 33, 06FG02	1.3	7
63	High aspect ratio features in poly(methylglutarimide) using electron beam lithography and solvent developers. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2012 , 30, 06FI01	1.3	7
62	Atomic layer deposition of Al ₂ O ₃ for single electron transistors utilizing Pt oxidation and reduction. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2016 , 34, 01A139	2.9	6
61	Time delay analysis in high speed gate-recessed E-mode InAlN HEMTs. <i>Solid-State Electronics</i> , 2013 , 80, 67-71	1.7	6
60	Sub-60 mV/decade steep transistors with compliant piezoelectric gate barriers 2014 ,		6
59	Resonant clocking circuits for reversible computation 2012 ,		6
58	Si single electron transistor fabricated by chemical mechanical polishing. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2010 , 28, C6L9-C6L13	1.3	6
57	A system to demonstrate the bistability in molecules for application in a molecular QCA cell 2009 ,		6
56	Controlled chemical mechanical polishing of polysilicon and silicon dioxide for single-electron device. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2007 , 25, 1034-1037	2.9	6
55	Temperature dependence of the locked mode in a single-electron latch. <i>Microelectronics Journal</i> , 2005 , 36, 304-307	1.8	6
54	Silicon single-electron transistor with oxide tunnel barriers fabricated using chemical mechanical polishing. <i>Journal of Vacuum Science & Technology B</i> , 2008 , 26, 2587-2591		5
53	Strong cotunneling suppression in a single-electron transistor with granulated metal film island. <i>Applied Physics Letters</i> , 2006 , 89, 043511	3.4	5
52	Fabrication and characterization of Au island single-electron transistors with CrOx step edge junctions. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2004 , 22, 3128		5
51	Aluminum oxide tunnel barriers for single electron memory devices. <i>Microelectronics Journal</i> , 2005 , 36, 272-276	1.8	5

50	Effect of ion induced damage on carrier lifetimes in strained CdZnSe/ZnSe quantum wells. <i>Journal of Applied Physics</i> , 2000 , 87, 3063-3067	2.5	5
49	The Development of Quantum-Dot Cellular Automata. <i>Lecture Notes in Computer Science</i> , 2014 , 3-20	0.9	5
48	Single-electron transistors featuring silicon nitride tunnel barriers prepared by atomic layer deposition 2016 ,		5
47	Transistor Switches Using Active Piezoelectric Gate Barriers. <i>IEEE Journal on Exploratory Solid-State Computational Devices and Circuits</i> , 2015 , 1, 35-42	2.4	4
46	Single electron memory devices utilizing Al ₂ O ₃ tunnel oxide barriers. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2004 , 22, 3119		4
45	Origin of Coulomb blockade oscillations in single-electron transistors fabricated with granulated Cr/Cr ₂ O ₃ resistive microstrips. <i>Microelectronics Journal</i> , 2005 , 36, 308-312	1.8	4
44	XAFS and X-ray reflectivity study of III-V compound native oxide/GaAs interfaces. <i>Journal of Synchrotron Radiation</i> , 2001 , 8, 824-6	2.4	4
43	Experimental demonstration of single electron transistors featuring SiO ₂ plasma-enhanced atomic layer deposition in Ni-SiO ₂ -Ni tunnel junctions. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2016 , 34, 01A122	2.9	4
42	Design and Fabrication of a Microprocessor Using Adiabatic CMOS and Bennett Clocking. <i>Lecture Notes in Computer Science</i> , 2015 , 173-185	0.9	3
41	Electrostrictive Tunable Capacitors and High-Performance 2D Crystal Transistors for Energy-Efficient Applications. <i>IEEE Electron Device Letters</i> , 2016 , 37, 341-344	4.4	3
40	2013 ,		3
39	Effects of visible light illumination on the conductance of Al ₂ O ₃ /SiO ₂ single-electron transistors. <i>Journal of Vacuum Science & Technology B</i> , 2009 , 27, 3158		3
38	Fabrication of hybrid metal island/silicon single electron transistor. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2011 , 29, 06FB02	1.3	3
37	Integration of CMOS, single electron transistors, and quantumdot cellular automata 2009 ,		3
36	Radio frequency operation of clocked quantum-dot cellular automata latch. <i>Applied Physics Letters</i> , 2009 , 95, 193109	3.4	3
35	Gated hybrid Hall effect device on silicon. <i>Microelectronics Journal</i> , 2005 , 36, 294-297	1.8	3
34	Reversible and Adiabatic Computing: Energy-Efficiency Maximized. <i>Lecture Notes in Computer Science</i> , 2014 , 341-356	0.9	3
33	Adiabatic CMOS: Limits of Reversible Energy Recovery and First Steps for Design Automation. <i>Lecture Notes in Computer Science</i> , 2014 , 1-20	0.9	3

32	Design of a 16-Bit Adiabatic Microprocessor 2019 ,		3
31	Single electron transistors with hydrogen treatment of ALD SiO in nanoscale metal-insulator-metal tunnel junctions. <i>Nanotechnology</i> , 2017 , 28, 215203	3.4	2
30	Temperature Effects on Singularity Matching and Parity in a Superconducting Single-Electron Transistor. <i>Journal of Low Temperature Physics</i> , 2019 , 195, 419-428	1.3	2
29	Dual-Port Reflectometry Technique: Charge identification in nanoscaled single-electron transistors.. <i>IEEE Nanotechnology Magazine</i> , 2015 , 9, 24-32	1.7	2
28	Using single-electron box arrays for voltage sensing applications. <i>Applied Physics Letters</i> , 2020 , 116, 213103	3.4	2
27	Chemical mechanical planarization of gold. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2014 , 32, 021402	2.9	2
26	Energy Recovery and Logical Reversibility in Adiabatic CMOS Multiplier. <i>Lecture Notes in Computer Science</i> , 2013 , 25-35	0.9	2
25	Models of irreversibility for binary adders 2013 ,		2
24	There is no Landauer Limit: Experimental tests of the Landauer principle 2012 ,		2
23	Quantum-dot Cellular Automata. <i>Materials Research Society Symposia Proceedings</i> , 2001 , 696, 1		2
22	Reversible and Adiabatic Computing: Energy-Efficiency Maximized. <i>Lecture Notes in Computer Science</i> , 2014 , 341-356	0.9	2
21	. <i>IEEE Nanotechnology Magazine</i> , 2020 , 19, 292-296	2.6	1
20	Adiabatic Capacitive Logic using Voltage-controlled Variable Capacitors 2020 ,		1
19	Detection of the first charged states in ultrasmall Si single-hole transistor using dual-channel radio frequency reflectometry 2014 ,		1
18	Back-gating effects on radio-frequency reflectometry-based characteriztaion of nanoscale Si single-electron transistors 2014 ,		1
17	High performance E-mode InAlN/GaN HEMTs: Interface states from subthreshold slopes 2010 ,		1
16	Using granular film to suppress charge leakage in a single-electron latch. <i>Physical Review B</i> , 2008 , 77,	3.3	1
15	Electronic quantum-dot cellular automata 2008 ,		1

14	Cryogenic MOSFET kink effect abatement 2008 ,		1
13	Radio Frequency Reflectometry of Single-Electron Box Arrays for Nanoscale Voltage Sensing Applications. <i>Applied Sciences (Switzerland)</i> , 2020 , 10, 8797	2.6	1
12	Quantifying Irreversible Information Loss in Digital Circuits. <i>ACM Journal on Emerging Technologies in Computing Systems</i> , 2014 , 11, 1-17	1.7	0
11	Fabry-Perot analysis of resonant tunneling structures. <i>Superlattices and Microstructures</i> , 1991 , 10, 67-72	2.8	0
10	Nano-photoluminescence of natural anyon molecules and topological quantum computation. <i>Scientific Reports</i> , 2021 , 11, 21440	4.9	0
9	Gate reflectometry of single-electron box arrays using calibrated low temperature matching networks.. <i>Scientific Reports</i> , 2022 , 12, 3098	4.9	0
8	(Invited) Challenges and Opportunities in the Design of Tunnel FETs: Materials, Device Architectures, and Defects. <i>ECS Transactions</i> , 2014 , 64, 581-595	1	
7	A Response to "Room Temperature Single-Electron Transistor Featuring Gate-Enhanced on-State Current". <i>IEEE Electron Device Letters</i> , 2010 , 31, 249-249	4.4	
6	A novel micromachining technique for the formation of extrusions. <i>IEEE Electron Device Letters</i> , 1997 , 18, 135-137	4.4	
5	Foreword - Special issue on nanoelectronics. <i>IEEE Transactions on Electron Devices</i> , 2003 , 50, 1821-1822	2.9	
4	Metal Dot QCA 2006 , 229-253		
3	Experimental Tests of the Landauer Principle in Electron Circuits, and Quasi-Adiabatic Computing Systems 2019 , 177-230		
2	Quantum Dots in Nanoelectronic Devices 2018 , 8-1-8-23		
1	Single electron transistors with e-beam evaporation of SiO ₂ tunnel barriers. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2018 , 36, 062202	1.3	