

# Alan C Seabaugh

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/912874/publications.pdf>

Version: 2024-02-01

214  
papers

10,972  
citations

71102

41  
h-index

32842

100  
g-index

217  
all docs

217  
docs citations

217  
times ranked

11575  
citing authors

#	ARTICLE	IF	CITATIONS
1	Electronics based on two-dimensional materials. Nature Nanotechnology, 2014, 9, 768-779.	31.5	2,505
2	Low-Voltage Tunnel Transistors for Beyond CMOS Logic. Proceedings of the IEEE, 2010, 98, 2095-2110.	21.3	1,362
3	Low-subthreshold-swing tunnel transistors. IEEE Electron Device Letters, 2006, 27, 297-300.	3.9	533
4	Tunnel Field-Effect Transistors: State-of-the-Art. IEEE Journal of the Electron Devices Society, 2014, 2, 44-49.	2.1	511
5	High-voltage field effect transistors with wide-bandgap $\text{In}^2\text{-Ga}_2\text{O}_3$ nanomembranes. Applied Physics Letters, 2014, 104, .	3.3	288
6	Ultimate thin vertical $\text{p}^+\text{n}^-$ junction composed of two-dimensional layered molybdenum disulfide. Nature Communications, 2015, 6, 6564.	12.8	285
7	Direct extraction of the electron tunneling effective mass in ultrathin $\text{SiO}_2$ . Applied Physics Letters, 1996, 69, 2728-2730.	3.3	258
8	Device and Architecture Outlook for Beyond CMOS Switches. Proceedings of the IEEE, 2010, 98, 2169-2184.	21.3	258
9	Transistors with chemically synthesized layered semiconductor $\text{WS}_2$ exhibiting 105 room temperature modulation and ambipolar behavior. Applied Physics Letters, 2012, 101, .	3.3	237
10	A monolithic 4-bit 2-Gbps resonant tunneling analog-to-digital converter. IEEE Journal of Solid-State Circuits, 1998, 33, 1342-1349.	5.4	202
11	Graphene Nanoribbon Tunnel Transistors. IEEE Electron Device Letters, 2008, 29, 1344-1346.	3.9	193
12	Exfoliated multilayer $\text{MoTe}_2$ field-effect transistors. Applied Physics Letters, 2014, 105, .	3.3	168
13	Determination of graphene work function and graphene-insulator-semiconductor band alignment by internal photoemission spectroscopy. Applied Physics Letters, 2012, 101, .	3.3	166
14	$\text{AlGaSb}/\text{InAs}$ Tunnel Field-Effect Transistor With On-Current of $78 \text{ } \mu\text{A}/\mu\text{m}$ at 0.5 V. IEEE Electron Device Letters, 2012, 33, 363-365.	3.9	129
15	Realization of a three-terminal resonant tunneling device: The bipolar quantum resonant tunneling transistor. Applied Physics Letters, 1989, 54, 1034-1036.	3.3	120
16	Reconfigurable Ion Gating of $2\text{H-MoTe}_2$ Field-Effect Transistors Using Poly(ethylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	14.6	110
17	Nine-state resonant tunneling diode memory. IEEE Electron Device Letters, 1992, 13, 479-481.	3.9	107
18	Room temperature operation of epitaxially grown $\text{Si}/\text{Si}_{0.5}\text{Ge}_{0.5}/\text{Si}$ resonant interband tunneling diodes. Applied Physics Letters, 1998, 73, 2191-2193.	3.3	104

#	ARTICLE	IF	CITATIONS
19	Performance of AlGaSb/InAs TFETs With Gate Electric Field and Tunneling Direction Aligned. IEEE Electron Device Letters, 2012, 33, 655-657.	3.9	103
20	RTD/HFET low standby power SRAM gain cell. IEEE Electron Device Letters, 1998, 19, 7-9.	3.9	97
21	InGaAs/InP Tunnel FETs With a Subthreshold Swing of 93 mV/dec and $I_{ON}/I_{OFF}$ Ratio Near $10^6$ . IEEE Electron Device Letters, 2012, 33, 782-784.	3.9	81
22	Universal analytic model for tunnel FET circuit simulation. Solid-State Electronics, 2015, 108, 110-117.	1.4	81
23	Void formation on ultrathin thermal silicon oxide films on the Si(100) surface. Applied Physics Letters, 1996, 69, 1270-1272.	3.3	77
24	W <sub>5</sub> O <sub>14</sub> Nanowires. Advanced Functional Materials, 2007, 17, 1974-1978.	14.9	77
25	Switching Dynamics of Ferroelectric Zr-Doped HfO <sub>2</sub> . IEEE Electron Device Letters, 2018, 39, 1780-1783.	3.9	75
26	Polarization-Engineered III-Nitride Heterojunction Tunnel Field-Effect Transistors. IEEE Journal on Exploratory Solid-State Computational Devices and Circuits, 2015, 1, 28-34.	1.5	73
27	Graphene nanoribbon field-effect transistors on wafer-scale epitaxial graphene on SiC substrates. APL Materials, 2015, 3, .	5.1	72
28	The MoS <sub>2</sub> Nanotubes with Defect-Controlled Electric Properties. Nanoscale Research Letters, 2011, 6, 26.	5.7	71
29	Influence of Fe <sub>2</sub> O <sub>3</sub> Nanofiller Shape on the Conductivity and Thermal Properties of Solid Polymer Electrolytes: Nanorods versus Nanospheres. Journal of Physical Chemistry C, 2012, 116, 21216-21223.	3.1	69
30	Atomic Layer Deposition of Al <sub>2</sub> O <sub>3</sub> on WSe <sub>2</sub> Functionalized by Titanyl Phthalocyanine. ACS Nano, 2016, 10, 6888-6896.	14.6	69
31	Direct Measurement of Dirac Point Energy at the Graphene/Oxide Interface. Nano Letters, 2013, 13, 131-136.	9.1	67
32	Synthesized multiwall MoS <sub>2</sub> nanotube and nanoribbon field-effect transistors. Applied Physics Letters, 2015, 106, .	3.3	66
33	Partially Depleted SOI MOSFETs Under Uniaxial Tensile Strain. IEEE Transactions on Electron Devices, 2004, 51, 317-323.	3.0	65
34	Evaluating the minimum thickness of gate oxide on silicon using first-principles method. Applied Surface Science, 1998, 135, 137-142.	6.1	61
35	Vertical InGaAs/InP Tunnel FETs With Tunneling Normal to the Gate. IEEE Electron Device Letters, 2011, 32, 1516-1518.	3.9	57
36	The use of tertiarybutylphosphine and tertiarybutylarsine for the metalorganic molecular beam epitaxy of the In <sub>0.53</sub> Ga <sub>0.47</sub> As/InP and In <sub>0.48</sub> Ga <sub>0.52</sub> P/GaAs materials systems. Journal of Crystal Growth, 1992, 116, 436-446.	1.5	55

#	ARTICLE	IF	CITATIONS
37	Transport properties of graphene nanoribbon transistors on chemical-vapor-deposition grown wafer-scale graphene. <i>Applied Physics Letters</i> , 2012, 100, .	3.3	55
38	Novel gate-recessed vertical InAs/GaSb TFETs with record high $I_{ON}/I_{OFF}$ of $180 \times 10^3$ at $V_{DS}$ of 0.5 V. , 2012, , .		54
39	Fully-depleted Ge interband tunnel transistor: Modeling and junction formation. <i>Solid-State Electronics</i> , 2009, 53, 30-35.	1.4	53
40	Opposing dependence of the electron and hole gate currents in SOI MOSFETs under uniaxial strain. <i>IEEE Electron Device Letters</i> , 2005, 26, 410-412.	3.9	51
41	Unified AC model for the resonant tunneling diode. <i>IEEE Transactions on Electron Devices</i> , 2004, 51, 653-657.	3.0	49
42	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.	3.0	47
43	Monolayer Solid-State Electrolyte for Electric Double Layer Gating of Graphene Field-Effect Transistors. <i>ACS Nano</i> , 2017, 11, 5453-5464.	14.6	40
44	Deposition of HfO <sub>2</sub> on InAs by atomic-layer deposition. <i>Microelectronic Engineering</i> , 2009, 86, 1561-1563.	2.4	39
45	InAs/AlGaSb heterojunction tunnel field-effect transistor with tunnelling in-line with the gate field. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2012, 9, 389-392.	0.8	39
46	Monte Carlo Simulation of Switching Dynamics in Polycrystalline Ferroelectric Capacitors. <i>IEEE Transactions on Electron Devices</i> , 2019, 66, 3527-3534.	3.0	39
47	Controlled growth of SiO <sub>2</sub> tunnel barrier and crystalline Si quantum wells for Si resonant tunneling diodes. <i>Journal of Applied Physics</i> , 1997, 81, 6415-6424.	2.5	37
48	Selective reactive ion etching of GaAs on AlGaAs using CCl <sub>2</sub> F <sub>2</sub> and He. <i>Journal of Vacuum Science &amp; Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1988, 6, 77.	1.6	35
49	Comparative study of chemically synthesized and exfoliated multilayer MoS <sub>2</sub> field-effect transistors. <i>Applied Physics Letters</i> , 2013, 102, 043116.	3.3	35
50	Pseudomorphic bipolar quantum resonant-tunneling transistor. <i>IEEE Transactions on Electron Devices</i> , 1989, 36, 2328-2334.	3.0	32
51	Quantitative resonant tunneling spectroscopy: Current-voltage characteristics of precisely characterized resonant tunneling diodes. <i>Applied Physics Letters</i> , 1989, 54, 1256-1258.	3.3	31
52	Room Temperature Hot Electron Transistors with InAs-Notched Resonant-Tunneling-Diode Injector. <i>Japanese Journal of Applied Physics</i> , 1991, 30, 921-925.	1.5	30
53	Epitaxially grown Si resonant interband tunnel diodes exhibiting high current densities. <i>IEEE Electron Device Letters</i> , 1999, 20, 329-331.	3.9	30
54	Resonant-tunneling mixed-signal circuit technology. <i>Solid-State Electronics</i> , 1999, 43, 1355-1365.	1.4	30

#	ARTICLE	IF	CITATIONS
55	The Tunneling Transistor. IEEE Spectrum, 2013, 50, 35-62.	0.7	30
56	Multiwall MoS2 tubes as optical resonators. Applied Physics Letters, 2018, 113, .	3.3	30
57	Si resonant interband tunnel diodes grown by low-temperature molecular-beam epitaxy. Applied Physics Letters, 1999, 75, 1308-1310.	3.3	29
58	Co-integration of resonant tunneling and double heterojunction bipolar transistors on InP. IEEE Electron Device Letters, 1993, 14, 472-474.	3.9	28
59	RTD/HFET low standby power SRAM gain cell. , 0, , .		27
60	Two-dimensional electric-double-layer Esaki diode. Npj 2D Materials and Applications, 2019, 3, .	7.9	27
61	Room-Temperature Graphene-Nanoribbon Tunneling Field-Effect Transistors. Npj 2D Materials and Applications, 2019, 3, .	7.9	26
62	Room-temperature resonant tunnelling bipolar transistor XNOR and XOR integrated circuits. Electronics Letters, 1993, 29, 1802.	1.0	25
63	Transistors and tunnel diodes for analog/mixed-signal circuits and embedded memory. , 0, , .		25
64	Silicon tunnel diodes formed by proximity rapid thermal diffusion. IEEE Electron Device Letters, 2003, 24, 93-95.	3.9	25
65	Pulse Dynamics of Electric Double Layer Formation on All-Solid-State Graphene Field-Effect Transistors. ACS Applied Materials & Interfaces, 2018, 10, 43166-43176.	8.0	25
66	Low Temperature Plasma-Enhanced Epitaxy of GaAs. Journal of the Electrochemical Society, 1984, 131, 1357-1359.	2.9	24
67	Multibit resonant tunneling diode SRAM cell based on slew-rate addressing. IEEE Transactions on Electron Devices, 1999, 46, 55-62.	3.0	24
68	Graphene as transparent electrode for direct observation of hole photoemission from silicon to oxide. Applied Physics Letters, 2013, 102, .	3.3	24
69	Continuous semiempirical model for the current-voltage characteristics of tunnel fets. , 2014, , .		24
70	Electric Double Layer Dynamics in Poly(ethylene oxide) LiClO <sub>4</sub> on Graphene Transistors. Journal of Physical Chemistry C, 2017, 121, 16996-17004.	3.1	24
71	Resonant transmission in the base/collector junction of a bipolar quantum-well resonant-tunneling transistor. Applied Physics Letters, 1991, 59, 3413-3415.	3.3	22
72	Gate-Controlled WSe2 Transistors Using a Buried Triple-Gate Structure. Nanoscale Research Letters, 2016, 11, 512.	5.7	22

#	ARTICLE	IF	CITATIONS
73	Characterization and control of unconfined lateral diffusion under stencil masks. Journal of Vacuum Science & Technology B, 2007, 25, 857.	1.3	20
74	Electric-double-layer doping of WSe <sub>2</sub> field-effect transistors using polyethylene-oxide cesium perchlorate. Journal of Applied Physics, 2016, 120, .	2.5	20
75	Observation of resonant tunneling at room temperature in GaInP/GaAs/GaInP double-heterojunction bipolar transistor. IEEE Transactions on Electron Devices, 1993, 40, 1384-1389.	3.0	18
76	Room-temperature operation of a resonant-tunneling hot-electron transistor based integrated circuit. IEEE Electron Device Letters, 1993, 14, 441-443.	3.9	18
77	Interface characterization of an InP/InGaAs resonant tunneling diode by scanning tunneling microscopy. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1995, 13, 602-606.	2.1	18
78	Nanofabrication using nanotranslated stencil masks and lift off. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2004, 22, 74.	1.6	18
79	Fabrication of top-gated epitaxial graphene nanoribbon FETs using hydrogen-silsesquioxane. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, .	1.2	18
80	Steep subthreshold swing tunnel FETs: GaN/InN/GaN and transition metal dichalcogenide channels. , 2015, , .		18
81	Electrochemical C-V profiling of heterojunction device structures. IEEE Transactions on Electron Devices, 1989, 36, 309-313.	3.0	17
82	Interface characterization in an InP/InGaAs resonant tunneling diode by scanning tunneling microscopy. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1995, 13, 660.	1.6	17
83	A monolithic 4 bit 2 GSps resonant tunneling analog-to-digital converter. , 1997, , .		17
84	Perspectives of TFETs for low power analog ICs. , 2012, , .		17
85	Optimum Bandgap and Supply Voltage in Tunnel FETs. IEEE Transactions on Electron Devices, 2014, 61, 2719-2724.	3.0	17
86	Epitaxial Si-based tunnel diodes. Thin Solid Films, 2000, 380, 145-150.	1.8	16
87	Universal charge-conserving TFET SPICE model incorporating gate current and noise. IEEE Journal on Exploratory Solid-State Computational Devices and Circuits, 2016, , 1-1.	1.5	16
88	Steep slope transistors: Tunnel FETs and beyond. , 2016, , .		16
89	Alloy Engineered Nitride Tunneling Field-Effect Transistor: A Solution for the Challenge of Heterojunction TFETs. IEEE Transactions on Electron Devices, 2019, 66, 736-742.	3.0	16
90	Resonant tunneling circuit technology: has it arrived?. , 0, , .		15

#	ARTICLE	IF	CITATIONS
91	Tunnel field-effect transistor heterojunction band alignment by internal photoemission spectroscopy. Applied Physics Letters, 2012, 100, .	3.3	15
92	The use of organometallic group-V sources for the metalorganic molecular beam epitaxy growth of In <sub>0.48</sub> Ga <sub>0.52</sub> P/GaAs and In <sub>0.53</sub> Ga <sub>0.47</sub> As/InP heterojunction bipolar device structures. Journal of Crystal Growth, 1994, 136, 1-10.	1.5	14
93	Experimentally Validated, Predictive Monte Carlo Modeling of Ferroelectric Dynamics and Variability. , 2018, , .		14
94	In <sub>0.52</sub> Al <sub>0.48</sub> As/In <sub>0.53</sub> Ga <sub>0.47</sub> As lateral resonant tunnelling transistor. Electronics Letters, 1991, 27, 1832.	1.0	13
95	Coupled-quantum-well field-effect resonant tunneling transistor for multi-valued logic/memory applications. IEEE Transactions on Electron Devices, 1994, 41, 132-137.	3.0	13
96	Hybrid phase-change " Tunnel FET (PC-TFET) switch with subthreshold swing <math>\le 10\text{mV/decade}</math> and sub-0.1 body factor: Digital and analog benchmarking. , 2016, , .		13
97	Tunnel FET Analog Benchmarking and Circuit Design. IEEE Journal on Exploratory Solid-State Computational Devices and Circuits, 2018, 4, 19-25.	1.5	13
98	Potential nanoelectronic integrated circuit technologies. Microelectronic Engineering, 1996, 32, 15-30.	2.4	12
99	Record PVCr GaAs-based tunnel diodes fabricated on Si substrates using aspect ratio trapping. , 2008, , .		12
100	Self-aligned InAs/Al<math>\text{In}</math>0.45</math>/<math>\text{Ga}</math>0.55</math>/Sb vertical tunnel FETs. , 2011, , .		12
101	Silicon tunnel diodes formed by proximity rapid thermal diffusion. , 0, , .		11
102	SiGe Esaki tunnel diodes fabricated by UHV-CVD growth and proximity rapid thermal diffusion. Electronics Letters, 2004, 40, 83.	1.0	11
103	Growth of InAs on Si substrates at low temperatures using metalorganic vapor phase epitaxy. Journal of Crystal Growth, 2008, 310, 4772-4775.	1.5	11
104	A unique photoemission method to measure semiconductor heterojunction band offsets. Applied Physics Letters, 2013, 102, 012101.	3.3	11
105	Quantum Transport in AlGaSb/InAs TFETs With Gate Field In-Line With Tunneling Direction. IEEE Transactions on Electron Devices, 2015, 62, 2445-2449.	3.0	11
106	First-Principles Study of Crown Ether and Crown Ether-Li Complex Interactions with Graphene. Journal of Physical Chemistry C, 2015, 119, 20016-20022.	3.1	11
107	Atomic layer epitaxy for resonant tunneling devices. Thin Solid Films, 1993, 225, 99-104.	1.8	10
108	Room-temperature operation of a tunneling hot-electron transfer amplifier. Applied Physics Letters, 1994, 64, 1138-1140.	3.3	10

#	ARTICLE	IF	CITATIONS
109	Nanoprobe-induced electrostatic lateral quantization in near-surface resonant tunneling heterostructures. Applied Physics Letters, 1995, 66, 3621-3623.	3.3	10
110	InAs film grown on Si(111) by metal organic vapor phase epitaxy. Journal of Physics: Conference Series, 2008, 100, 042017.	0.4	10
111	Frequency response of LaAlO <sub>3</sub> /SrTiO <sub>3</sub> all-oxide field-effect transistors. Solid-State Electronics, 2012, 76, 1-4.	1.4	10
112	Improved MBE Growth Of InGaAs-InAlAs Heterostructures For High-Performance Device Applications. Proceedings of SPIE, 1989, , .	0.8	9
113	Hysteresis in resonant tunneling diode based multiple-peak driver device for multivalued SRAM cells: analysis, simulation, and experimental results. Canadian Journal of Physics, 1992, 70, 993-1000.	1.1	9
114	Solution-Cast Monolayers of Cobalt Crown Ether Phthalocyanine on Highly Ordered Pyrolytic Graphite. Journal of Physical Chemistry C, 2015, 119, 21992-22000.	3.1	9
115	Energetics of metal ion adsorption on and diffusion through crown ethers: First principles study on two-dimensional electrolyte. Solid State Ionics, 2017, 301, 176-181.	2.7	9
116	Reconfigurable Electric Double Layer Doping in an MoS <sub>2</sub> Nanoribbon Transistor. IEEE Transactions on Electron Devices, 2017, 64, 5217-5222.	3.0	9
117	Resonant-Tunneling Transistors. Edpacs, 1994, , 351-383.	1.0	8
118	Disorder effects in reduced dimension: Indium phosphide-based resonant tunneling diodes. Journal of Applied Physics, 2000, 88, 6951-6953.	2.5	8
119	Irradiation effects in InGaAs/InAlAs high electron mobility transistors. Applied Physics Letters, 2001, 79, 2279-2281.	3.3	8
120	A Combined Chemical Vapor Deposition and Rapid Thermal Diffusion Process for SiGe Esaki Diodes by Ultra-Shallow Junction Formation. IEEE Nanotechnology Magazine, 2005, 4, 594-598.	2.0	8
121	One-transistor bistable-body tunnel SRAM. , 2009, , .		8
122	Electric field coupling to quantum dot diodes. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1991, 9, 2893.	1.6	7
123	Si-based interband tunneling devices for high-speed logic and low power memory applications. , 0, , .		7
124	Design approach using tunnel diodes for lowering power in differential comparators. IEEE Transactions on Circuits and Systems Part 2: Express Briefs, 2005, 52, 572-575.	2.2	7
125	Analytic expression and approach for low subthreshold-swing tunnel transistors. , 2005, , .		7
126	Bistable-Body Tunnel SRAM. IEEE Nanotechnology Magazine, 2012, 11, 1067-1072.	2.0	7



#	ARTICLE	IF	CITATIONS
127	Partial switching of ferroelectrics for synaptic weight storage. , 2017, , .		7
128	Programming-Pulse Dependence of Ferroelectric Partial Polarization: Insights From a Comparative Study of PZT and HZO Capacitors. IEEE Transactions on Electron Devices, 2020, 67, 4482-4487.	3.0	7
129	Gallium nitride tunneling field-effect transistors exploiting polarization fields. Applied Physics Letters, 2020, 116, .	3.3	7
130	Removal of the high-resistivity layer at the non-liquid phase epitaxial GaAs layer-substrate interface by controlled in situ etch-back. Journal of Applied Physics, 1980, 51, 6435-6437.	2.5	6
131	Quantum-well resonant-tunneling transistors. , 0, , .		6
132	<title>Advances in the processing of quantum-coupled devices</title>. , 1990, , .		6
133	The Use of Tertiarybutylphosphine and Tertiarybutylarsine for the Metalorganic Molecular Beam Epitaxial Growth of Resonant Tunneling Devices. Materials Research Society Symposia Proceedings, 1991, 240, 33.	0.1	6
134	Integration of resonant-tunneling transistors and hot-electron transistors. IEEE Electron Device Letters, 1994, 15, 254-256.	3.9	6
135	Proton-induced disorder in InP-based resonant tunneling diodes. Applied Physics Letters, 1999, 75, 280-282.	3.3	6
136	Special Issue On Quantum Devices And Their Applications. Proceedings of the IEEE, 1999, 87, 535-536.	21.3	6
137	Performance-augmented CMOS using back-end uniaxial strain. , 0, , .		6
138	Record high current density and low contact resistance in MoS <sub>2</sub> FETs by ion doping. , 2016, , .		6
139	Ionization and displacement damage irradiation studies of quantum devices: resonant tunneling diodes and two-dimensional electron gas transistors. IEEE Transactions on Nuclear Science, 1999, 46, 1702-1707.	2.0	5
140	MeV ion-induced suppression of resonance current in InP-based resonant tunneling diodes. Applied Physics Letters, 2000, 76, 2562-2564.	3.3	5
141	Structural Sensitivity of Interband Tunnel Diodes for SRAM. , 2008, , .		5
142	Batch-Fabricated WSe <sub>2</sub> -on-Sapphire Field-Effect Transistors Grown by Chemical Vapor Deposition. IEEE Transactions on Electron Devices, 2020, 67, 1839-1844.	3.0	5
143	Quantitative, experimentally-validated, model of MoS <sub>2</sub> nanoribbon Schottky field-effect transistors from subthreshold to saturation. Journal of Applied Physics, 2020, 127, .	2.5	5
144	Prospects for Semiconductor Quantum Devices. Advances in Chemistry Series, 1994, , 15-42.	0.6	4

#	ARTICLE	IF	CITATIONS
145	Nonparabolicity effects in the bipolar quantum-well resonant-tunneling transistor. <i>Physical Review B</i> , 1997, 55, 7068-7072.	3.2	4
146	Ultralow current density RTDs for tunneling-based SRAM. , 1997, , .		4
147	InAlAs/InGaAs Interband Tunnel Diodes for SRAM. <i>IEEE Transactions on Electron Devices</i> , 2010, 57, 2587-2593.	3.0	4
148	Tunnel field-effect transistors - status and prospects. , 2010, , .		4
149	Vertical heterojunction of MoS <sub>2</sub> and WSe <sub>2</sub> . , 2014, , .		4
150	Electronic transport properties of top-gated epitaxial-graphene nanoribbon field-effect transistors on SiC wafers. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2014, 32, 012202.	1.2	4
151	Electric-double-layer p-n junctions in WSe <sub>2</sub> . <i>Scientific Reports</i> , 2020, 10, 12890.	3.3	4
152	Is Resonant Tunneling Transistor a Reality?. <i>Physics Today</i> , 1990, 43, 132-132.	0.3	3
153	Fabrication of lateral resonant tunneling devices. <i>Journal of Vacuum Science &amp; Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1992, 10, 2941.	1.6	3
154	Improved turn-on characteristics of a hot electron transistor at 300 K. <i>IEEE Electron Device Letters</i> , 1994, 15, 409-411.	3.9	3
155	Beyond-The-Roadmap Technology: Silicon Heterojunctions, Optoelectronics, and Quantum Devices. <i>Materials Research Society Symposia Proceedings</i> , 1997, 486, 67.	0.1	3
156	Resonant tunneling technology for mixed signal and digital circuits in the 10-100 GHz domain. , 0, , .		3
157	Vertical tunnel diodes on high resistivity silicon. , 0, , .		3
158	Influence of uniaxial tensile strain on the performance of partially depleted SOI CMOS ring oscillators. <i>IEEE Electron Device Letters</i> , 2006, 27, 52-54.	3.9	3
159	Rapid Melt Growth of Germanium Tunnel Junctions. <i>Journal of the Electrochemical Society</i> , 2007, 154, H536.	2.9	3
160	Fundamentals and current status of steep-slope tunnel field-effect transistors. , 2011, , .		3
161	(Invited) III-V Tunnel Field-Effect Transistors. <i>ECS Transactions</i> , 2011, 41, 227-229.	0.5	3
162	Exfoliated MoTe <sub>2</sub> field-effect transistor. , 2013, , .		3

#	ARTICLE	IF	CITATIONS
163	Low-leakage WSe <sub>2</sub> /FET gate-stack using titanyl phthalocyanine seeding layer for atomic layer deposition of Al <sub>2</sub> O <sub>3</sub> . , 2015, , .		3
164	Electric Double Layer Esaki Tunnel Junction in a 40-nm-Length, WSe <sub>2</sub> Channel Grown by Molecular Beam Epitaxy on Al <sub>2</sub> O <sub>3</sub> . , 2018, , .		3
165	Process Dependent Switching Dynamics of Ferroelectric Hafnium Zirconate. , 2019, , .		3
166	A Device Non-Ideality Resilient Approach for Mapping Neural Networks to Crossbar Arrays. , 2020, , .		3
167	Resonant tunneling and quantum integrated circuits. , 0, , .		2
168	Functional InP/InGaAs lateral double barrier heterostructure resonant tunneling diodes by using etch and regrowth. Applied Physics Letters, 1996, 69, 1918-1920.	3.3	2
169	Band Offset Measurement Of The ZnS/Si[001] Heterojunction. , 1997, , .		2
170	Effect of surface pretreatment and substrate orientation on the characteristics of InAs quantum dots on Si and SiO <sub>2</sub> substrates. Journal of Vacuum Science & Technology B, 2007, 25, 945.	1.3	2
171	Electrical properties of HfO <sub>2</sub> /InAs MOS capacitors. , 2007, , .		2
172	Sub-10 nm epitaxial graphene nanoribbon FETs. , 2011, , .		2
173	First demonstration of two-dimensional WS <sub>2</sub> transistors exhibiting 10 <sup>5</sup> room temperature modulation and ambipolar behavior. , 2012, , .		2
174	Electron transport in 2D crystal semiconductors and their device applications. , 2014, , .		2
175	Demonstration of electric double layer p-i-n junction in WSe <sub>2</sub> . , 2016, , .		2
176	Confinement Related Phenomena in MoS <sub>2</sub> Tubular Structures Grown from Vapour Phase. Israel Journal of Chemistry, 0, , .	2.3	2
177	Minority carrier magneto-oscillations in the bipolar quantum well resonant tunneling transistor. Journal of Applied Physics, 1996, 79, 2732-2737.	2.5	1
178	Rapid melt growth of Ge tunnel junctions for interband tunnel transistors. , 2007, , .		1
179	Tunnel FETs with tunneling normal to the gate. , 2013, , .		1
180	Nanomembrane Ga <sub>2</sub> O <sub>3</sub> high-voltage field effect transistors. , 2013, , .		1

#	ARTICLE	IF	CITATIONS
181	Tunnel field-effect transistors - update. , 2014, , .		1
182	Investigation of aging and restoration of polyethylene-oxide cesium-perchlorate solid polymer electrolyte used for ion doping of a $WSe_2$ field-effect transistor. , 2014, , .		1
183	Tunnel transistors. , 2014, , 117-143.		1
184	Reconfigurable p-n junction formation and bandgap opening in bilayer graphene using polyethylene oxide and $CsClO_4$ solid polymer electrolyte. , 2015, , .		1
185	First synthesized $WS_2$ nanotube and nanoribbon field effect transistors grown by chemical vapor transport. , 2017, , .		1
186	Electrical Properties of 6Ånm to 19Ånm Thick Polyethylene Oxide Capacitors for Ion/Electron Functional Devices. Journal of Electronic Materials, 2021, 50, 2956-2963.	2.2	1
187	A combined UHV-CVD and rapid thermal diffusion process for SiGe Esaki diodes by ultra shallow junction formation. , 0, , .		0
188	Semiconductor Resonant Tunneling Device Physics and Applications. Materials Research Society Symposia Proceedings, 1990, 198, 309.	0.1	0
189	Formation of rotation-induced superlattices and their observation by tunneling spectroscopy. Applied Physics Letters, 1991, 59, 570-572.	3.3	0
190	Room-temperature operation of InGaAs-based hot-electron transistors. IEEE Transactions on Electron Devices, 1993, 40, 2134.	3.0	0
191	Magneto-oscillations in the bipolar quantum-well resonant tunneling transistor. , 0, , .		0
192	Resonant tunneling in tunneling hot-electron transfer amplifier (THETA) structures. , 0, , .		0
193	Fabrication of lateral resonant tunneling devices with heterostructure barriers. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1996, 14, 4038.	1.6	0
194	Resonant tunneling in disordered materials such as $SiO_2/Si/SiO_2$ . , 1997, , .		0
195	Disorder-effects in reduced dimensional and quantum electronics. AIP Conference Proceedings, 2001, , .	0.4	0
196	TUNNEL DIODE/TRANSISTOR DIFFERENTIAL COMPARATOR. International Journal of High Speed Electronics and Systems, 2004, 14, 640-645.	0.7	0
197	Tunnel diode/transistor differential comparator. , 0, , .		0
198	Impact of uniaxial strain on the gate leakage currents of PD-SOI MOSFETs and ring oscillators with ultra-thin gate dielectric. , 2005, , .		0

#	ARTICLE	IF	CITATIONS
199	InAs growth on submicron (100) SOI islands for InAs-Si composite channel MOSFETs. , 2007, , .		0
200	Fabrication approach for lateral InGaAs tunnel transistors. , 2009, , .		0
201	Field modulation in heavily-doped thin-body p&#x002B;InGaAs for tunnel FETs. , 2009, , .		0
202	Fundamentals and current status of steep-slope tunnel field-effect transistors. , 2011, , .		0
203	Band alignment of TFET heterojunctions and post deposition annealing effects by internal photoemission spectroscopy. , 2011, , .		0
204	Novel logic devices based on 2D crystal semiconductors: Opportunities and challenges. , 2013, , .		0
205	Foreword Special Issue on Transistors With Steep Subthreshold Swing for Low-Power Electronics. IEEE Journal of the Electron Devices Society, 2015, 3, 86-87.	2.1	0
206	In Quest of the Next Information Processing Substrate. , 2017, , .		0
207	Projected performance of experimental InAs/GaAsSb/GaSb TFET as millimeter-wave detector. , 2017, , .		0
208	Improvement of Metal-Semiconductor Contact from Schottky to Ohmic by Cu Doping in Transition Metal Dichalcogenide Transistors. , 2018, , .		0
209	Using Ions to Control Transport in Two-Dimensional Materials for Ion-Controlled Electronics. , 2018, , .		0
210	Dynamics of Ferroelectric and Ionic Memories: Physics and Applications. , 2019, , .		0
211	TUNNEL DIODE/TRANSISTOR DIFFERENTIAL COMPARATOR. , 2005, , .		0
212	Resonant Tunneling Transistors. , 1993, , .		0
213	Resolution enhancement of transmission electron microscopy by super-resolution radial fluctuations. Applied Physics Letters, 2020, 116, 044105.	3.3	0
214	Mark A. Reed (1955â€“2021). Nature Nanotechnology, 2022, , .	31.5	0