Trevor J Thornton

List of Publications by Year
in descending order

116	4,809	304368 22	95083 68
papers	citations	h-index	g-index

116	116	116	2295
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Demonstration and Analysis of Ultrahigh Forward Current Density Diamond Diodes. IEEE Transactions on Electron Devices, 2022, 69, 254-261.	1.6	11
2	Space charge limited corrections to the power figure of merit for diamond. Applied Physics Letters, 2022, 120, .	1.5	3
3	Measurements and Simulation of Self-Heating in 40 nm SOI MOSFETs. , 2021, , .		2
4	Diamond Schottky p-i-n diodes for high power RF receiver protectors. Solid-State Electronics, 2021, 186, 108154.	0.8	9
5	Adaptive Power Control Using Current Adjustment for Watt-Level Power Amplifiers in CMOS SOI. IEEE Transactions on Circuits and Systems II: Express Briefs, 2020, 67, 605-609.	2.2	2
6	Self-Heating in 40 nm SOI MOSFETs on High Resistivity, Trap-Rich Substrates. IEEE Nanotechnology Magazine, 2020, 19, 42-46.	1.1	2
7	RF Characterization of Diamond Schottky p-i-n Diodes for Receiver Protector Applications. IEEE Microwave and Wireless Components Letters, 2020, 30, 1141-1144.	2.0	15
8	CMOS-Compatible MESFETs for High Power RF Integrated Circuits. IEEE Transactions on Semiconductor Manufacturing, 2019, 32, 14-22.	1.4	5
9	Online Undergraduate Laboratories in Electrical Engineering. , 2019, , .		7
10	High Breakdown Voltage MESFETs Integrated with SOI CMOS Technologies. , 2019, , .		0
11	Linear and Efficient NFET-MESFET 5G Cascode Power Amplifiers Using 45nm SOI CMOS. , 2019, , .		0
12	SOI MESFETs on high-resistivity, trap-rich substrates. Solid-State Electronics, 2018, 142, 47-51.	0.8	4
13	Self-Heating in SOI MOSFETs at the 45nm Node. , 2018, , .		1
14	Optimizing Activity Detection via Sensor Fusion. , 2018, , .		3
15	<inline-formula> <tex-math notation="LaTeX">K </tex-math> </inline-formula>-Band CMOS-Based MESFET Cascode Amplifiers. IEEE Microwave and Wireless Components Letters, 2018, 28, 609-611.	2.0	3
16	Impact Ionization in SOI MESFETs at the 32-nm Node. IEEE Transactions on Electron Devices, 2016, 63, 4143-4146.	1.6	2
17	4-terminal Angelov model for SOI CMOS MESFETs. , 2015, , .		9
18	Complementary SOI MESFETs at the 45-nm CMOS Node. IEEE Electron Device Letters, 2015, 36, 14-16.	2.2	4

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19	Avalanche breakdown in SOI MESFETs. Solid-State Electronics, 2014, 91, 78-80.	0.8	7
20	SOI MESFET RF power amplifiers at the 45nm node. , 2014, , .		3
21	Backgate Modulation Technique for Higher Efficiency Envelope Tracking. IEEE Transactions on Microwave Theory and Techniques, 2013, 61, 1599-1607.	2.9	1
22	32 dBm Power Amplifier on 45 nm SOI CMOS. IEEE Microwave and Wireless Components Letters, 2013, 23, 161-163.	2.0	19
23	Radiation Effects of High Voltage MESFETs at the 45nm Node. , 2013, , .		0
24	40V MESFETs fabricated on 32nm SOI CMOS. , 2013, , .		3
25	Radiation Tolerant MESFET-CMOS Low Dropout Linear Regulator for Integrated Power Management at the 45nm Node. , 2013, , .		1
26	SILICON-ON-INSULATOR MESFETs AT THE 45nm NODE. Selected Topics in Electornics and Systems, 2013, , 167-181.	0.2	0
27	SILICON-ON-INSULATOR MESFETS AT THE 45NM NODE. International Journal of High Speed Electronics and Systems, 2012, 21, 1250012.	0.3	7
28	Characterization and modeling of enhanced voltage RF MESFETs on 45nm CMOS for RF applications. , 2012, , .		6
29	Wideband class AB RF power amplifier using CMOS compatible SOI-MESFET device on 150nm technology. , 2012, , .		0
30	An integrated MESFET voltage follower LDO for high power and PSR RF and analog applications. , 2012, , .		10
31	Analog image recognition arrays design by using co-fabricated MOSFET and MESFETs on a 0.25ÂÎ¼m SOS process. Analog Integrated Circuits and Signal Processing, 2012, 72, 485-494.	0.9	1
32	Scaling SOI MESFETs to 150-nm CMOS Technologies. IEEE Transactions on Electron Devices, 2011, 58, 1628-1634.	1.6	21
33	Transform domain features for ion-channel signal classification. Biomedical Signal Processing and Control, 2011, 6, 219-224.	3.5	6
34	Nanopore Protein Biosensor Using Diffusive Flow. Japanese Journal of Applied Physics, 2011, 50, 127002.	0.8	0
35	A low-power CMOS BFSK transceiver for health monitoring systems. , 2011, , 157-160.		8
36	Nanopore Protein Biosensor Using Diffusive Flow. Japanese Journal of Applied Physics, 2011, 50, 127002.	0.8	1

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37	Silicon on insulator MESFETs for RF amplifiers. Solid-State Electronics, 2010, 54, 336-342.	0.8	9
38	Field effect modulation of ionic conductance of cylindrical silicon-on-insulator nanopore array. Journal of Applied Physics, 2010, 107, .	1.1	33
39	Electromigration of Charged Polystyrene Beads Through Silicon Nanopores Filled With Low Ionic Strength Solutions. , 2009, , .		2
40	SOI MESFETs Fabricated Using Fully Depleted CMOS Technologies. IEEE Electron Device Letters, 2009, 30, 678-680.	2.2	25
41	Compact modeling of a PD SOI MESFET for wide temperature designs. Microelectronics Journal, 2009, 40, 1264-1273.	1.1	9
42	Electromigration Current Rectification in a Cylindrical Nanopore Due to Asymmetric Concentration Polarization. Analytical Chemistry, 2009, 81, 3128-3133.	3.2	61
43	CMOS compatible high voltage compliant MESFET based analog IC building blocks. , 2009, , .		0
44	Transform domain features for ion-channel signal classification using support vector machines. , 2009, , .		2
45	Acquiring and Classifying Signals from Nanopores and Ion-Channels. Lecture Notes in Computer Science, 2009, , 265-274.	1.0	3
46	Silicon Based Pore Systems for Emerging Biosensor Applications. , 2009, , .		2
47	Si-MESFET technologies for low drop out regulators. , 2008, , .		3
48	Electrical Detection of Amine Ligation to a Metalloporphyrin via a Hybrid SOI-MOSFET. Journal of the American Chemical Society, 2008, 130, 2226-2233.	6.6	52
49	Ion Conductance of Cylindrical Solid State Nanopores Used in Coulter Counting Experiments. Materials Research Society Symposia Proceedings, 2008, 1092, 20901.	0.1	0
50	Compact Modeling of a PD SOI MESFET for Wide Temperature Designs. , 2007, , .		1
51	Fabrication of Cylindrical Nanopores and Nanopore Arrays in Silicon-On-Insulator Substrates. Journal of Microelectromechanical Systems, 2007, 16, 1419-1428.	1.7	19
52	High aspect ratio cylindrical nanopores in silicon-on-insulator substrates. Solid-State Electronics, 2007, 51, 1391-1397.	0.8	12
53	Low-Frequency-Noise Spectroscopy of SIMOX and Bonded SOI Wafers. IEEE Transactions on Electron Devices, 2007, 54, 3378-3382.	1.6	10
54	Integrated electrodes on a silicon based ion channel measurement platform. Biosensors and Bioelectronics, 2007, 23, 183-190.	5.3	30

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55	SILICON-BASED INTEGRATED MOSFETS AND MESFETS: A NEW PARADIGM FOR LOW POWER, MIXED SIGNAL, MONOLITHIC SYSTEMS USING COMMERCIALLY AVAILABLE SOI. International Journal of High Speed Electronics and Systems, 2006, 16, 723-732.	0.3	23
56	Large-signal modeling of SOI MESFETs. Solid-State Electronics, 2006, 50, 943-950.	0.8	34
57	CMOS-Compatible SOI MESFETs With High Breakdown Voltage. IEEE Transactions on Electron Devices, 2006, 53, 3129-3135.	1.6	84
58	SOI Low Frequency Noise and Interface Trap Density Measurements with the Pseudo MOSFET. ECS Transactions, 2006, 2, 491-502.	0.3	7
59	High-Voltage CMOS Compatible SOI MESFET Characterization and Spice Model Extraction. , 2006, , .		9
60	SILICON-BASED INTEGRATED MOSFETS AND MESFETS: A NEW PARADIGM FOR LOW POWER, MIXED SIGNAL, MONOLITHIC SYSTEMS USING COMMERCIALLY AVAILABLE SOI. , 2006, , .		0
61	Subthreshold Electron Mobility in SOI MOSFETs and MESFETs. IEEE Transactions on Electron Devices, 2005, 52, 1622-1626.	1.6	8
62	Total dose radiation response of CMOS compatible SOI MESFETs. IEEE Transactions on Nuclear Science, 2005, 52, 2398-2402.	1.2	18
63	CMOS Compatible SOI MESFETs for Extreme Environment Applications. , 2005, , .		8
64	Characterization of nickel Germanide thin films for use as contacts to p-channel Germanium MOSFETs. IEEE Electron Device Letters, 2005, 26, 151-153.	2.2	71
65	Ion Channels on Silicon. E-Journal of Surface Science and Nanotechnology, 2005, 3, 184-189.	0.1	5
66	Kelvin probe force microscopy as a tool for characterizing chemical sensors. Applied Physics Letters, 2004, 85, 3926-3928.	1.5	12
67	Teflonâ„¢-coated silicon apertures for supported lipid bilayer membranes. Applied Physics Letters, 2004, 85, 3307-3309.	1.5	34
68	Ion Channel Sensor on a Silicon Support. Materials Research Society Symposia Proceedings, 2004, 820, 158.	0.1	2
69	Calibration of a pH sensitive buried channel silicon-on-insulator MOSFET for sensor applications. Physica Status Solidi (B): Basic Research, 2004, 241, 2291-2296.	0.7	14
70	Full-band particle-based simulation of SOI and GOI MOSFETs. Physica Status Solidi (B): Basic Research, 2004, 241, 2297-2302.	0.7	4
71	High-Frequency Performance of Subthreshold SOI MESFETs. IEEE Electron Device Letters, 2004, 25, 652-654.	2.2	20
72	Shallow source/drain extensions for deep submicron mosfets using spin-on-dopants. IEEE Transactions on Electron Devices, 2003, 50, 1277-1283.	1.6	7

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73	Silicon-based ion channel sensor. Superlattices and Microstructures, 2003, 34, 451-457.	1.4	22
74	Drain current control in a hybrid molecular/MOSFET device. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 17, 659-663.	1.3	3
75	High Field Transport Studies of GaN. Physica Status Solidi A, 2002, 190, 263-270.	1.7	27
76	Buried channel silicon-on-insulator MOSFETs for hot-electron spectroscopy. Physica B: Condensed Matter, 2002, 314, 354-357.	1.3	0
77	Molecular control of the threshold voltage of an NMOS inversion layer. Microelectronic Engineering, 2002, 63, 135-139.	1.1	5
78	Schottky junction transistor-micropower circuits at GHz frequencies. IEEE Electron Device Letters, 2001, 22, 38-40.	2.2	7
79	Physics and applications of the Schottky junction transistor. IEEE Transactions on Electron Devices, 2001, 48, 2421-2427.	1.6	20
80	Coulomb blockade in strained-Si nanowires on leaky virtual substrates. Semiconductor Science and Technology, 2001, 16, 72-76.	1.0	8
81	Transport in split-gate silicon quantum dots. Superlattices and Microstructures, 2000, 27, 373-376.	1.4	5
82	Single-electron quantum dots in silicon MOS structures. Applied Physics A: Materials Science and Processing, 2000, 71, 415-421.	1.1	9
83	Superconducting quantum wells for the detection of submillimeter wave electromagnetic radiation. Applied Physics Letters, 2000, 77, 432-434.	1.5	4
84	Boundary scattering in wet-etched InAs/GaSb heterostructure wires: with and without magnetic field. Semiconductor Science and Technology, 1999, 14, 478-483.	1.0	6
85	Variable-range hopping transport in modulation-doped n-channel Si/Si1-xGexquantum well structures. Semiconductor Science and Technology, 1999, 14, 762-767.	1.0	16
86	Coupling of superconductivity with low-dimensional electron systems in mesoscopic geometries. Superlattices and Microstructures, 1999, 25, 767-774.	1.4	8
87	Ballistic transport in GaAs quantum wiresâ€"A short history. Superlattices and Microstructures, 1998, 23, 601-610.	1.4	15
88	Analysis of quantum lifetime behaviour in modulation-doped n-channel structures. Semiconductor Science and Technology, 1998, 13, 1106-1110.	1.0	7
89	Leakage currents in virtual substrates: measurements and device implications. Semiconductor Science and Technology, 1998, 13, 1215-1218.	1.0	10
90	MOS gated Si:SiGe quantum wells formed by anodic oxidation. Semiconductor Science and Technology, 1998, 13, 1442-1445.	1.0	6

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91	Si:SiGe MODFET current mirror. Electronics Letters, 1998, 34, 2076.	0.5	6
92	Si/SiGe quantum wells grown on vicinal Si(001) substrates: Morphology, dislocation dynamics, and transport properties. Applied Physics Letters, 1998, 72, 2262-2264.	1.5	18
93	Si:SiGe quantum wells grown on (118) substrates: Surface morphology and transport properties. Applied Physics Letters, 1997, 70, 1278-1280.	1.5	12
94	Superconductor-semiconductor interaction effects in mesoscopic hybrid structures. Physical Review B, 1996, 54, 14026-14031.	1.1	15
95	Two dimensional electron gases in SiGe/Si heterostructures grown by gas source molecular beam epitaxy. Journal of Materials Science: Materials in Electronics, 1995, 6, 330-335.	1.1	10
96	Electron heating effect on transport properties in modulation doped structures grown by gas source molecular beam epitaxy. Journal of Crystal Growth, 1995, 157, 373-377.	0.7	6
97	Quantum interference in the n-channel of a Si:SiGe quantum well. Semiconductor Science and Technology, 1995, 10, 1084-1088.	1.0	8
98	Characterization of n-channel Si/SiGe modulation doped structures grown by gas source molecular beam epitaxy. Semiconductor Science and Technology, 1995, 10, 1247-1252.	1.0	9
99	Mesoscopic devices. Reports on Progress in Physics, 1995, 58, 311-364.	8.1	63
100	Mobility degradation in gated Si:SiGe quantum wells with thermally grown oxides. Electronics Letters, 1995, 31, 1876-1878.	0.5	10
101	Singleâ€electron effects in a point contact using sideâ€gating in deltaâ€doped layers. Applied Physics Letters, 1992, 61, 3145-3147.	1.5	45
102	Side gating in Î´â€doped quantum wires. Applied Physics Letters, 1992, 60, 94-96.	1.5	21
103	Electron focusing with a double grid in AlGaAs/GaAs heterostructures. Applied Physics Letters, 1992, 60, 1093-1095.	1.5	9
104	Electron scatterers near the boundary in AlGaAs/GaAs quantum wires fabricated by focused ion beam implantation. Superlattices and Microstructures, 1992, 11, 261-264.	1.4	12
105	Boundary scattering in quantum wires. Physical Review Letters, 1989, 63, 2128-2131.	2.9	289
106	Electrostatically defined heterojunction rings and the Aharonovâ€“Bohm effect. Applied Physics Letters, 1989, 54, 21-23.	1.5	96
107	Transport in GaAs heterojunction ring structures. Superlattices and Microstructures, 1988, 4, 541-544.	1.4	9
108	One-dimensional transport and the quantisation of the ballistic resistance. Journal of Physics C: Solid State Physics, 1988, 21, L209-L214.	1.5	1,885

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109	Four-terminal magnetoresistance of a two-dimensional electron-gas constriction in the ballistic regime. Physical Review B, 1988, 37, 8534-8536.	1.1	130
110	Vanishing hall voltage in a quasi-one-dimensionalGaAsâˆ'AlxGa1âˆ'xAsheterojunction. Physical Review B, 1988, 38, 8518-8521.	1.1	101
111	The Aharonov-Bohm effect in electrostatically defined heterojunction rings. Journal of Physics C: Solid State Physics, 1988, 21, L325-L331.	1.5	67
112	Universal conductance fluctuations and electron coherence lengths in a narrow two-dimensional electron gas. Physical Review B, 1987, 36, 4514-4517.	1.1	52
113	Quantum interference and dimensionality in semiconductor structures. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1987, 56, 775-784.	0.6	5
114	Magnetic Depopulation of 1D Subbands in a Narrow 2D Electron Gas in a GaAs:AlGaAs Heterojunction. Physical Review Letters, 1986, 57, 1769-1772.	2.9	342
115	One-Dimensional Conduction in the 2D Electron Gas of a GaAs-AlGaAs Heterojunction. Physical Review Letters, 1986, 56, 1198-1201.	2.9	594
116	Electron transport across depleted region of a fine-gate GaAs:AlGaAs heterojunction FET. Electronics Letters, 1986, 22, 247.	0.5	8