

Tomas Gonzalez

List of Publications by Year in descending order

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papers

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201385

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302
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302
times ranked

1082
citing authors

#	ARTICLE	IF	CITATIONS
1	Voltage tuneable terahertz emission from a ballistic nanometer InGaAs δ -InAlAs transistor. Journal of Applied Physics, 2005, 97, 064307.	1.1	133
2	Microwave Detection at 110 GHz by Nanowires with Broken Symmetry. Nano Letters, 2005, 5, 1423-1427.	4.5	99
3	Monte Carlo simulator for the design optimization of low-noise HEMTs. IEEE Transactions on Electron Devices, 2000, 47, 1950-1956.	1.6	92
4	Electron transport in InP under high electric field conditions. Semiconductor Science and Technology, 1992, 7, 31-36.	1.0	88
5	Ballistic nanodevices for terahertz data processing: Monte Carlo simulations. Nanotechnology, 2003, 14, 117-122.	1.3	88
6	Improved Monte Carlo algorithm for the simulation of δ -doped AlInAs/GaInAs HEMTs. IEEE Transactions on Electron Devices, 2000, 47, 250-253.	1.6	83
7	Operation and high-frequency performance of nanoscale unipolar rectifying diodes. Applied Physics Letters, 2005, 86, 212103.	1.5	82
8	Microscopic modeling of nonlinear transport in ballistic nanodevices. IEEE Transactions on Electron Devices, 2003, 50, 1897-1905.	1.6	81
9	Microscopic simulation of electronic noise in semiconductor materials and devices. IEEE Transactions on Electron Devices, 1994, 41, 1916-1925.	1.6	78
10	Comparison Between the Dynamic Performance of Double- and Single-Gate AlInAs/InGaAs HEMTs. IEEE Transactions on Electron Devices, 2007, 54, 2815-2822.	1.6	66
11	Physical models of ohmic contact for Monte Carlo device simulation. Solid-State Electronics, 1996, 39, 555-562.	0.8	62
12	Experimental demonstration of direct terahertz detection at room-temperature in AlGaN/GaN asymmetric nanochannels. Journal of Applied Physics, 2013, 113, .	1.1	62
13	Universality of the 1/3 Shot-Noise Suppression Factor in Nondegenerate Diffusive Conductors. Physical Review Letters, 1998, 80, 2901-2904.	2.9	59
14	Monte Carlo determination of the intrinsic small-signal equivalent circuit of MESFET's. IEEE Transactions on Electron Devices, 1995, 42, 605-611.	1.6	53
15	Terahertz Gunn-like oscillations in InGaAs/InAlAs planar diodes. Journal of Applied Physics, 2008, 103, 094516.	1.1	52
16	Influence of the surface charge on the operation of ballistic T-branch junctions: a self-consistent model for Monte Carlo simulations. Semiconductor Science and Technology, 2007, 22, 663-670.	1.0	51
17	Effect of the T-gate on the performance of recessed HEMTs. A Monte Carlo analysis. Semiconductor Science and Technology, 1999, 14, 864-870.	1.0	50
18	Nonlinear Effects in T-Branch Junctions. IEEE Electron Device Letters, 2004, 25, 235-237.	2.2	48

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19	Searching for THz Gunn oscillations in GaN planar nanodiodes. Journal of Applied Physics, 2012, 111, .	1.1	48
20	Effect of long-range Coulomb interaction on shot-noise suppression in ballistic transport. Physical Review B, 1997, 56, 6424-6427.	1.1	37
21	Monte Carlo analysis of dynamic and noise performance of submicron MOSFETs at RF and microwave frequencies. Semiconductor Science and Technology, 2001, 16, 939-946.	1.0	36
22	Design Optimization of AlInAs/GaN HEMTs for High-Frequency Applications. IEEE Transactions on Electron Devices, 2004, 51, 521-528.	1.6	34
23	High-mobility heterostructures based on InAs and InSb: A Monte Carlo study. Journal of Applied Physics, 2009, 105, .	1.1	34
24	Five-valley model for the study of electron transport properties at very high electric fields in GaAs. Semiconductor Science and Technology, 1991, 6, 862-871.	1.0	31
25	Microscopic analysis of electron noise in GaAs Schottky barrier diodes. Journal of Applied Physics, 1997, 82, 2349-2358.	1.1	30
26	Electron-number statistics and shot-noise suppression by Coulomb correlation in nondegenerate ballistic transport. Physical Review B, 1998, 57, 1366-1369.	1.1	30
27	Microscopic analysis of shot-noise suppression in nondegenerate ballistic transport. Semiconductor Science and Technology, 1998, 13, 714-724.	1.0	28
28	Optimized V-shape design of GaN nanodiodes for the generation of Gunn oscillations. Applied Physics Letters, 2014, 104, .	1.5	27
29	Room Temperature Direct and Heterodyne Detection of 0.28-0.69-THz Waves Based on GaN 2-DEG Unipolar Nanochannels. IEEE Transactions on Electron Devices, 2016, 63, 353-359.	1.6	27
30	Microscopic analysis of generation-recombination noise in semiconductors under dc and time-varying electric fields. Journal of Applied Physics, 2000, 88, 800-807.	1.1	25
31	Comparison Between the Noise Performance of Double- and Single-Gate InP-Based HEMTs. IEEE Transactions on Electron Devices, 2008, 55, 1535-1540.	1.6	25
32	Comparative Monte Carlo analysis of InP- and GaN-based Gunn diodes. Journal of Applied Physics, 2014, 115, .	1.1	25
33	Monte Carlo analysis of the behavior and spatial origin of electronic noise in GaAs MESFET's. IEEE Transactions on Electron Devices, 1995, 42, 991-998.	1.6	24
34	Injection statistics simulator for dynamic analysis of noise in mesoscopic devices. Semiconductor Science and Technology, 1999, 14, L37-L40.	1.0	24
35	Upconversion of partition noise in semiconductors operating under periodic large-signal conditions. Physical Review B, 2003, 67, .	1.1	24
36	THz operation of self-switching nano-diodes and nano-transistors. , 2005, , .		24

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37	Quasiballistic transport in nanometer Si metal-oxide-semiconductor field-effect transistors: Experimental and Monte Carlo analysis. Journal of Applied Physics, 2007, 101, 114511.	1.1	24
38	Monte Carlo analysis of noise spectra in self-switching nanodiodes. Journal of Applied Physics, 2008, 103, 024502.	1.1	24
39	Noise and terahertz rectification linked by geometry in planar asymmetric nanodiodes. Applied Physics Letters, 2009, 94, 093512.	1.5	24
40	Simulation of electron transport in silicon: impact-ionization processes. Semiconductor Science and Technology, 1993, 8, 1291-1297.	1.0	23
41	Langevin forces and generalized transfer fields for noise modeling in deep submicron devices. IEEE Transactions on Electron Devices, 2000, 47, 1992-1998.	1.6	23
42	Monte Carlo study of kink effect in short-channel InAlAs/InGaAs high electron mobility transistors. Journal of Applied Physics, 2003, 94, 4096-4101.	1.1	23
43	Kink-effect related noise in short-channel InAlAs/InGaAs high electron mobility transistors. Journal of Applied Physics, 2004, 95, 8271-8274.	1.1	23
44	Monte Carlo Simulation of Schottky Diodes Operating Under Terahertz Cyclostationary Conditions. IEEE Electron Device Letters, 2004, 25, 1-3.	2.2	23
45	Monte Carlo analysis of noise spectra in Schottky-barrier diodes. Applied Physics Letters, 1993, 63, 3040-3042.	1.5	22
46	Monte Carlo analysis of a Schottky diode with an automatic space-variable charge algorithm. Semiconductor Science and Technology, 1996, 11, 380-387.	1.0	22
47	Design Optimization of AlInAs/GaInAs HEMTs for Low-Noise Applications. IEEE Transactions on Electron Devices, 2004, 51, 1228-1233.	1.6	22
48	Semiclassical theory of shot noise in ballistic n -semiconductor structures: Relevance of Pauli and long-range Coulomb correlations. Physical Review B, 2002, 66, .	1.1	21
49	Monte Carlo investigation of terahertz plasma oscillations in ultrathin layers of n -type In _{0.53} Ga _{0.47} As. Applied Physics Letters, 2008, 92, 042113.	1.5	21
50	Plasma Enhanced Terahertz Rectification and Noise in InGaAs HEMTs. IEEE Transactions on Terahertz Science and Technology, 2012, 2, 562-569.	2.0	21
51	Optimization and small-signal modeling of zero-bias InAs self-switching diode detectors. Solid-State Electronics, 2015, 104, 79-85.	0.8	21
52	Impact of substrate and thermal boundary resistance on the performance of AlGaIn/GaN HEMTs analyzed by means of electro-thermal Monte Carlo simulations. Semiconductor Science and Technology, 2016, 31, 065005.	1.0	21
53	Room temperature nonlinear transport in ballistic nanodevices. Semiconductor Science and Technology, 2004, 19, S125-S127.	1.0	20
54	Microscopic analysis of shot-noise suppression in nondegenerate diffusive conductors. Physical Review B, 1999, 60, 2670-2679.	1.1	19

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55	Numerical study of sub-millimeter Gunn oscillations in InP and GaN vertical diodes: Dependence on bias, doping, and length. <i>Journal of Applied Physics</i> , 2013, 114, .	1.1	19
56	Transfer-field methods for electronic noise in submicron semiconductor structures. <i>Rivista Del Nuovo Cimento</i> , 2001, 24, 1-72.	2.0	19
57	Spatial analysis of electronic noise in submicron semiconductor structures. <i>Applied Physics Letters</i> , 1993, 63, 84-86.	1.5	18
58	Three-terminal junctions operating as mixers, frequency doublers and detectors: a broad-band frequency numerical and experimental study at room temperature. <i>Semiconductor Science and Technology</i> , 2010, 25, 125013.	1.0	18
59	Negative Differential Transconductance and Nonreciprocal Effects in a Y-Branch Nanojunction: High-Frequency Analysis. <i>IEEE Nanotechnology Magazine</i> , 2006, 5, 750-757.	1.1	17
60	A microscopic interpretation of the RF noise performance of fabricated FDSOI MOSFETs. <i>IEEE Transactions on Electron Devices</i> , 2006, 53, 523-532.	1.6	17
61	Hydrodynamic and Monte Carlo simulation of steady-state transport and noise in submicrometre silicon structures. <i>Semiconductor Science and Technology</i> , 1996, 11, 865-872.	1.0	16
62	Bohm trajectories for the Monte Carlo simulation of quantum-based devices. <i>Applied Physics Letters</i> , 1998, 72, 806-808.	1.5	16
63	Monte Carlo analysis of the noise behavior in Si bipolar junction transistors and SiGe heterojunction bipolar transistors at radio frequencies. <i>Journal of Applied Physics</i> , 2001, 90, 1582-1588.	1.1	16
64	Monte Carlo analysis of electronic noise in semiconductor materials and devices. <i>Microelectronics Journal</i> , 1997, 28, 183-198.	1.1	15
65	Microscopic investigation of large-signal noise in semiconductor materials and devices. , 2003, 5113, 252.		15
66	Monte Carlo analysis of four-terminal ballistic rectifiers. <i>Nanotechnology</i> , 2004, 15, S250-S253.	1.3	15
67	Influence of the branches width on the nonlinear output characteristics of InAlAs/InGaAs-based three-terminal junctions. <i>Journal of Applied Physics</i> , 2009, 105, 094504.	1.1	15
68	Correlation between low-frequency current-noise enhancement and high-frequency oscillations in GaN-based planar nanodiodes: A Monte Carlo study. <i>Applied Physics Letters</i> , 2011, 99, 062109.	1.5	15
69	Nonlinear nanochannels for room temperature terahertz heterodyne detection. <i>Semiconductor Science and Technology</i> , 2013, 28, 125024.	1.0	15
70	Monte Carlo analysis of the transient spectral density of velocity fluctuations in semiconductors. <i>Applied Physics Letters</i> , 1992, 60, 613-615.	1.5	14
71	Numerical and experimental analysis of the static characteristics and noise in ungated recessed MESFET structures. <i>Solid-State Electronics</i> , 1996, 39, 1629-1636.	0.8	14
72	Monte carlo simulation of threshold bandwidth for high-order harmonic extraction. <i>IEEE Transactions on Electron Devices</i> , 2003, 50, 1171-1178.	1.6	14

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73	Monte Carlo study of kink effect in isolated-gate InAs/AlSb high electron mobility transistors. Journal of Applied Physics, 2010, 108, .	1.1	14
74	Monte Carlo Study of 2-D Capacitance Fringing Effects in GaAs Planar Schottky Diodes. IEEE Transactions on Electron Devices, 2016, 63, 3900-3907.	1.6	14
75	Ensemble Monte Carlo with Poisson solver for the study of current fluctuations in homogeneous GaAs structures. Journal of Applied Physics, 1993, 73, 7453-7464.	1.1	13
76	Acceleration fluctuation scheme for diffusion noise sources within a generalized impedance field method. Physical Review B, 1998, 57, 11866-11869.	1.1	13
77	Hysteresis phenomena in nanoscale rectifying diodes: A Monte Carlo interpretation in terms of surface effects. Applied Physics Letters, 2007, 91, .	1.5	13
78	Ballistic nano-devices for high frequency applications. Thin Solid Films, 2007, 515, 4321-4326.	0.8	13
79	Operation of GaN Planar Nanodiodes as THz Detectors and Mixers. IEEE Transactions on Terahertz Science and Technology, 2014, 4, 670-677.	2.0	13
80	Voltage controlled sub-THz detection with gated planar asymmetric nanochannels. Applied Physics Letters, 2018, 113, .	1.5	13
81	Analysis of the transient spectral density of velocity fluctuations in GaAs and InP. Journal of Applied Physics, 1992, 72, 2322-2330.	1.1	12
82	On the spectral strength of the noise source entering the transfer impedance method. Applied Physics Letters, 1997, 71, 3093-3095.	1.5	12
83	Noise and transit time in ungated FET structures. IEEE Transactions on Electron Devices, 1997, 44, 2128-2135.	1.6	12
84	Towards the Monte Carlo simulation of resonant tunnelling diodes using time-dependent wavepackets and Bohm trajectories. Semiconductor Science and Technology, 1999, 14, 532-542.	1.0	12
85	Exploring Digital Logic Design Using Ballistic Deflection Transistors Through Monte Carlo Simulations. IEEE Nanotechnology Magazine, 2011, 10, 1337-1346.	1.1	12
86	On the effect of δ -doping in self-switching diodes. Applied Physics Letters, 2014, 105, .	1.5	12
87	GaN nanodiode arrays with improved design for zero-bias sub-THz detection. Semiconductor Science and Technology, 2018, 33, 095016.	1.0	12
88	Spatial extent of the correlation between local diffusion noise sources in GaAs. Journal of Applied Physics, 1995, 77, 1564-1568.	1.1	11
89	Influence of spatial correlations on the analysis of diffusion noise in submicron semiconductor structures. Applied Physics Letters, 1995, 67, 685-687.	1.5	11
90	Noise suppression due to long-range Coulomb interaction: crossover between diffusive and ballistic transport regimes. Semiconductor Science and Technology, 1997, 12, 1053-1056.	1.0	11

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91	Terahertz tunable detection in self-switching diodes based on high mobility semiconductors: InGaAs, InAs and InSb. Journal of Physics: Conference Series, 2009, 193, 012082.	0.3	11
92	Transfer impedance calculations of electronic noise in two-terminal semiconductor structures. Journal of Applied Physics, 1998, 83, 2052-2066.	1.1	10
93	Noise in Schottky-barrier diodes: from static to large-signal operation. , 2004, 5470, 322.		10
94	Theoretical investigation of Schottky-barrier diode noise performance in external resonant circuits. Semiconductor Science and Technology, 2006, 21, 550-557.	1.0	10
95	Monte Carlo analysis of Gunn oscillations in narrow and wide band-gap asymmetric nanodiodes. Journal of Physics: Conference Series, 2009, 193, 012018.	0.3	10
96	Dynamic Monte Carlo study of isolated-gate InAs/AlSb HEMTs. Semiconductor Science and Technology, 2011, 26, 025004.	1.0	10
97	Analysis of Surface Charge Effects and Edge Fringing Capacitance in Planar GaAs and GaN Schottky Barrier Diodes. IEEE Transactions on Electron Devices, 2020, 67, 3530-3535.	1.6	10
98	Joint effect of Fermi and Coulomb correlations on shot-noise suppression in ballistic conductors. Physica B: Condensed Matter, 1999, 272, 285-287.	1.3	9
99	Monte Carlo analysis of the influence of dc conditions on the upconversion of generation-recombination noise in semiconductors. Semiconductor Science and Technology, 2001, 16, L8-L11.	1.0	9
100	Numerical and experimental study of a 0.25 μm fully-depleted silicon-on-insulator MOSFET: static and dynamic radio-frequency behaviour. Semiconductor Science and Technology, 2002, 17, 1149-1156.	1.0	9
101	Monte Carlo simulation of high-order harmonics generation in bulk semiconductors and submicron structures. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 1367-1376.	0.8	9
102	Kink effect and noise performance in isolated-gate InAs/AlSb high electron mobility transistors. Semiconductor Science and Technology, 2012, 27, 065018.	1.0	9
103	Effects of a High-k Dielectric on the Performance of InGaAs Ballistic Deflection Transistors. IEEE Electron Device Letters, 2012, 33, 1120-1122.	2.2	9
104	Experimental assessment of anomalous low-frequency noise increase at the onset of Gunn oscillations in InGaAs planar diodes. Applied Physics Letters, 2014, 105, .	1.5	9
105	Monte Carlo modelling of noise in advanced InGaAs HEMTs. Journal of Computational Electronics, 2015, 14, 72-86.	1.3	9
106	Anomalous DC and RF behavior of virgin AlGaIn/AlN/GaN HEMTs. Semiconductor Science and Technology, 2017, 32, 035011.	1.0	9
107	Monte Carlo Simulation of Electronic Noise in Semiconductor Materials and Devices Operating under Cyclostationary Conditions. Journal of Computational Electronics, 2003, 2, 455-458.	1.3	8
108	Numerical modeling of TeraHertz electronic devices. Journal of Computational Electronics, 2006, 5, 71-77.	1.3	8

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109	Monte Carlo investigation of terahertz plasma oscillations in gated ultrathin channel of n-InGaAs. Applied Physics Letters, 2009, 95, 152102.	1.5	8
110	Trap-related frequency dispersion of zero-bias microwave responsivity at low temperature in GaN-based self-switching diodes. Nanotechnology, 2020, 31, 405204.	1.3	8
111	A microscope interpretation of hot-electron noise in Schottky barrier diodes. Semiconductor Science and Technology, 1994, 9, 580-583.	1.0	7
112	Monte Carlo analysis of voltage noise in sub-micrometre semiconductor structures under large-signal regime. Semiconductor Science and Technology, 2002, 17, 696-700.	1.0	7
113	Monte Carlo Simulation of Noise in Electronic Devices: Limitations and Perspectives. AIP Conference Proceedings, 2003, , .	0.3	7
114	Monte Carlo Comparison Between InP-Based Double-Gate and Standard HEMTs. , 2006, , .		7
115	Enhanced Terahertz detection in self-switching diodes. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2010, 23, 301-314.	1.2	7
116	Non-linear thermal resistance model for the simulation of high power GaN-based devices. Semiconductor Science and Technology, 2021, 36, 055002.	1.0	7
117	One-dimensional Monte Carlo analysis of electron transport in submicrometre silicon structures. Semiconductor Science and Technology, 1994, 9, 1316-1323.	1.0	6
118	Spatiotemporal correlation of conduction current fluctuations within a hydrodynamic-Langevin scheme. Applied Physics Letters, 1999, 74, 723-725.	1.5	6
119	A Generalized Drift-Diffusion Model for Rectifying Schottky Contact Simulation. IEEE Transactions on Electron Devices, 2010, 57, 1539-1547.	1.6	6
120	Terahertz current oscillations assisted by optical phonon emission in GaN n+nn+ diodes: Monte Carlo simulations. Journal of Applied Physics, 2010, 107, 053707.	1.1	6
121	Analysis of noise spectra in GaAs and GaN Schottky barrier diodes. Semiconductor Science and Technology, 2011, 26, 055023.	1.0	6
122	Monte Carlo study of the operation of GaN planar nanodiodes as sub-THz emitters in resonant circuits. Semiconductor Science and Technology, 2014, 29, 115032.	1.0	6
123	Introduction to special issue on noise modeling. Journal of Computational Electronics, 2015, 14, 1-3.	1.3	6
124	Influence of trapping&detrapping processes on shot noise in nondegenerate quasi-ballistic transport. Semiconductor Science and Technology, 2002, 17, 440-445.	1.0	5
125	Influence of Ge profile on the noise behavior of SiGe HBTs under high injection conditions. Physica B: Condensed Matter, 2002, 314, 381-385.	1.3	5
126	Ballistic nanodevices for high frequency applications. International Journal of Nanotechnology, 2008, 5, 796.	0.1	5

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127	Plasmonic noise in nanometric semiconductor layers. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P02030.	0.9	5
128	A Monte Carlo investigation of plasmonic noise in nanometric n-In _{0.53} Ga _{0.47} As channels. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P01040.	0.9	5
129	Effect of tunnel injection through the Schottky gate on the static and noise behavior of GaInAs/AlInAs high electron mobility transistor. Journal of Applied Physics, 2014, 116, 234502.	1.1	5
130	Optimization of Ballistic Deflection Transistors by Monte Carlo Simulations. Journal of Physics: Conference Series, 2015, 647, 012066.	0.3	5
131	Self-consistent electro-thermal simulations of AlGaIn/GaN diodes by means of Monte Carlo method. Semiconductor Science and Technology, 2015, 30, 035001.	1.0	5
132	Ion shot noise in Hodgkin-Huxley neurons. Journal of Computational Electronics, 2018, 17, 1790-1796.	1.3	5
133	Design and Fabrication of Planar Gunn Nanodiodes Based on Doped GaN. , 2019, , .		5
134	GaN-based SSD structure for THz applications. , 2019, , .		5
135	Monte Carlo analysis of the influence of surface charges on GaN asymmetric nanochannels: Bias and temperature dependence. Journal of Applied Physics, 2021, 130, .	1.1	5
136	Submillimeter-Wave Oscillations in Recessed InGaAs/InAlAs Heterostructures: Origin and Tunability. Acta Physica Polonica A, 2011, 119, 111-113.	0.2	5
137	Review of electron transport properties in bulk InGaAs and InAs at room temperature. Lithuanian Journal of Physics, 2016, 55, .	0.1	5
138	Temperature and Gate-Length Dependence of Subthreshold RF Detection in GaN HEMTs. Sensors, 2022, 22, 1515.	2.1	5
139	Influence of Al mole fraction on the noise performance of GaAs/Al _x Ga _{1-x} As HEMT's. IEEE Transactions on Electron Devices, 1998, 45, 2081-2083.	1.6	4
140	Shot-noise suppression in nondegenerate semiconductors: the role of an energy-dependent scattering time. Physica B: Condensed Matter, 1999, 272, 282-284.	1.3	4
141	Terahertz oscillations in ultra-thin n-In _{0.53} Ga _{0.47} As ungated channels. Journal of Physics Condensed Matter, 2008, 20, 384210.	0.7	4
142	Monte Carlo analysis of thermal effects in GaN HEMTs. , 2009, , .		4
143	Monte Carlo simulation of ballistic transport in high-mobility channels. Journal of Physics: Conference Series, 2009, 193, 012035.	0.3	4
144	Time-domain Monte Carlo simulations of resonant-circuit operation of GaN Gunn diodes. , 2013, , .		4

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145	Ballistic deflection transistor: Geometry dependence and boolean operations. , 2013, , .		4
146	Time-dependent shot noise in multi-level quantum dot-based single-electron devices. Semiconductor Science and Technology, 2015, 30, 055002.	1.0	4
147	Stochastic model for action potential simulation including ion shot noise. Journal of Computational Electronics, 2017, 16, 419-430.	1.3	4
148	Hot-carrier thermal conductivity from the simulation of submicron semiconductor structures. Semiconductor Science and Technology, 1997, 12, 1511-1513.	1.0	3
149	Langevin Forces and Generalized Transfer Fields for Noise Modelling in Deep Submicron Devices. VLSI Design, 2001, 13, 85-90.	0.5	3
150	High injection effects on noise characteristics of Si BJTs and SiGe HBTs. Microelectronics Reliability, 2001, 41, 847-854.	0.9	3
151	Shot-noise anomalies in nondegenerate elastic diffusive conductors. Physical Review B, 2002, 66, .	1.1	3
152	Dynamical formation of hot-carrier intergroup noise under sub-terahertz cyclostationary conditions. Semiconductor Science and Technology, 2004, 19, S170-S172.	1.0	3
153	Current noise spectra of Schottky barrier diodes with electron traps in the active layer. Journal of Applied Physics, 2005, 97, 073708.	1.1	3
154	Ultra Fast Gunn Effect at THz Frequencies in HEMTs. , 0, , .		3
155	Monte Carlo simulation of surface charge effects in Tâ€branch nanojunctions. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 94-97.	0.8	3
156	Sub-THz frequency analysis in nano-scale devices at room temperature. , 2010, , .		3
157	Monte Carlo analysis of thermal effects in self-switching diodes. , 2013, , .		3
158	Exploration of digital latch design using ballistic deflection transistors â€ Modeling and simulation. , 2015, , .		3
159	Fabrication and Characterization of Fully Transparent ZnO Thin-Film Transistors and Self-Switching Nano-Diodes. Journal of Physics: Conference Series, 2015, 647, 012068.	0.3	3
160	Monte Carlo modeling of ultra-fast operating Ballistic Deflection Transistor. , 2016, , .		3
161	Geometry and bias dependence of trapping effects in planar GaN nanodiodes. , 2017, , .		3
162	Microwave detection up to 43.5 GHz by GaN nanodiodes: Experimental and analytical responsivity. , 2017, , .		3

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163	Comprehensive characterization of Gunn oscillations in $\text{In}_{0.53}\text{Ga}_{0.47}\text{As}$ planar diodes. <i>Semiconductor Science and Technology</i> , 2020, 35, 115009.	1.0	3
164	Optimization of the Epilayer Design for the Fabrication of Doped GaN Planar Gunn Diodes. <i>IEEE Transactions on Electron Devices</i> , 2022, 69, 514-520.	1.6	3
165	Monte Carlo analysis of thermal effects in the DC and AC performance of AlGaIn/GaN HEMTs. <i>Solid-State Electronics</i> , 2022, 193, 108289.	0.8	3
166	Hot-carrier fluctuations from ballistic to diffusive regime in submicron semiconductor structures. <i>Semiconductor Science and Technology</i> , 1994, 9, 584-587.	1.0	2
167	Bohm trajectories for the modeling of tunneling devices. <i>Microelectronic Engineering</i> , 1997, 36, 125-128.	1.1	2
168	González et al. Reply. <i>Physical Review Letters</i> , 1999, 83, 1268-1268.	2.9	2
169	Monte Carlo Investigation of Shot-noise Suppression in Nondegenerate Ballistic and Diffusive Transport Regimes. <i>Australian Journal of Physics</i> , 2000, 53, 3.	0.6	2
170	Monte Carlo simulation of electronic characteristics in short channel δ -doped AlInAs/GaInAs HEMTs. <i>Microelectronics Reliability</i> , 2001, 41, 73-77.	0.9	2
171	INFLUENCE OF DENSITY, OCCUPANCY AND LOCATION OF ELECTRON TRAPS ON SHOT NOISE IN NONDEGENERATE QUASIBALLISTIC TRANSPORT. <i>Fluctuation and Noise Letters</i> , 2002, 02, L243-L251.	1.0	2
172	High-frequency noise in FDSOI MOSFETs: a Monte Carlo investigation. , 2003, , .		2
173	ON THE INFLUENCE OF SPACE-QUANTIZATION EFFECTS ON THE RF NOISE BEHAVIOUR OF DG MOSFETs. <i>Fluctuation and Noise Letters</i> , 2004, 04, L561-L569.	1.0	2
174	Operation of a novel nanoscale unipolar rectifying diode. , 0, , .		2
175	TeraHertz Emission and Noise Spectra in HEMTs. <i>AIP Conference Proceedings</i> , 2005, , .	0.3	2
176	Onset of quasi-ballistic transport and mobility degradation in ultra scaled MOSFETs: a Monte Carlo study. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2008, 5, 123-126.	0.8	2
177	Fabrication and fundamentals of operation of an InAlAs/InGaAs velocity modulation transistor. <i>Applied Physics Letters</i> , 2009, 94, 103504.	1.5	2
178	Frequency response of T-shaped Three Branch Junctions as Mixers and Detectors. , 2009, , .		2
179	On the geometrical tunability of THz Gunn-like oscillations in InGaAs/InAlAs slot diodes. <i>Journal of Physics: Conference Series</i> , 2009, 193, 012090.	0.3	2
180	Monte Carlo study of the noise performance of isolated-gate InAs HEMTs. , 2011, , .		2

#	ARTICLE	IF	CITATIONS
181	Transconductance characteristics and plasma oscillations in nanometric InGaAs field effect transistors. <i>Solid-State Electronics</i> , 2011, 56, 116-119.	0.8	2
182	Evidence of surface charge effects in T-branch nanojunctions using microsecond-pulse testing. <i>Nanotechnology</i> , 2011, 22, 445203.	1.3	2
183	Monte Carlo study of the noise performance of isolated-gate InAs/AlSb HEMTs. <i>Semiconductor Science and Technology</i> , 2012, 27, 015008.	1.0	2
184	Room temperature THz detection and emission with semiconductor nanodevices. , 2013, , .		2
185	Modelling of Thermal Boundary Resistance in a GaN Diode by means of Electro-Thermal Monte Carlo Simulations. <i>Journal of Physics: Conference Series</i> , 2015, 609, 012005.	0.3	2
186	Shot-noise suppression effects in InGaAs planar diodes at room temperature. <i>Journal of Physics: Conference Series</i> , 2015, 647, 012061.	0.3	2
187	Modeling and Study of Two-BDT-Nanostructure based Sequential Logic Circuits. , 2016, , .		2
188	Design and Analysis of High Performance Ballistic Nanodevice-Based Sequential Circuits Using Monte Carlo and Verilog AMS Simulations. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2016, 63, 2236-2244.	3.5	2
189	Monte Carlo analysis of III-V PIN diodes for tunnel-FETs and Impact Ionization-MOSFETs. , 2017, , .		2
190	Noise and charge discreteness as ultimate limit for the THz operation of ultra-small electronic devices. <i>Scientific Reports</i> , 2020, 10, 15990.	1.6	2
191	Analysis of trap states in AlGaIn/GaN self-switching diodes via impedance measurements. <i>Microelectronics Reliability</i> , 2020, 114, 113806.	0.9	2
192	Temperature Behavior of Gunn Oscillations in Planar InGaAs Diodes. <i>IEEE Electron Device Letters</i> , 2021, 42, 1136-1139.	2.2	2
193	Theoretical Investigation of Large-Signal Noise in Nanometric Schottky-Barrier Diodes Operating in External Resonant Circuits. <i>Acta Physica Polonica A</i> , 2005, 107, 396-399.	0.2	2
194	Quantum Monte Carlo Simulation of Tunneling Devices Using Bohm Trajectories. <i>Physica Status Solidi (B): Basic Research</i> , 1997, 204, 404-407.	0.7	1
195	Hydrodynamic Modeling of Spatial Cross-Correlation of Conduction Current Fluctuations. <i>Materials Science Forum</i> , 1998, 297-298, 147-150.	0.3	1
196	Thermal conductivity of nonequilibrium carriers. <i>Physica B: Condensed Matter</i> , 1999, 272, 247-249.	1.3	1
197	Generalized transfer-fields and Langevin forces for hot-carrier fluctuations in semiconductor submicron devices. <i>Physica B: Condensed Matter</i> , 1999, 272, 260-262.	1.3	1
198	Effect of dimensionality on shot-noise suppression in nondegenerate diffusive conductors. <i>Microelectronics Reliability</i> , 2000, 40, 1951-1954.	0.9	1

#	ARTICLE	IF	CITATIONS
199	Role of energy correlations on Coulomb suppression of shot noise in ballistic conductors contacted to degenerate reservoirs. <i>Physical Review B</i> , 2003, 68, .	1.1	1
200	UPCONVERSION OF INTERGROUP HOT-CARRIER NOISE IN SEMICONDUCTORS OPERATING UNDER PERIODIC LARGE-SIGNAL CONDITIONS. <i>Fluctuation and Noise Letters</i> , 2003, 03, L51-L61.	1.0	1
201	Influence of the kink effect on the dynamic performance of short-channel InAlAs/InGaAs high electron mobility transistors. <i>Semiconductor Science and Technology</i> , 2005, 20, 956-960.	1.0	1
202	Kink effect in InAlAs/InGaAs short-channel HEMTs: influence on the dynamic and noise performance. , 0, , .		1
203	Influence of kink effect on the dynamic and noise performance of short-channel InAlAs/InGaAs HEMTs. , 0, , .		1
204	Monte Carlo Investigation of THz Oscillations in InAlAs/InGaAs Heterostructures by Means of Current and Voltage Noise Spectra. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	1
205	Noise analysis of plasma wave oscillations in InGaAs channels. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	1
206	Monte Carlo simulation of AlGaIn/GaN heterostructures. , 2007, , .		1
207	Monte Carlo analysis of memory effects in nanoscale rectifying diodes. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2008, 5, 82-85.	0.8	1
208	Monte Carlo simulation of plasma oscillations in ultra-thin layers. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2008, 5, 249-252.	0.8	1
209	Excitation of millimeter-wave oscillations in InAlAs/InGaAs heterostructures. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2008, 5, 146-149.	0.8	1
210	High Frequency Noise in GaN HEMTs. , 2009, , .		1
211	Monte Carlo Simulation of Sb-based Heterostructures. , 2009, , .		1
212	RF doubling and rectification in three-terminal junctions: experimental characterization and Monte Carlo analysis. <i>Journal of Physics: Conference Series</i> , 2009, 193, 012021.	0.3	1
213	Plasmonic noise in Si and InGaAs semiconductor nanolayers. <i>Journal of Physics: Conference Series</i> , 2009, 193, 012091.	0.3	1
214	Plasma-resonant THz detection with HEMTs. , 2010, , .		1
215	THz generation based on Gunn oscillations in GaN planar asymmetric nanodiodes. , 2010, , .		1
216	Noise and Terahertz rectification in semiconductor diodes and transistors. , 2011, , .		1

#	ARTICLE	IF	CITATIONS
217	Static and large signal noise analysis in GaAs and GaN Schottky diodes for high frequency applications. , 2011, , .		1
218	Noise in terahertz detectors based on semiconductor nanochannels. , 2013, , .		1
219	Ultrahigh responsivity of optically active, semiconducting asymmetric nano-channel diodes. Journal of Physics: Conference Series, 2015, 647, 012013.	0.3	1
220	Improvement of interfacial and electrical properties of Al ₂ O ₃ /n-Ga _{0.47} In _{0.53} As for III-V impact ionization MOSFETs. Journal of Physics: Conference Series, 2015, 647, 012062.	0.3	1
221	Monte Carlo model for the analysis and development of III-V Tunnel-FETs and Impact Ionization-MOSFETs. Journal of Physics: Conference Series, 2015, 647, 012056.	0.3	1
222	Modeling edge capacitances in ultra-scaled GaAs Schottky barrier diodes for THz applications. , 2016, , .		1
223	A high performance Full Adder based on Ballistic Deflection Transistor technology. , 2017, , .		1
224	Stochastic model for ion shot noise in Hodgkin and Huxley neurons. , 2017, , .		1
225	Impact ionization and band-to-band tunneling in In _x Ga _{1-x} As PIN ungated devices: A Monte Carlo analysis. Journal of Applied Physics, 2018, 123, 034501.	1.1	1
226	Planar Asymmetric Semiconductor Nanodiodes for THz Detection. , 2018, , .		1
227	Special Issue on Terahertz Devices. Semiconductor Science and Technology, 2020, 35, 040201.	1.0	1
228	Influence of Laser Modulation Frequency on the Performance of Terahertz Photoconductive Switches on Semi-Insulating GaAs Exhibiting Negative Differential Conductance. IEEE Transactions on Terahertz Science and Technology, 2021, 11, 591-597.	2.0	1
229	Dielectric Passivation and Edge Effects in Planar GaN Schottky Barrier Diodes. IEEE Transactions on Electron Devices, 2021, 68, 4296-4301.	1.6	1
230	Transport and Noise in Ultrafast Unipolar Nanodiodes and Nanotransistors. , 2006, , 109-113.		1
231	Monte Carlo Simulation of Room Temperature Ballistic Nanodevices. , 0, , .		1
232	Monte Carlo Analysis of Impact Ionization in Isolated-Gate InAs/AlSb High Electron Mobility Transistors. Acta Physica Polonica A, 2011, 119, 222-224.	0.2	1
233	Microscopic theory of electronic noise in semiconductor materials and devices. , 0, , .		0
234	Noise Suppression in Mesoscopic Structures Due to Long-Range Coulomb Interaction. Physica Status Solidi (B): Basic Research, 1997, 204, 450-452.	0.7	0

#	ARTICLE	IF	CITATIONS
235	Shot-Noise Suppression in Nondegenerate Conductors. Materials Science Forum, 1998, 297-298, 139-146.	0.3	0
236	The puzzle of 1/3 shot-noise suppression in diffusive conductors: Universality or Numerical Coincidence?. AIP Conference Proceedings, 2000, , .	0.3	0
237	RF Noise in a Short-Channel n-MOSFET: A Monte Carlo Study. Materials Science Forum, 2002, 384-385, 155-158.	0.3	0
238	Improvement of the high frequency performance of HEMTs by bufferless technology. , 0, , .		0
239	Electronic transport and noise in nanoelectronic ballistic N/sup +/-i-N/sup +/- diodes. , 0, , .		0
240	Enhanced shot-noise in mesoscopic non-degenerate diffusive semiconductors. Physica B: Condensed Matter, 2002, 314, 189-192.	1.3	0
241	Room temperature nonlinear transport in InGaAs/AlInAs based ballistic nanodevices. , 0, , .		0
242	Monte Carlo analysis of kink effect in short-channel InAlAs/InGaSs HEMTs. , 0, , .		0
243	Kink-effect-related noise in InAlAs/InGaAs short-channel HEMTs. , 2003, , .		0
244	Noise temperature reduction by doping in ballistic n+â€“nâ€“nanodiodes. Semiconductor Science and Technology, 2004, 19, S209-S211.	1.0	0
245	Monte Carlo particle-based simulation of DG MOSFETs: influence of space-quantization effects on the high-frequency noise. , 2004, , .		0
246	Nonlocal effects and transfer fields for electronic noise in small devices. , 2004, , .		0
247	TeraHertz emission from nanometric HEMTs analyzed by noise spectra. AIP Conference Proceedings, 2005, , .	0.3	0
248	Non-linear noise in nanometric Schottky-barrier diodes. AIP Conference Proceedings, 2005, , .	0.3	0
249	Investigation of longitudinal velocity fluctuations in MOSFETs by means of ensemble Monte Carlo simulation. AIP Conference Proceedings, 2005, , .	0.3	0
250	Electron transport and noise in schottky diodes with electron traps in the active layer. , 0, , .		0
251	InP based ballistic nanodevices. , 0, , .		0
252	A simple approach for the fabrication of ultrafast unipolar diodes. , 0, , .		0

#	ARTICLE	IF	CITATIONS
253	Microscopic Analysis of Noise in Self-Switching Diodes. AIP Conference Proceedings, 2007, , .	0.3	0
254	Kinetic and Partial-Differential Equation Modeling of Noise in Schottky Barrier Diodes: a Comparison. AIP Conference Proceedings, 2007, , .	0.3	0
255	Noise Behavior of InP-Based Double-Gate and Standard HEMTs: a Comparison. AIP Conference Proceedings, 2007, , .	0.3	0
256	RF Noise and Scaling in Nanometer SOI MOSFETs: Influence of Quasiballistic Transport. AIP Conference Proceedings, 2007, , .	0.3	0
257	Monte Carlo analysis of carrier transport from diffusive to ballistic regime in nanometer SOI MOSFETs. , 2007, , .		0
258	InAlAs/InGaAs heterostructures for THz generation. , 2007, , .		0
259	Monte Carlo Comparison Between InAlAs/InGaAs Double-Gate and Standard HEMTs. , 2007, , .		0
260	Surface Charge Effects in Ballistic T-Branch Nanojunctions. , 2007, , .		0
261	Monte Carlo comparison of the noise performance of InAlAs/InGaAs Double-Gate and Standard HEMTs. , 2008, , .		0
262	Monte Carlo Study of an InAlAs/InGaAs Velocity Modulation Transistor. , 2009, , .		0
263	Noise Enhanced THz Rectification Tuned by Geometry in Planar Asymmetric Nanodiodes. , 2009, , .		0
264	Monte Carlo analysis of noise spectra in InAs channels from diffusive to ballistic regime. , 2009, , .		0
265	Tunable Terahertz Resonance in Planar Asymmetric Nanodiodes. , 2009, , .		0
266	Current oscillations excited by optical phonon emission in GaN _n diodes: Monte Carlo simulations. Journal of Physics: Conference Series, 2009, 193, 012023.	0.3	0
267	Monte Carlo Study of the Dynamic Performance of a 100-nm-Gate InAlAs/InGaAs Velocity Modulation Transistor. IEEE Transactions on Electron Devices, 2010, 57, 2572-2578.	1.6	0
268	Monte Carlo study of ballistic effects in high speed InAs-based quantum hot electron transistor. , 2010, , .		0
269	Isolated-gate InAs/AlSb HEMTs: A Monte Carlo study. , 2010, , .		0
270	Toward THz Gunn oscillations in planar GaN nanodiodes. , 2011, , .		0

#	ARTICLE	IF	CITATIONS
271	OPTTR induced current oscillations in GaN diodes Monte Carlo simulations. , 2011, , .		0
272	Monte Carlo study of impact ionization and hole transport in InAs HEMTs with isolated gate. , 2011, , .		0
273	Comparison of noise characteristics of GaAs and GaN Schottky diodes for millimeter and submillimeter applications. , 2011, , .		0
274	Monte Carlo study of the dynamic performance of isolated-gate InAs/AlSb HEMTs. , 2011, , .		0
275	Realization of Logic Operations Through Optimized Ballistic Deflection Transistors. , 2011, , .		0
276	Analysis of nonharmonic oscillations in Schottky diodes. Journal of Applied Physics, 2012, 112, 053703.	1.1	0
277	Monte Carlo studies of the intrinsic time-domain response of nanoscale three-branch junctions. Journal of Applied Physics, 2012, 111, 084511.	1.1	0
278	Accurate predictions of terahertz noise in ultra-small devices: A limiting factor for their practical application?. , 2013, , .		0
279	200 GHz communication system using unipolar InAs THz rectifiers. , 2013, , .		0
280	GaN-based Implanted self switching diodes for THz imaging. , 2014, , .		0
281	Time-domain Monte Carlo simulation of GaN planar Gunn nanodiodes in resonant circuits. , 2014, , .		0
282	Frequency-dependent shot noise in single-electron devices. , 2014, , .		0
283	0.69 THz room temperature heterodyne detection using GaN nanodiodes. Journal of Physics: Conference Series, 2015, 647, 012006.	0.3	0
284	19th International Conference on Electron Dynamics in Semiconductors, Optoelectronics and Nanostructures (EDISON'19). Journal of Physics: Conference Series, 2015, 647, 011001.	0.3	0
285	Temperature and Surface Traps Influence on the THz Emission from InGaAs Diodes. Journal of Physics: Conference Series, 2015, 647, 012039.	0.3	0
286	Experimental verification of low-frequency noise effects at the onset of oscillations in planar Gunn diodes. , 2015, , .		0
287	Carrier dynamics probed by noise in high-frequency electronic devices. , 2015, , .		0
288	Experimental analysis of shot-noise suppression in InGaAs/InAlAs recessed planar diodes at room temperature. , 2015, , .		0

#	ARTICLE	IF	CITATIONS
289	Time-dependent physics of double-tunnel junctions. , 2015, , .		0
290	Evaluation of the thermal resistance in GaN-diodes by means of electro-thermal Monte Carlo simulations. , 2015, , .		0
291	Anomalous low-frequency noise increase at the onset of oscillations in Gunn diodes. , 2015, , .		0
292	Ballistic deflection transistor very high frequency modeling. , 2016, , .		0
293	Characterization and modeling of traps and RF frequency dispersion in AlGaIn/AlN/GaN HEMTs. , 2016, , .		0
294	Monte Carlo calculation of In$_{0.53}$Ga$_{0.47}$As and InAs noise parameters. , 2017, , .		0
295	Noise and Charge Discreteness as Ultimate Limit for the THz Operation of Ultra-Small Electronic Devices. , 2018, , .		0
296	Fabrication Process of Non-Linear Planar Diodes Based on GaN. , 2018, , .		0
297	Interplay between channel and shot noise at the onset of spiking activity in neural membranes. Journal of Computational Electronics, 2020, 19, 792-799.	1.3	0
298	Bias-dependence of surface charge at low temperature in GaN Self-Switching Diodes. , 2021, , .		0
299	Technological Parameters and Edge Fringing Capacitance in GaN Schottky Barrier Diodes: Monte Carlo Simulations. , 2021, , .		0
300	Monte Carlo Analysis of the Dynamic Behavior of InAlAs/InGaAs Velocity Modulation Transistors: A Geometrical Optimization. Acta Physica Polonica A, 2011, 119, 193-195.	0.2	0
301	TeraHertz Emission From Nanometric HEMTs Analyzed by Noise Spectra. , 2006, , 291-294.		0