Cristina Medina BailÃ³n

List of Publications by Year
in descending order

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57	302	1040056 9	1058476 14
papers	citations	h-index	g-index

57	57	57	165
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Simulation of the Impact of Ionized Impurity Scattering on the Total Mobility in Si Nanowire Transistors. Materials, 2019, 12, 124.	2.9	21
2	Confinement-induced InAs/GaSb heterojunction electronâ€“hole bilayer tunneling field-effect transistor. Applied Physics Letters, 2018, 112, .	3.3	20
3	NESS: new flexible Nano-Electronic Simulation Software. , 2018, , .		20
4	Nano-electronic Simulation Software (NESS): a flexible nano-device simulation platform. Journal of Computational Electronics, 2020, 19, 1031-1046.	2.5	20
5	Mobility of Circular and Elliptical Si Nanowire Transistors Using a Multi-Subband 1D Formalism. IEEE Electron Device Letters, 2019, 40, 1571-1574.	3.9	15
6	Comprehensive Study of Cross-Section Dependent Effective Masses for Silicon Based Gate-All-Around Transistors. Applied Sciences (Switzerland), 2019, 9, 1895.	2.5	15
7	Assessment of pseudo-bilayer structures in the heterogate germanium electron-hole bilayer tunnel field-effect transistor. Applied Physics Letters, 2015, 106, .	3.3	14
8	Multisubband Ensemble Monte Carlo Analysis of Tunneling Leakage Mechanisms in Ultrascaled FDSOI, DGSOI, and FinFET Devices. IEEE Transactions on Electron Devices, 2019, 66, 1145-1152.	3.0	12
9	Source-to-Drain Tunneling Analysis in FDSOI, DGSOI, and FinFET Devices by Means of Multisubband Ensemble Monte Carlo. IEEE Transactions on Electron Devices, 2018, 65, 4740-4746.	3.0	11
10	Random Dopant-Induced Variability in Si-InAs Nanowire Tunnel FETs: A Quantum Transport Simulation Study. IEEE Electron Device Letters, 2018, 39, 1473-1476.	3.9	11
11	Implementation of Band-to-Band Tunneling Phenomena in a Multisubband Ensemble Monte Carlo Simulator: Application to Silicon TFETs. IEEE Transactions on Electron Devices, 2017, 64, 3084-3091.	3.0	9
12	MS-EMC vs. NEGF: A comparative study accounting for transport quantum corrections. , 2018, , .		9
13	Comprehensive Analytical Modelling of an Absolute pH Sensor. Sensors, 2021, 21, 5190.	3.8	9
14	Gate Leakage Tunneling Impact on the InAs/GaSb Heterojunction Electronâ€“Hole Bilayer Tunneling Field-Effect Transistor. IEEE Transactions on Electron Devices, 2018, 65, 4679-4686.	3.0	8
15	Simulation and Modeling of Novel Electronic Device Architectures with NESS (Nano-Electronic) Tj ETQq1 1 0.784314 rgBT /Overlock 10	2.9	8
16	Variability Predictions for the Next Technology Generations of n-type SixGe1â^'x Nanowire MOSFETs. Micromachines, 2018, 9, 643.	2.9	7
17	Quantum Enhancement of a S/D Tunneling Model in a 2D MS-EMC Nanodevice Simulator: NEGF Comparison and Impact of Effective Mass Variation. Micromachines, 2020, 11, 204.	2.9	7
18	Impact of S/D tunneling in ultrascaled devices, a Multi-Subband Ensemble Monte Carlo study. , 2015, , .		6

#	Article	IF	Citations
19	Study of the 1D Scattering Mechanisms' Impact on the Mobility in Si Nanowire Transistors. , 2018, , .		6
20	Confinement orientation effects in S/D tunneling. Solid-State Electronics, 2017, 128, 48-53.	1.4	5
21	Enhanced Capabilities of the Nano-Electronic Simulation Software (NESS). , 2020, , .		5
22	Assessment of gate leakage mechanism utilizing Multi-Subband Ensemble Monte Carlo. , 2017, , .		4
23	Analysis of the Heterogate Electronâ€“Hole Bilayer Tunneling Field-Effect Transistor With Partially Doped Channels: Effects on Tunneling Distance Modulation and Occupancy Probabilities. IEEE Transactions on Electron Devices, 2018, 65, 339-346.	3.0	4
24	Efficient Two-Band based Non-Equilibrium Green's Function Scheme for Modeling Tunneling Nano-Devices. , 2018, , .		4
25	Impact of the Effective Mass on the Mobility in Si Nanowire Transistors. , 2018, , .		4
26	Impact of electron effective mass variation on the performance of InAs/GaSb Electron-Hole Bilayer Tunneling Field-Effect Transistor. , 2018, , .		4
27	Nano-Electronic Simulation Software (NESS): A Novel Open-Source TCAD Simulation Environment. Journal of Microelectronic Manufacturing, 2020, 3, 1-8.	0.2	4
28	Density Gradient Based Quantum-Corrected 3D Drift-Diffusion Simulator for Nanoscale MOSFETs. , 2021, , .		4
29	Multi-subband ensemble Monte Carlo study of tunneling leakage mechanisms. , 2017, , .		3
30	The Impact of Dopant Diffusion on Random Dopant Fluctuation in Si Nanowire FETs: A Quantum Transport Study. , 2018, , .		3
31	Quantum Transport Investigation of Threshold Voltage Variability in Sub-10 nm JunctionlessSi Nanowire FETs. , 2018, , .		3
32	Surface Roughness Scattering in NEGF using self-energy formulation. , 2019, , .		3
33	Impact of the Trap Attributes on the Gate Leakage Mechanisms in a 2D MS-EMC Nanodevice Simulator. Lecture Notes in Computer Science, 2019, , 273-280.	1.3	3
34	Confinement orientation effects in S/D tunneling. , 2016, , .		2
35	Multi-subband ensemble Monte Carlo study of band-to-band tunneling in silicon-based TFETs. , 2016, , .		2
36	Impact of non uniform strain configuration on transport properties for FD14+ devices. Solid-State Electronics, 2016, 115, 232-236.	1.4	2

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37	Full-band quantum transport simulation in the presence of hole-phonon interactions using a mode-space kÂ·p approach. Nanotechnology, 2021, 32, 020001.	2.6	2
38	SchrÃ¶dinger Equation Based Quantum Corrections in Drift-Diffusion: A Multiscale Approach. , 2019, , .		2
39	A Combined First Principles and Kinetic Monte Carlo study of Polyoxometalate based Molecular Memory Devices. , 2020, , .		2
40	Multi-Subband Ensemble Monte Carlo Simulator for Nanodevices in the End of the Roadmap. Lecture Notes in Computer Science, 2020, , 438-445.	1.3	2
41	TCAD Simulation of Novel Semiconductor Devices. , 2021, , .		2
42	Self-Consistent Enhanced S/D Tunneling Implementation in a 2D MS-EMC Nanodevice Simulator. Micromachines, 2021, 12, 601.	2.9	1
43	KMC-based POM flash cell optimization and time-dependent performance investigation. Semiconductor Science and Technology, 2021, 36, 075021.	2.0	1
44	TCAD Simulations of High-Aspect-Ratio Nano-biosensor for Label-Free Sensing Application. , 2021, , .		1
45	Simulation of gated GaAs-AlGaAs resonant tunneling diodes for tunable terahertz communication applications. , 2020, , .		1
46	Statistical device simulations of III-V nanowire resonant tunneling diodes as physical unclonable functions source. Solid-State Electronics, 2022, 194, 108339.	1.4	1
47	Impact of non uniform strain configuration on transport properties for FD14+ devices. , 2015, , .		0
48	Sub-22nm scaling of UTB2SOI devices for Multi-V<inf>t</inf> applications. , 2015, , .		0
49	Modelling on Aging Induced Time Dependent Variability of Z2FET for Memory Applications. , 2018, , .		0
50	Nanowire FETs. , 2018, , .		0
51	Impact of Strain on S/D tunneling in FinFETs: a MS-EMC study. , 2018, , .		0
52	Efficient Coupled-mode space based Non-Equilibrium Greenâ€™s Function Approach for Modeling Quantum Transport and Variability in Vertically Stacked SiNW FETs. , 2019, , .		0
53	Scaling-aware TCAD Parameter Extraction Methodology for Mobility Prediction in Tri-gate Nanowire Transistors. , 2019, , .		0
54	Impact of Effective Mass on Transport Properties and Direct Source-to-Drain Tunneling in Ultrascaled Double Gate Devices: a 2D Multi-Subband Ensemble Monte Carlo study. , 2019, , .		0

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55	Efficient Implementation of S/D tunneling in 2D MS-EMC of Nanoelectronic Devices Including the Thickness Dependent Effective Mass. , 2020, , .		0
56	Techniques for Statistical Enhancement in a 2D Multi-subband Ensemble Monte Carlo Nanodevice Simulator. Lecture Notes in Computer Science, 2020, , 411-419.	1.3	0
57	Analysis of the Reformulated Source to Drain Tunneling Probability for Improving the Accuracy of a Multisubband Ensemble Monte Carlo Simulator. Micromachines, 2022, 13, 533.	2.9	0