

Wenchao Chen

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1251042/publications.pdf>

Version: 2024-02-01

57
papers

2,989
citations

535685

17
h-index

232693

48
g-index

57
all docs

57
docs citations

57
times ranked

6853
citing authors

#	ARTICLE	IF	CITATIONS
1	Multiphysics Computation for Resistive Random Access Memories With Different Metal Oxides. IEEE Transactions on Electron Devices, 2022, 69, 133-140.	1.6	3
2	First-principles investigation of copper diffusion barrier performance in defective 2D layered materials*. Nanotechnology, 2022, 33, 165201.	1.3	2
3	Broadband Janus Scattering from Tilted Dipolar Metagratings. Laser and Photonics Reviews, 2022, 16, .	4.4	18
4	Hexahedron-Based Control Volume Finite Element Method for Fully Coupled Nonlinear Drift-Diffusion Transport Equations in Semiconductor Devices. IEEE Transactions on Microwave Theory and Techniques, 2022, 70, 2965-2978.	2.9	3
5	An Artificial Neural Network Model for Electro-Thermal Effect Affected Hot Carrier Injection Reliability in 14-nm FinFETs. IEEE Transactions on Microwave Theory and Techniques, 2022, 70, 4827-4834.	2.9	5
6	A Physics-based Compact Model for Set Process of Resistive Random Access Memory (RRAM) with Graphene Electrode. , 2022, , .		0
7	Rigorous Modeling and Investigation of Low-Field Hole Mobility in Silicon and Germanium Gate-All-Around Nanosheet Transistors. IEEE Transactions on Electron Devices, 2022, 69, 4777-4785.	1.6	1
8	A Hybrid Streamline Upwind Finite Volume-Finite Element Method for Semiconductor Continuity Equations. IEEE Transactions on Electron Devices, 2021, 68, 5421-5429.	1.6	4
9	Design Considerations for Si- and Ge-Stacked Nanosheet pMOSFETs Based on Quantum Transport Simulations. IEEE Transactions on Electron Devices, 2020, 67, 26-32.	1.6	10
10	Massively Parallel Electromagnetic-Thermal Cosimulation of Large Antenna Arrays. IEEE Antennas and Wireless Propagation Letters, 2020, 19, 1551-1555.	2.4	12
11	Electrothermal Modeling and Simulation of Resistive Random Access Memory (RRAM) with Different Resistive Switching Oxides. , 2020, , .		0
12	Diffusion Barrier Prediction of Graphene and Boron Nitride for Copper Interconnects by Deep Learning. IEEE Access, 2020, 8, 210542-210549.	2.6	5
13	Magnetic Metamirrors as Spatial Frequency Filters. IEEE Transactions on Antennas and Propagation, 2020, 68, 5505-5511.	3.1	6
14	Modeling and Simulation of Resistive Random Access Memory With Graphene Electrode. IEEE Transactions on Electron Devices, 2020, 67, 915-921.	1.6	11
15	Fully coupled electrothermal simulation of resistive random access memory (RRAM) array. Science China Information Sciences, 2020, 63, 1.	2.7	3
16	Electrical-Thermal Cosimulation of Coaxial TSVs With Temperature-Dependent MOS Effect Using Equivalent Circuit Models. IEEE Transactions on Electromagnetic Compatibility, 2020, 62, 2247-2256.	1.4	12
17	Terahertz frequency selective surface based on metal-graphene structure with independent frequency tuneability. IET Microwaves, Antennas and Propagation, 2019, 13, 911-916.	0.7	6
18	Observation of ballistic avalanche phenomena in nanoscale vertical InSe/BP heterostructures. Nature Nanotechnology, 2019, 14, 217-222.	15.6	153

#	ARTICLE	IF	CITATIONS
19	An improved multifilamentary conduction model for multiphysics analysis of reset process in resistive random access memory. AIP Advances, 2019, 9, 045310.	0.6	0
20	Study on High-Density Integration Resistive Random Access Memory Array From Multiphysics Perspective by Parallel Computing. IEEE Transactions on Electron Devices, 2019, 66, 1747-1753.	1.6	21
21	An Improved Algorithm for Drift Diffusion Transport and Its Application on Large Scale Parallel Simulation of Resistive Random Access Memory Arrays. IEEE Access, 2019, 7, 31273-31285.	2.6	9
22	Fully Coupled Electrothermal Simulation of Large RRAM Arrays in the "Thermal-House". IEEE Access, 2019, 7, 3897-3908.	2.6	11
23	Parallel Simulation of Fully Coupled Electrothermal Processes in Large-Scale Phase-Change Memory Arrays. IEEE Transactions on Electron Devices, 2019, 66, 5117-5125.	1.6	8
24	Electrothermal Study on Resistive Random Access Memory (RRAM) Arrays. , 2019, , .		0
25	Electrothermal Effects on Reliability of Vertical Resistive Random Access Memory Array by Parallel Computing. , 2019, , .		0
26	Quantum Transport Study of Si Ultrathin-Body Double-Gate pMOSFETs: $\langle V \rangle$ and $\langle C \rangle$. IEEE Transactions on Electron Devices, 2019, 66, 655-663.	1.6	7
27	Optical Kerr effect and third harmonic generation in topological Dirac/Weyl semimetal. Optics Express, 2019, 27, 38270.	1.7	24
28	Carrier Dynamics of Nanopillar Textured Ultrathin Si Film/PEDOT:PSS Heterojunction Solar Cell. IEEE Journal of Photovoltaics, 2018, 8, 757-762.	1.5	3
29	Multiphysics Modeling and Simulation of Carrier Dynamics and Thermal Transport in Monolayer MoS ₂ /WSe ₂ Heterojunction. IEEE Transactions on Electron Devices, 2018, 65, 4542-4547.	1.6	1
30	Recent progress of nano-electromagnetic compatibility (nano-EMC) in the emerging carbon nanoelectronics. IEEE Electromagnetic Compatibility Magazine, 2018, 7, 71-81.	0.1	3
31	Tuning of the Contact Properties for High-Efficiency Si/PEDOT:PSS Heterojunction Solar Cells. ACS Energy Letters, 2017, 2, 556-562.	8.8	75
32	An Active Absorber Based on Nonvolatile Floating-Gate Graphene Structure. IEEE Nanotechnology Magazine, 2017, 16, 189-195.	1.1	8
33	Tunable THz Multiband Frequency-Selective Surface Based on Hybrid Metal-Graphene Structures. IEEE Nanotechnology Magazine, 2017, 16, 1132-1137.	1.1	41
34	Electrothermal Effects on Hot Carrier Injection in n-Type SOI FinFET Under Circuit-Speed Bias. IEEE Transactions on Electron Devices, 2017, 64, 3802-3807.	1.6	18
35	Fully Coupled Multiphysics Simulation of Crosstalk Effect in Bipolar Resistive Random Access Memory. IEEE Transactions on Electron Devices, 2017, 64, 3647-3653.	1.6	29
36	Multiphysics modeling and simulation of ultra-thin channel Germanium on insulator (GeOI) MOSFETs. , 2017, , .		0

#	ARTICLE	IF	CITATIONS
37	Modeling and simulation of Si/PEDOT:PSS planar heterojunction photovoltaics by finite element method. , 2017, , .		1
38	Highly efficient graphene-on-gap modulator by employing the hybrid plasmonic effect. Optics Letters, 2017, 42, 1736.	1.7	44
39	Electrothermal Cosimulation of 3-D Carbon-Based Heterogeneous Interconnects. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2016, 6, 518-526.	1.4	30
40	Electrothermal Effects on Hot-Carrier Reliability in SOI MOSFETsâ€™AC Versus Circuit-Speed Random Stress. IEEE Transactions on Electron Devices, 2016, 63, 3669-3676.	1.6	24
41	Electrothermal characterization of SOI FinFETs. , 2016, , .		1
42	Electrothermal Characterization in 3-D Resistive Random Access Memory Arrays. IEEE Transactions on Electron Devices, 2016, 63, 4720-4728.	1.6	28
43	Scaling Analysis of High Gain Monolayer MoS ₂ Photodetector for Its Performance Optimization. IEEE Transactions on Electron Devices, 2016, 63, 1608-1614.	1.6	12
44	Modelling of multilayer graphene (MLG)-based structures at different temperatures. , 2015, , .		0
45	Wideband Modeling of Graphene-Based Structures at Different Temperatures Using Hybrid FDTD Method. IEEE Nanotechnology Magazine, 2015, 14, 250-258.	1.1	30
46	18.5% efficient graphene/GaAs van der Waals heterostructure solar cell. Nano Energy, 2015, 16, 310-319.	8.2	180
47	Electrothermal Investigation on Vertically Aligned Single-Walled Carbon Nanotube Contacted Phase-Change Memory Array for 3-D ICs. IEEE Transactions on Electron Devices, 2015, 62, 3258-3263.	1.6	15
48	Modeling and simulation of graphene-gated graphene-GaAs Schottky junction field-effect solar cell for its performance enhancement. IEEE Transactions on Electron Devices, 2015, 62, 3760-3766.	1.6	15
49	Effect of Nanoâ€™Porosity on High Gain Permeable Metalâ€™Base Transistors. Advanced Functional Materials, 2014, 24, 6056-6065.	7.8	17
50	Intrinsic delay of permeable base transistor. Journal of Applied Physics, 2014, 116, .	1.1	13
51	Atomically thin pâ€™n junctions with van der Waals heterointerfaces. Nature Nanotechnology, 2014, 9, 676-681.	15.6	1,953
52	Computational study of graphene-based vertical field effect transistor. Journal of Applied Physics, 2013, 113, 094507.	1.1	13
53	Modeling and simulation of carbon nanotube-semiconductor heterojunction vertical field effect transistors. Journal of Applied Physics, 2013, 113, .	1.1	11
54	Carrier dynamics and design optimization of electrolyte-induced inversion layer carbon nanotube-silicon Schottky junction solar cell. Applied Physics Letters, 2012, 100, 103503.	1.5	15

#	ARTICLE	IF	CITATIONS
55	Performance analysis of carbon nanotube contacted phase change memory by finite element method. Journal of Applied Physics, 2011, 110, .	1.1	10
56	ZnO, GaN, and InN Functionalized Nanowires for Sensing and Photonics Applications. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 1092-1101.	1.9	22
57	Electrothermal Characterization of Single-Walled Carbon Nanotube (SWCNT) Interconnect Arrays. IEEE Nanotechnology Magazine, 2009, 8, 718-728.	1.1	43