Rahim Faez

List of Publications by Year
in descending order

103 papers	791 citations	687363 13 h-index	610901 24 g-index
106 all docs	106 docs citations	106 times ranked	685 citing authors

#	Article	IF	Citations
1	Engineering enhanced thermoelectric properties in zigzag graphene nanoribbons. Journal of Applied Physics, 2012, 111, .	2.5	88
2	Stability Analysis in Graphene Nanoribbon Interconnects. IEEE Electron Device Letters, 2010, 31, 1458-1460.	3.9	81
3	Geometrical effects on the thermoelectric properties of ballistic graphene antidot lattices. Journal of Applied Physics, 2011, 110, .	2.5	69
4	COMPACT FORMULAE FOR NUMBER OF CONDUCTION CHANNELS IN VARIOUS TYPES OF GRAPHENE NANORIBBONS AT VARIOUS TEMPERATURES. Modern Physics Letters B, 2012, 26, 1150004.	1.9	38
5	A novel graphene nanoribbon field effect transistor with two different gate insulators. Physica E: Low-Dimensional Systems and Nanostructures, 2015, 66, 133-139.	2.7	32
6	Atomistic Study of the Lattice Thermal Conductivity of Rough Graphene Nanoribbons. IEEE Transactions on Electron Devices, 2013, 60, 2142-2147.	3.0	30
7	Improving<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:mrow><mml:msub><mml:mrow><mml:mi>I</mml:mi></mml:mrow><mml:mrow><mml:mi mathvariant="italic">ON</mml:mi></mml:mrow></mml:msub><mml:mo>/</mml:mo><mml:msub><mml:mrow><mml:mi>I</mml:mi><mml:mi mathvariant="italic">OFF</mml:mi></mml:mrow></mml:msub></mml:mrow></mml:math>and sub-threshold swing in graphene nanoribbon field-effect transistors using single vacancy defects. Superlattices and Microstructures, 2015, 86, 483-492.	3.1	29
8	Modeling comparison of graphene nanoribbon field effect transistors with single vacancy defect. Superlattices and Microstructures, 2016, 97, 28-45.	3.1	27
9	Stability analysis in multiwall carbon nanotube bundle interconnects. Microelectronics Reliability, 2012, 52, 3026-3034.	1.7	22
10	Implementation of Open Boundary Problems in Photo-Conductive Antennas by Using Convolutional Perfectly Matched Layers. IEEE Transactions on Antennas and Propagation, 2016, 64, 4919-4922.	5.1	15
11	Crosstalk Stability Analysis in Multilayer Graphene Nanoribbon Interconnects. Circuits, Systems, and Signal Processing, 2013, 32, 2653-2666.	2.0	14
12	A 3D analytical modeling of tri-gate tunneling field-effect transistors. Journal of Computational Electronics, 2016, 15, 820-830.	2.5	14
13	Modeling of a Vertical Tunneling Transistor Based on Grapheneâ€“MoS₂Heterostructure. IEEE Transactions on Electron Devices, 2017, 64, 3459-3465.	3.0	14
14	Calculation of Confined Phonon Spectrum in Narrow Silicon Nanowires Using the Valence Force Field Method. Journal of Electronic Materials, 2013, 42, 2091-2097.	2.2	13
15	A computational study of vertical tunneling transistors based on graphene-WS2 heterostructure. Journal of Applied Physics, 2017, 121, .	2.5	13
16	A comparative study of NEGF and DDMS models in the GAA silicon nanowire transistor. International Journal of Electronics, 2012, 99, 1299-1307.	1.4	12
17	A silicon doped hafnium oxide ferroelectric pâ€“nâ€“pâ€“n SOI tunneling fieldâ€“effect transistor with steep subthreshold slope and high switching state current ratio. AIP Advances, 2016, 6, 095010.	1.3	12
18	Transient and steady state study of a rear-illuminated 6H-SiC Photoconductive Semiconductor Switch. Optik, 2016, 127, 4615-4620.	2.9	12

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19	Effects of Stone-Wales defect on the electronic and transport properties of bilayer armchair graphene nanoribbons. Superlattices and Microstructures, 2016, 100, 739-748.	3.1	10
20	Effect of Stone-Wales defect on an armchair graphene nanoribbon-based photodetector. Superlattices and Microstructures, 2019, 130, 127-138.	3.1	10
21	A New SPICE Macro-Model for Simulation of Single Electron Circuits. Journal of the Korean Physical Society, 2010, 56, 1202-1207.	0.7	10
22	Investigation of quantum conductance in semiconductor single-wall carbon nanotubes: Effect of strain and impurity. Journal of Applied Physics, 2011, 110, .	2.5	9
23	Design and simulation of a high power single mode 1550nm InGaAsP VCSELs. IEICE Electronics Express, 2011, 8, 1096-1101.	0.8	9
24	Analysis of Lattice Temperature Effects on a GaInP/6H-SiC Strained Quantum-Well Lasers. Asian Journal of Chemistry, 2013, 25, 4715-4717.	0.3	8
25	Spin relaxation in graphene nanoribbons in the presence of substrate surface roughness. Journal of Applied Physics, 2016, 120, .	2.5	8
26	Performance improvement of junctionless field effect transistors using p-GaAs/AlGaAs heterostructure. Superlattices and Microstructures, 2017, 110, 305-312.	3.1	8
27	Novel Quantum Hydrodynamic Equations for Semiconductor Devices. Japanese Journal of Applied Physics, 2002, 41, 1300-1304.	1.5	7
28	Electronic and transport properties of monolayer graphene defected by one and two carbon ad-dimers. Applied Physics A: Materials Science and Processing, 2014, 116, 2057-2063.	2.3	7
29	Analytical Calculation of Energy levels of mono- and bilayer Graphene Quantum Dots Used as Light Absorber in Solar Cells. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	7
30	Performance comparison of ideal and defected bilayer graphene nanoribbon FETs. Superlattices and Microstructures, 2017, 111, 262-272.	3.1	7
31	Thermally induced spin-dependent current based on Zigzag Germanene Nanoribbons. Physica E: Low-Dimensional Systems and Nanostructures, 2017, 86, 175-183.	2.7	7
32	An improved macro-model for simulation of single electron transistor (SET) using HSPICE. , 2009, , .		6
33	Small signal circuit modeling for semiconductor self-assembled quantum dot laser. Optical Engineering, 2011, 50, 034202.	1.0	6
34	NUMERICAL INVESTIGATION ON THE TEMPERATURE DEPENDENCE OF THE CYLINDRICAL-GATE-ALL-AROUND Si-NW-FET. Modern Physics Letters B, 2011, 25, 2269-2278.	1.9	6
35	Threshold characteristics analysis of InP-based PhC VCSEL with buried tunnel junction. , 2013, , .		6
36	Role of 3D-paired pentagonâ€“heptagon defects in electronic and transport properties of zigzag graphene nanoribbons. Applied Physics A: Materials Science and Processing, 2014, 116, 295-301.	2.3	6

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37	Minimum length modulator design with a graphene-based plasmonic waveguide. Applied Optics, 2017, 56, 4926.	2.1	6
38	Computational study of spin caloritronics in a pristine and defective antimonene nanoribbon. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 120, 114083.	2.7	6
39	Using Superlattice Structure in the Source of GNRFET to Improve Its Switching Performance. IEEE Transactions on Electron Devices, 2020, 67, 1334-1339.	3.0	6
40	Tunable spherical graphene surface plasmon amplification by stimulated emission of radiation. Journal of Nanophotonics, 2019, 13, 1.	1.0	6
41	Graphene-Based Antidots for Thermoelectric Applications. Journal of the Electrochemical Society, 2011, 158, K213.	2.9	5
42	The effect of structural defects on the electron transport of MoS2 nanoribbons based on density functional theory. Journal of Theoretical and Applied Physics, 2019, 13, 55-62.	1.4	5
43	Engineered Nanopores-Based Armchair Graphene Nanoribbon FET With Resonant Tunneling Performance. IEEE Transactions on Electron Devices, 2019, 66, 5339-5346.	3.0	5
44	PERFORMANCE EVALUATION OF SOURCE HETEROJUNCTION STRAINED CHANNEL GATE ALL AROUND NANOWIRE TRANSISTOR. Modern Physics Letters B, 2012, 26, 1250076.	1.9	4
45	Magnetization of bilayer graphene with interplay between monovacancy in each layer. Journal of Applied Physics, 2013, 114, 084313.	2.5	4
46	Dc and microwave noise characteristics of AlGaN/GaN HEMT with AlN and InGaN interlayers. , 2014, , .		4
47	Simulation and investigation of a back-triggered 6H-SiC high power photoconductive switch. , 2015, , .		4
48	Near-room-temperature spin caloritronics in a magnetized and defective zigzag MoS2 nanoribbon. Journal of Computational Electronics, 2020, 19, 137-146.	2.5	4
49	Normal-incidence near-1.55-Î¼m Ge quantum dot photodetectors on Si substrate. , 2001, , .		3
50	Quantum Corrections in the Drift-Diffusion Model. Japanese Journal of Applied Physics, 2007, 46, 7247.	1.5	3
51	NOVEL STRUCTURES FOR CARBON NANOTUBE FIELD EFFECT TRANSISTORS. International Journal of Modern Physics B, 2009, 23, 3871-3880.	2.0	3
52	Analysis of carrier dynamic effects in transistor lasers. Optical Engineering, 2012, 51, 024202.	1.0	3
53	The noise equivalent circuit model of quantum-dot lasers. Journal of Russian Laser Research, 2012, 33, 217-226.	0.6	3
54	A novel thermo-photovoltaic cell with quantum-well for high open circuit voltage. Superlattices and Microstructures, 2015, 83, 61-70.	3.1	3

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55	Full-Quantum Simulation of Graphene Self-Switching Diodes. Chinese Physics Letters, 2019, 36, 067202.	3.3	3
56	Local impact of Stoneâ€“Wales defect on a single layer GNRFET. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126170.	2.1	3
57	Modeling of a vertical tunneling transistor based on Gr-hBN-Ї‡₃ borophene heterostructure. Journal of Applied Physics, 2022, 132, 034302.	2.5	3
58	Efficient implementation of the convective terms in the hydrodynamic equations. Computer Methods in Applied Mechanics and Engineering, 2005, 194, 969-978.	6.6	2
59	Full quantum mechanical simulation of a novel nanoscale DG-MOSFET: 2D NEGF approach. , 2007, , .		2
60	A new SPICE macro-model for simulation of single electron circuits. , 2009, , .		2
61	The non-equilibrium Green's function (NEGF) simulation of nanoscale lightly doped drain and source double gate MOSFETs. , 2012, , .		2
62	Large signal analysis of double quantum well transistor laser. Optical and Quantum Electronics, 2013, 45, 389-399.	3.3	2
63	Doped silicon quantum dots as sources of coherent surface plasmons. Journal of Optics (United) Tj ETQq1 1 0.784314 rgBT /Overlock	2.2	2
64	Tightâ€binding model for the electronic properties of buckled triangular borophene. Micro and Nano Letters, 2019, 14, 992-994.	1.3	2
65	The most optimal barrier height of InGaN light-emitting diodes. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	2.3	2
66	Lateral BN-BCN Heterostructure Tunneling Transistor with Large Current Modulation. ACS Applied Electronic Materials, 2022, 4, 3520-3524.	4.3	2
67	Investigation of breakdown voltage in InAlAs/InGaAs/InP HEMTs with different structures. IEICE Electronics Express, 2010, 7, 1447-1452.	0.8	1
68	A small signal circuit model of two mode InAs/GaAs quantum dot laser. IEICE Electronics Express, 2011, 8, 245-251.	0.8	1
69	TRIPLE-TUNNEL JUNCTION SINGLE ELECTRON TRANSISTOR (TTJ-SET). Modern Physics Letters B, 2011, 25, 1487-1501.	1.9	1
70	Large Signal Circuit Model of Two-Section Gain Lever Quantum Dot Laser. Chinese Physics Letters, 2012, 29, 114207.	3.3	1
71	Effect of Varying Aspect Ratio on Relative Stability for Graphene Nanoribbon Interconnects. Applied Mechanics and Materials, 0, 229-231, 205-209.	0.2	1
72	Compare noise characteristic of DC-HEMT and HEMT. , 2013, , .		1

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73	Effect of Stone-Wales defects on electronic properties of armchair graphene nanoribbons. , 2013, , .		1
74	A seamless-pitched graphene nanoribbon field effect transistor. Physica E: Low-Dimensional Systems and Nanostructures, 2015, 74, 414-420.	2.7	1
75	A novel organicâ€“inorganic hybrid tandem solar cell with inverted structure. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	2.3	1
76	Numerical simulation of vertical tunneling transistor with bilayer graphene as source and drain regions. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1700155.	1.8	1
77	Investigation of the electronic structure of tetragonal B3N3 under pressure. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	2.3	1
78	Simulation analysis of inverted organic solar cells with grating structure: Undesirable effects of high absorption near grating anode. Optik, 2018, 154, 453-458.	2.9	1
79	A Functional Study of a Bilayer Graphene Nanoribbon FET With Four Different Gate Insulators. IEEE Nanotechnology Magazine, 2019, 18, 890-895.	2.0	1
80	GNRFET with superlattice source, channel, and drain: SLSCD-GNRFET. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 131, 114728.	2.7	1
81	Fast three-dimensional super-resolution photoacoustic microscopy imaging. Optical Engineering, 2021, 60, .	1.0	1
82	Quantum hydrodynamic equations with quantum corrected potential [RTD simulation]. , 0, , .		0
83	Two-dimensional quantum simulation of scaling effects in ultrathin body MOSFET structure: NEGF approach. , 2007, , .		0
84	Charge controlling in nanoscale shielded channel DG-MOSFET: A quantum simulation. , 2007, , .		0
85	Hydrogen-passivated graphene antidot structures for thermoelectric applications. , 2011, , .		0
86	An investigation of ZGNR-based transistors. , 2011, , .		0
87	Improving Elmore Model of RLC Networks for Applying to SWCNT Interconnects. Applied Mechanics and Materials, 0, 110-116, 5078-5084.	0.2	0
88	INTRODUCING THE AlGaNâˆ•GaNâˆ•InAlGaNâˆ•GaN DH-HEMT STRUCTURE AND IT IS FUNCTIONAL ANALYSIS. AIP Conference Proceedings, 2011, , .	0.4	0
89	Reduced Master Equation for Modeling of Ferromagnetic Single-Electron Transistor. Applied Mechanics and Materials, 0, 110-116, 3103-3110.	0.2	0
90	An Investigation of the Geometrical Effects on the Thermal Conductivity of Graphene Antidot Lattices. ECS Transactions, 2011, 35, 185-192.	0.5	0

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91	Detemining the Thickness of Barriers and Well of Resonance Tunneling Diodes by Specified I-V Characteristic. Applied Mechanics and Materials, 0, 110-116, 5464-5470.	0.2	0
92	Electronic features of rippled graphene. , 2012, , .		0
93	Effect of Varying Dielectric Constant on Relative Stability for Graphene Nanoribbon Interconnects. Applied Mechanics and Materials, 0, 229-231, 201-204.	0.2	0
94	Simulation of deep level traps effects in quantum well transistor laser. Journal of Computational Electronics, 2013, 12, 812-815.	2.5	0
95	Spin effect on band structure of zigzag and armchair graphene nanoribbones with Stone-Wales defect. , 2013, , .		0
96	Digital-to-time converter using set in HSPICE. , 2015, , .		0
97	Spin FET Based on Graphene Nanoribbon in the Presence of Surface Roughness. IEEE Transactions on Electron Devices, 2017, 64, 3437-3442.	3.0	0
98	Effect of hotspot on THz radiation from Bi2Sr2CaCu2O8 intrinsic Josephson junctions. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	2.3	0
99	Pressure effect on the mechanical and electronic properties of B3N3: A first-principle study. Physica C: Superconductivity and Its Applications, 2018, 548, 50-54.	1.2	0
100	Circuit Modeling of the Modulator Based on a Plasmonic Waveguide. Journal of Nanoscience and Nanotechnology, 2019, 19, 5601-5607.	0.9	0
101	Analysis and simulation of asymmetrical nanoscale self-switching transistor. International Journal of Modelling and Simulation, 0, , 1-7.	3.3	0
102	Influence of Physical Parameters on Microwave Noise Characteristics of Al0.3Ga0.7N/Al0.05Ga0.95N/GaN Composite-Channel HEMTs. International Journal of Applied Physics and Mathematics, 2013, , 442-445.	0.3	0
103	Performance optimization of a plasmonic coupler based on a lossy transmission line. Journal of Nanophotonics, 2018, 12, 1.	1.0	0