# Rahim Faez

## List of Publications by Year in Descending Order



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|---|---|---|---|
| 87 papers | 591 citations | 11 h-index | 21 g-index |
| 106 ext. papers | 704 ext. citations | 1.9 avg, IF | 4.13 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 87 | The most optimal barrier height of InGaN light-emitting diodes. *Applied Physics A: Materials Science and Processing*, **2021**, 127, 1 | 2.6 | 1 |
| 86 | GNRFET with superlattice source, channel, and drain: SLSCD-GNRFET. *Physica E: Low-Dimensional Systems and Nanostructures*, **2021**, 131, 114728 | 3 | 1 |
| 85 | Computational study of spin caloritronics in a pristine and defective antimonene nanoribbon. *Physica E: Low-Dimensional Systems and Nanostructures*, **2020**, 120, 114083 | 3 | 3 |
| 84 | Using Superlattice Structure in the Source of GNRFET to Improve Its Switching Performance. *IEEE Transactions on Electron Devices*, **2020**, 67, 1334-1339 | 2.9 | 4 |
| 83 | Local impact of Stone□Wales defect on a single layer GNRFET. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2020**, 384, 126170 | 2.3 | 2 |
| 82 | Near-room-temperature spin caloritronics in a magnetized and defective zigzag MoS2 nanoribbon. *Journal of Computational Electronics*, **2020**, 19, 137-146 | 1.8 | 0 |
| 81 | A Functional Study of a Bilayer Graphene Nanoribbon FET With Four Different Gate Insulators. *IEEE Nanotechnology Magazine*, **2019**, 18, 890-895 | 2.6 | 0 |
| 80 | Tight-binding model for the electronic properties of buckled triangular borophene. *Micro and Nano Letters*, **2019**, 14, 992-994 | 0.9 | 1 |
| 79 | Full-Quantum Simulation of Graphene Self-Switching Diodes. *Chinese Physics Letters*, **2019**, 36, 067202 | 1.8 | 2 |
| 78 | Circuit Modeling of the Modulator Based on a Plasmonic Waveguide. *Journal of Nanoscience and Nanotechnology*, **2019**, 19, 5601-5607 | 1.3 | |
| 77 | Effect of Stone-Wales defect on an armchair graphene nanoribbon-based photodetector. *Superlattices and Microstructures*, **2019**, 130, 127-138 | 2.8 | 2 |
| 76 | 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 | 1 |
| 75 | Tunable spherical graphene surface plasmon amplification by stimulated emission of radiation. *Journal of Nanophotonics*, **2019**, 13, 1 | 1.1 | 3 |
| 74 | Engineered Nanopores-Based Armchair Graphene Nanoribbon FET With Resonant Tunneling Performance. *IEEE Transactions on Electron Devices*, **2019**, 66, 5339-5346 | 2.9 | 5 |
| 73 | Pressure effect on the mechanical and electronic properties of B3N3: A first-principle study. *Physica C: Superconductivity and Its Applications*, **2018**, 548, 50-54 | 1.3 | |
| 72 | Investigation of the electronic structure of tetragonal B3N3 under pressure. *Applied Physics A: Materials Science and Processing*, **2018**, 124, 1 | 2.6 | 1 |
| 71 | Simulation analysis of inverted organic solar cells with grating structure: Undesirable effects of high absorption near grating anode. *Optik*, **2018**, 154, 453-458 | 2.5 | 1 |

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| 70 | Performance optimization of a plasmonic coupler based on a lossy transmission line. *Journal of Nanophotonics*, **2018**, 12, 1 | 1.1 | |
| 69 | Doped silicon quantum dots as sources of coherent surface plasmons. *Journal of Optics (United Kingdom)*, **2018**, 20, 125001 | 1.7 | 1 |
| 68 | Performance comparison of ideal and defected bilayer graphene nanoribbon FETs. *Superlattices and Microstructures*, **2017**, 111, 262-272 | 2.8 | 6 |
| 67 | Spin FET Based on Graphene Nanoribbon in the Presence of Surface Roughness. *IEEE Transactions on Electron Devices*, **2017**, 64, 3437-3442 | 2.9 | |
| 66 | A novel organic□inorganic hybrid tandem solar cell with inverted structure. *Applied Physics A: Materials Science and Processing*, **2017**, 123, 1 | 2.6 | 1 |
| 65 | Minimum length modulator design with a graphene-based plasmonic waveguide. *Applied Optics*, **2017**, 56, 4926-4933 | 0.2 | 2 |
| 64 | 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 | 1.6 | 1 |
| 63 | Performance improvement of junctionless field effect transistors using p-GaAs/AlGaAs heterostructure. *Superlattices and Microstructures*, **2017**, 110, 305-312 | 2.8 | 3 |
| 62 | Effect of hotspot on THz radiation from Bi2Sr2CaCu2O8 intrinsic Josephson junctions. *Applied Physics A: Materials Science and Processing*, **2017**, 123, 1 | 2.6 | |
| 61 | Modeling of a Vertical Tunneling Transistor Based on Graphene□MoS2 Heterostructure. *IEEE Transactions on Electron Devices*, **2017**, 64, 3459-3465 | 2.9 | 8 |
| 60 | Thermally induced spin-dependent current based on Zigzag Germanene Nanoribbons. *Physica E: Low-Dimensional Systems and Nanostructures*, **2017**, 86, 175-183 | 3 | 5 |
| 59 | A computational study of vertical tunneling transistors based on graphene-WS2 heterostructure. *Journal of Applied Physics*, **2017**, 121, 214503 | 2.5 | 9 |
| 58 | Effects of Stone-Wales defect on the electronic and transport properties of bilayer armchair graphene nanoribbons. *Superlattices and Microstructures*, **2016**, 100, 739-748 | 2.8 | 7 |
| 57 | Modeling comparison of graphene nanoribbon field effect transistors with single vacancy defect. *Superlattices and Microstructures*, **2016**, 97, 28-45 | 2.8 | 22 |
| 56 | A 3D analytical modeling of tri-gate tunneling field-effect transistors. *Journal of Computational Electronics*, **2016**, 15, 820-830 | 1.8 | 11 |
| 55 | Transient and steady state study of a rear-illuminated 6H-SiC Photoconductive Semiconductor Switch. *Optik*, **2016**, 127, 4615-4620 | 2.5 | 11 |
| 54 | 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 | 2.6 | 4 |
| 53 | A silicon doped hafnium oxide ferroelectric p□□□ SOI tunneling field□ffect transistor with steep subthreshold slope and high switching state current ratio. *AIP Advances*, **2016**, 6, 095010 | 1.5 | 7 |

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| 52 | Spin relaxation in graphene nanoribbons in the presence of substrate surface roughness. *Journal of Applied Physics*, **2016**, 120, 053904 | 2.5 | 6 |
| 51 | 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 | 4.9 | 11 |
| 50 | A seamless-pitched graphene nanoribbon field effect transistor. *Physica E: Low-Dimensional Systems and Nanostructures*, **2015**, 74, 414-420 | 3 | 1 |
| 49 | Simulation and investigation of a back-triggered 6H-SiC high power photoconductive switch **2015**, | | 2 |
| 48 | A novel thermo-photovoltaic cell with quantum-well for high open circuit voltage. *Superlattices and Microstructures*, **2015**, 83, 61-70 | 2.8 | 2 |
| 47 | ImprovingION/IOFFand sub-threshold swing in graphene nanoribbon field-effect transistors using single vacancy defects. *Superlattices and Microstructures*, **2015**, 86, 483-492 | 2.8 | 19 |
| 46 | A novel graphene nanoribbon field effect transistor with two different gate insulators. *Physica E: Low-Dimensional Systems and Nanostructures*, **2015**, 66, 133-139 | 3 | 24 |
| 45 | 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 | 2.6 | 6 |
| 44 | Role of 3D-paired pentagon–heptagon defects in electronic and transport properties of zigzag graphene nanoribbons. *Applied Physics A: Materials Science and Processing*, **2014**, 116, 295-301 | 2.6 | 6 |
| 43 | Large signal analysis of double quantum well transistor laser. *Optical and Quantum Electronics*, **2013** , 45, 389-399 | 2.4 | 2 |
| 42 | Simulation of deep level traps effects in quantum well transistor laser. *Journal of Computational Electronics*, **2013**, 12, 812-815 | 1.8 | |
| 41 | Calculation of Confined Phonon Spectrum in Narrow Silicon Nanowires Using the Valence Force Field Method. *Journal of Electronic Materials*, **2013**, 42, 2091-2097 | 1.9 | 11 |
| 40 | Atomistic Study of the Lattice Thermal Conductivity of Rough Graphene Nanoribbons. *IEEE Transactions on Electron Devices*, **2013**, 60, 2142-2147 | 2.9 | 25 |
| 39 | Analysis of Lattice Temperature Effects on a GaInP/6H-SiC Strained Quantum-Well Lasers. *Asian Journal of Chemistry*, **2013**, 25, 4715-4717 | 0.4 | 3 |
| 38 | Crosstalk Stability Analysis in Multilayer Graphene Nanoribbon Interconnects. *Circuits, Systems, and Signal Processing*, **2013**, 32, 2653-2666 | 2.2 | 11 |
| 37 | Magnetization of bilayer graphene with interplay between monovacancy in each layer. *Journal of Applied Physics*, **2013**, 114, 084313 | 2.5 | 4 |
| 36 | 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 | 0.4 | |
| 35 | The noise equivalent circuit model of quantum-dot lasers. *Journal of Russian Laser Research*, **2012**, 33, 217-226 | 0.7 | 2 |

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| 34 | Stability analysis in multiwall carbon nanotube bundle interconnects. *Microelectronics Reliability*, **2012**, 52, 3026-3034 | 1.2 | 21 |
| 33 | A comparative study of NEGF and DDMS models in the GAA silicon nanowire transistor. *International Journal of Electronics*, **2012**, 99, 1299-1307 | 1.2 | 10 |
| 32 | COMPACT FORMULAE FOR NUMBER OF CONDUCTION CHANNELS IN VARIOUS TYPES OF GRAPHENE NANORIBBONS AT VARIOUS TEMPERATURES. *Modern Physics Letters B*, **2012**, 26, 1150004 | 1.6 | 28 |
| 31 | Effect of Varying Aspect Ratio on Relative Stability for Graphene Nanoribbon Interconnects. *Applied Mechanics and Materials*, **2012**, 229-231, 205-209 | 0.3 | 1 |
| 30 | Effect of Varying Dielectric Constant on Relative Stability for Graphene Nanoribbon Interconnects. *Applied Mechanics and Materials*, **2012**, 229-231, 201-204 | 0.3 | |
| 29 | Engineering enhanced thermoelectric properties in zigzag graphene nanoribbons. *Journal of Applied Physics*, **2012**, 111, 054501 | 2.5 | 71 |
| 28 | Analysis of carrier dynamic effects in transistor lasers. *Optical Engineering*, **2012**, 51, 024202 | 1.1 | 2 |
| 27 | Large Signal Circuit Model of Two-Section Gain Lever Quantum Dot Laser. *Chinese Physics Letters*, **2012**, 29, 114207 | 1.8 | 0 |
| 26 | PERFORMANCE EVALUATION OF SOURCE HETEROJUNCTION STRAINED CHANNEL GATE ALL AROUND NANOWIRE TRANSISTOR. *Modern Physics Letters B*, **2012**, 26, 1250076 | 1.6 | 4 |
| 25 | The non-equilibrium Green's function (NEGF) simulation of nanoscale lightly doped drain and source double gate MOSFETs **2012**, | | 1 |
| 24 | Geometrical effects on the thermoelectric properties of ballistic graphene antidot lattices. *Journal of Applied Physics*, **2011**, 110, 054506 | 2.5 | 61 |
| 23 | Improving Elmore Model of RLC Networks for Applying to SWCNT Interconnects. *Applied Mechanics and Materials*, **2011**, 110-116, 5078-5084 | 0.3 | |
| 22 | Investigation of quantum conductance in semiconductor single-wall carbon nanotubes: Effect of strain and impurity. *Journal of Applied Physics*, **2011**, 110, 064320 | 2.5 | 7 |
| 21 | Design and simulation of a high power single mode 1550nm InGaAsP VCSELs. *IEICE Electronics Express*, **2011**, 8, 1096-1101 | 0.5 | 8 |
| 20 | A small signal circuit model of two mode InAs/GaAs quantum dot laser. *IEICE Electronics Express*, **2011**, 8, 245-251 | 0.5 | 1 |
| 19 | Small signal circuit modeling for semiconductor self-assembled quantum dot laser. *Optical Engineering*, **2011**, 50, 034202 | 1.1 | 4 |
| 18 | Reduced Master Equation for Modeling of Ferromagnetic Single-Electron Transistor. *Applied Mechanics and Materials*, **2011**, 110-116, 3103-3110 | 0.3 | |
| 17 | An Investigation of the Geometrical Effects on the Thermal Conductivity of Graphene Antidot Lattices. *ECS Transactions*, **2011**, 35, 185-192 | 1 | |

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| 16 | Graphene-Based Antidots for Thermoelectric Applications. *Journal of the Electrochemical Society*, **2011**, 158, K213 | 3.9 | 5 |
| 15 | TRIPLE-TUNNEL JUNCTION SINGLE ELECTRON TRANSISTOR (TTJ-SET). *Modern Physics Letters B*, **2011**, 25, 1487-1501 | 1.6 | 1 |
| 14 | Detemining the Thickness of Barriers and Well of Resonance Tunneling Diodes by Specified I-V Characteristic. *Applied Mechanics and Materials*, **2011**, 110-116, 5464-5470 | 0.3 | |
| 13 | NUMERICAL INVESTIGATION ON THE TEMPERATURE DEPENDENCE OF THE CYLINDRICAL-GATE-ALL-AROUND Si-NW-FET. *Modern Physics Letters B*, **2011**, 25, 2269-2278 | 1.6 | 5 |
| 12 | Stability Analysis in Graphene Nanoribbon Interconnects. *IEEE Electron Device Letters*, **2010**, 31, 1458-1460 | 4.4 | 65 |
| 11 | Investigation of breakdown voltage in InAlAs/InGaAs/InP HEMTs with different structures. *IEICE Electronics Express*, **2010**, 7, 1447-1452 | 0.5 | 1 |
| 10 | A New SPICE Macro-Model for Simulation of Single Electron Circuits. *Journal of the Korean Physical Society*, **2010**, 56, 1202-1207 | 0.6 | 9 |
| 9 | NOVEL STRUCTURES FOR CARBON NANOTUBE FIELD EFFECT TRANSISTORS. *International Journal of Modern Physics B*, **2009**, 23, 3871-3880 | 1.1 | 3 |
| 8 | A new SPICE macro-model for simulation of single electron circuits **2009**, | | 2 |
| 7 | An improved macro-model for simulation of single electron transistor (SET) using HSPICE **2009**, | | 4 |
| 6 | Quantum Corrections in the Drift-Diffusion Model. *Japanese Journal of Applied Physics*, **2007**, 46, 7247-7250 | 1.4 | 2 |
| 5 | Full quantum mechanical simulation of a novel nanoscale DG-MOSFET: 2D NEGF approach **2007**, | | 1 |
| 4 | Efficient implementation of the convective terms in the hydrodynamic equations. *Computer Methods in Applied Mechanics and Engineering*, **2005**, 194, 969-978 | 5.7 | 1 |
| 3 | Novel Quantum Hydrodynamic Equations for Semiconductor Devices. *Japanese Journal of Applied Physics*, **2002**, 41, 1300-1304 | 1.4 | 4 |
| 2 | Normal-incidence near-1.55-□m Ge quantum dot photodetectors on Si substrate **2001**, | | 2 |
| 1 | Analysis and simulation of asymmetrical nanoscale self-switching transistor. *International Journal of Modelling and Simulation*,1-7 | 1.5 | |