

# Md Sherajul Islam

## List of Publications by Year in descending order

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Version: 2024-02-01

85  
papers

761  
citations

471061

17  
h-index

610482

24  
g-index

85  
all docs

85  
docs citations

85  
times ranked

316  
citing authors

#	ARTICLE	IF	CITATIONS
1	Spin-orbit coupling effects on the electronic structure of two-dimensional silicon carbide. Journal of Computational Electronics, 2019, 18, 407-414.	1.3	55
2	Anomalous temperature dependent thermal conductivity of two-dimensional silicon carbide. Nanotechnology, 2019, 30, 445707.	1.3	49
3	Tunable electronic properties in stanene and two dimensional silicon-carbide heterobilayer: A first principles investigation. AIP Advances, 2019, 9, .	0.6	37
4	Vacancy-induced thermal transport in two-dimensional silicon carbide: a reverse non-equilibrium molecular dynamics study. Physical Chemistry Chemical Physics, 2020, 22, 13592-13602.	1.3	35
5	Anisotropic mechanical behavior of two dimensional silicon carbide: effect of temperature and vacancy defects. Materials Research Express, 2019, 6, 125073.	0.8	33
6	Effect of vacancy defects on phonon properties of hydrogen passivated graphene nanoribbons. Carbon, 2014, 80, 146-154.	5.4	32
7	Numerical design of high-performance WS <sub>2</sub> /metal/WS <sub>2</sub> /graphene heterostructure based surface plasmon resonance refractive index sensor. Results in Physics, 2021, 23, 104021.	2.0	30
8	Lateral and flexural thermal transport in stanene/2D-SiC van der Waals heterostructure. Nanotechnology, 2020, 31, 505702.	1.3	27
9	Widely tunable electronic properties in graphene/two-dimensional silicon carbide van der Waals heterostructures. Journal of Computational Electronics, 2019, 18, 836-845.	1.3	23
10	Germanene/2D-SiC van der Waals heterobilayer: Structural features and tunable electronic properties. Materials Today Communications, 2021, 26, 101718.	0.9	22
11	Germanene/2D-AIP van der Waals heterostructure: Tunable structural and electronic properties. AIP Advances, 2021, 11, .	0.6	22
12	Exceptional in-plane and interfacial thermal transport in graphene/2D-SiC van der Waals heterostructures. Scientific Reports, 2020, 10, 22050.	1.6	21
13	Molecular dynamics study of thermal transport in single-layer silicon carbide nanoribbons. AIP Advances, 2020, 10, .	0.6	21
14	Numerical analysis on vacancy induced vibrational properties of graphene nanoribbons. Computational Materials Science, 2013, 79, 356-361.	1.4	20
15	Effect of boron and nitrogen doping with native point defects on the vibrational properties of graphene. Computational Materials Science, 2014, 94, 35-43.	1.4	20
16	Superior tunable photocatalytic properties for water splitting in two dimensional GeC/SiC van der Waals heterobilayers. Scientific Reports, 2021, 11, 17739.	1.6	20
17	Tunable electronic properties in bismuthene/2D silicon carbide van der Waals heterobilayer. Japanese Journal of Applied Physics, 2020, 59, SCCC03.	0.8	18
18	Strong tribo-piezoelectric effect in bilayer indium nitride (InN). Scientific Reports, 2021, 11, 18669.	1.6	15

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19	Polarized microscopic laser Raman scattering spectroscopy for edge structure of epitaxial graphene and localized vibrational mode. Carbon, 2014, 77, 1073-1081.	5.4	13
20	Numerical experiments on phonon properties of isotope and vacancy-type disordered graphene. Diamond and Related Materials, 2013, 40, 115-122.	1.8	12
21	Vacancy-Induced Thermal Transport and Tensile Mechanical Behavior of Monolayer Honeycomb BeO. ACS Omega, 2022, 7, 4525-4537.	1.6	12
22	Analysis of vibrational properties of C-doped hexagonal boron nitride (h-BN). Computational Materials Science, 2014, 94, 225-233.	1.4	10
23	Combined effect of <sup>13</sup> C isotope and vacancies on the phonon properties in AB stacked bilayer graphene. Carbon, 2020, 168, 22-31.	5.4	10
24	Temperature- and Defect-Induced Uniaxial Tensile Mechanical Behaviors and the Fracture Mechanism of Two-Dimensional Silicon Germanide. ACS Omega, 2021, 6, 21861-21871.	1.6	10
25	Vacancy and curvature effects on the phonon properties of single wall carbon nanotube. Japanese Journal of Applied Physics, 2018, 57, 02CB08.	0.8	9
26	HfO <sub>2</sub> /TiO <sub>2</sub> /HfO <sub>2</sub> tri-layer high-K gate oxide based MoS <sub>2</sub> negative capacitance FET with steep subthreshold swing. AIP Advances, 2020, 10, .	0.6	9
27	Interlayer vacancy effects on the phonon modes in AB stacked bilayer graphene nanoribbon. Current Applied Physics, 2020, 20, 572-581.	1.1	9
28	Thermal transport in monolayer zinc-sulfide: effects of length, temperature and vacancy defects. Nanotechnology, 2021, 32, 435703.	1.3	9
29	Numerical Investigations of Nanowire Gate-All-Around Negative Capacitance GaAs/InN Tunnel FET. IEEE Access, 2022, 10, 30323-30334.	2.6	9
30	Design and performance of 1.55 $\mu$ m laser using InGaN. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 1825-1828.	0.8	8
31	2DEG properties in InGaN/InN/InGaN-based double channel HEMTs. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 1997-2000.	0.8	8
32	A Study on Theoretical Performance of Graphene FET using Analytical Approach with Reference to High Cutoff Frequency. International Journal of Nanoscience, 2016, 15, 1640001.	0.4	8
33	Silicene/Zn <sub>2</sub> van der Waals heterostructure: tunable structural and electronic properties. Nanotechnology, 2021, 32, 305707.	1.3	8
34	Chirality, temperature, and vacancy effects on mechanical behavior of monolayer zinc-sulfide. Computational Materials Science, 2021, 200, 110824.	1.4	8
35	Dual source negative capacitance GaSb/InGaAsSb/InAs heterostructure based vertical TFET with steep subthreshold swing and high on-off current ratio. Results in Physics, 2021, 29, 104796.	2.0	7
36	Tensile Mechanical Behavior and the Fracture Mechanism in Monolayer Group-III Nitrides XN (X= Ga, In, Al, B). Tj ETQq0 0 0 rrgBT /Overlock 10 Tf	1.6	7

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37	Tribo-Piezoelectricity in Group III Nitride Bilayers: A Density Functional Theory Investigation. ACS Applied Materials & Interfaces, 2022, 14, 20856-20865.	4.0	7
38	Polarized micro Raman scattering spectroscopy for curved edges of epitaxial graphene. Applied Physics Letters, 2014, 105, 243103.	1.5	6
39	Effect of <sup>10</sup> B isotope and vacancy defects on the phonon modes of two-dimensional hexagonal boron nitride. Japanese Journal of Applied Physics, 2018, 57, 02CB04.	0.8	6
40	Numerical Analysis of Gate-All-Around HfO <sub>2</sub> /TiO <sub>2</sub> /HfO <sub>2</sub> High-K Dielectric Based WSe <sub>2</sub> NCFET With Reduced Sub-Threshold Swing and High On/Off Ratio. IEEE Access, 2021, 9, 116254-116264.	2.6	6
41	Numerical Analysis on Phonon Localization of Vacancy Type Disordered Graphene. Journal of Circuits, Systems and Computers, 2015, 24, 1540002.	1.0	5
42	Deconvolution of Raman spectra of disordered monolayer graphene: an approach to probe the phonon modes. Bulletin of Materials Science, 2019, 42, 1.	0.8	5
43	Phonon transmission of vacancy disordered armchair silicene nanoribbon. Optoelectronics Letters, 2021, 17, 454-458.	0.4	5
44	Temperature induced anomalous exciton localization in InGaN/GaN and GaN/AlInN quantum wells. Journal of Computational Electronics, 2018, 17, 373-381.	1.3	4
45	Phonon localization in single wall carbon nanotube: Combined effect of <sup>13</sup> C isotope and vacancies. Journal of Applied Physics, 2020, 128, 045108.	1.1	4
46	Molecular beam epitaxy of InAlN alloys in the whole compositional range. AIP Advances, 2020, 10, 015053.	0.6	4
47	AlInN/InN metal oxide semiconductor heterostructure field effect transistor. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 1983-1987.	0.8	3
48	Realistic edge shape effects on the vibrational properties of graphene nanoribbons. , 2015, , .		3
49	Phonon transmission of vacancy defected (10,0) carbon nanotube. , 2017, , .		3
50	Electro-Optical Properties of Sputtered Calcium Lead Titanate Thin Films for Pyroelectric Detection. Micromachines, 2020, 11, 1073.	1.4	3
51	RF-MBE growth and orientation control of GaN on epitaxial graphene. Results in Physics, 2021, 20, 103714.	2.0	3
52	Proposal for dispersion compensating square-lattice photonic crystal fiber. Optoelectronics Letters, 2021, 17, 160-164.	0.4	3
53	Electronic properties of Ge/2D-GaP heterobilayer: A first-principles investigation. , 2020, , .		3
54	High efficiency In<sub>f</sub>x<sub>f</sub>Ga<sub>f</sub>1&#x2212;x<sub>f</sub>N-based quantum well solar cell. , 2010, , .		2

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55	Analysis on band structure and NEGF approach for graphene as a channel material. , 2015, , .		2
56	Theoretical analysis of substrate effects on the DC performance of AlGaIn/GaN high electron mobility transistor. , 2016, , .		2
57	Substrate effects on channel temperature distribution of AlGaIn/GaN HEMT. , 2017, , .		2
58	Temperature-induced localized exciton dynamics in mixed lead-tin based $\text{CH}_3\text{NH}_3\text{Pb}_{1-x}\text{Sn}_x\text{I}_3$ perovskite materials. AIP Advances, 2020, 10, 065331.	0.6	2
59	InN-based dual channel high electron mobility transistor. , 2008, , .		1
60	Vacancy induced phonon properties of hydrogen passivated graphene. , 2014, , .		1
61	Effect of photon recycling on the properties of p+ n GaAs solar cell. , 2015, , .		1
62	DC and RF characteristics of graphene FET using analytical approach. , 2015, , .		1
63	Dynamic performance of graphene field effect transistor with contact resistance. , 2016, , .		1
64	Exciton-phonon scattering effects on photoluminescence of hybrid lead halide perovskite. , 2017, , .		1
65	A Study on Phonon Transmission of (10,0) Silicon Nanotube with Atomic Vacancies. , 2018, , .		1
66	Vacancy Induced Electron-Phonon Interaction of Single Layer Graphene. , 2018, , .		1
67	Permeability Analysis of Pure Water across Nano Porous Graphene. , 2019, , .		1
68	RF-MBE and MOVPE $\text{In}_x\text{Ga}_{1-x}\text{N}$ films over the entire composition range: A study on growth method dependence. Superlattices and Microstructures, 2020, 140, 106448.	1.4	1
69	Temperature dependent localization dynamics of excitons in $\text{Mg}_{0.14}\text{Zn}_{0.86}\text{O}$ alloyed semiconductor. Physica B: Condensed Matter, 2019, 558, 127-130.	1.3	1
70	Temperature Induced Anomalous Exciton Localization Dynamics of $\text{CH}_3\text{NH}_3\text{Pb}(\text{I}_{1-x}\text{Br}_x)_3$ Perovskite Material: A Monte Carlo Simulation. , 2020, , .		1
71	In $_x$ Ga $_{1-x}$ N based multi junction concentrator solar cell. , 2008, , .		0
72	Charge control studies for an AlInN/InN heterojunction field effect transistor without and with oxide layer. , 2010, , .		0

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73	Transport Properties of Insulated Gate AlInN/InN Heterojunction Field Effect Transistor. Advanced Materials Research, 0, 403-408, 64-69.	0.3	0
74	The effect of quantum dot size, interdot distance and indium content on In <sub>x</sub> Ga <sub>1-x</sub> N/GaN QD-IBSC. , 2014, , .		0
75	Numerical analysis on vibrational properties of vacancy-type disordered graphane. , 2015, , .		0
76	Effect of phosphor distribution on junction temperature reduction in white LEDs. , 2016, , .		0
77	Probing the neuronal status for cerebrovascular disease using EEG. , 2017, , .		0
78	Numerical simulation of vibrational properties of AGNR with vacancy and stone wales defects. , 2017, , .		0
79	Temperature Induced Localization Dynamics of Exciton in ZnO/MgZnO and CdZnO/MgZnO Quantum Well. , 2018, , .		0
80	Effects of Edge Termination on the Electronic Properties of Zigzag Boron Nitride Nanoribbons. , 2018, , .		0
81	Structural and electronic properties of sublimated graphene on silicon carbide: A First Principle study. , 2018, , .		0
82	First Principle Calculations on the Electronic Properties of Siligraphene. , 2018, , .		0
83	Vacancy Induced Electronic Properties of Two Dimensional Silicon Carbide: A First Principles Calculation. , 2019, , .		0
84	Halogen Doped Electronic Properties of 2D ZnO: A First Principles Study. , 2019, , .		0
85	Behaviour of Raman B1 (high) mode and evaluation of crystalline quality in the In <sub>x</sub> Ga <sub>1-x</sub> N alloys grown by RF-MBE. Bulletin of Materials Science, 2020, 43, 1.	0.8	0