

Somnath Bhowmick

List of Publications by Citations

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44
papers

2,697
citations

22
h-index

49
g-index

49
ext. papers

3,022
ext. citations

3.8
avg, IF

5.36
L-index

#	Paper	IF	Citations
44	Symmetry-dependent phonon renormalization in monolayer MoS ₂ transistor. <i>Physical Review B</i> , 2012 , 85,	3.3	707
43	Polymorphism of two-dimensional boron. <i>Nano Letters</i> , 2012 , 12, 2441-5	11.5	435
42	BN white graphene with "colorful" edges: the energies and morphology. <i>Nano Letters</i> , 2011 , 11, 3113-6	11.5	261
41	Quantum Dots and Nanoroads of Graphene Embedded in Hexagonal Boron Nitride. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 9889-9893	3.8	127
40	Electric field induced gap modification in ultrathin blue phosphorus. <i>Physical Review B</i> , 2015 , 91,	3.3	111
39	Effect of strain on the thermal conductivity of solids. <i>Journal of Chemical Physics</i> , 2006 , 125, 164513	3.9	110
38	Edge state magnetism of single layer graphene nanostructures. <i>Journal of Chemical Physics</i> , 2008 , 128, 244717	3.9	88
37	Resonance energy transfer from a fluorescent dye to a metal nanoparticle. <i>Journal of Chemical Physics</i> , 2006 , 125, 181102	3.9	82
36	Doping Strategies for Monolayer MoS ₂ via Surface Adsorption: A Systematic Study. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 30309-30314	3.8	77
35	Boundaries for efficient use of electron vortex beams to measure magnetic properties. <i>Physical Review Letters</i> , 2013 , 111, 105504	7.4	65
34	Edge Stabilities of Hexagonal Boron Nitride Nanoribbons: A First-Principles Study. <i>Journal of Chemical Theory and Computation</i> , 2011 , 7, 720-4	6.4	61
33	SnP ₃ : A Previously Unexplored Two-Dimensional Material. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 18185-18191	3.8	56
32	Four allotropes of semiconducting layered arsenic that switch into a topological insulator via an electric field: Computational study. <i>Physical Review B</i> , 2016 , 94,	3.3	50
31	Achieving atomic resolution magnetic dichroism by controlling the phase symmetry of an electron probe. <i>Physical Review Letters</i> , 2014 , 113, 145501	7.4	49
30	Thickness and electric-field-dependent polarizability and dielectric constant in phosphorene. <i>Physical Review B</i> , 2016 , 93,	3.3	48
29	Anisotropy of the Stone-Wales defect and warping of graphene nanoribbons: A first-principles analysis. <i>Physical Review B</i> , 2010 , 81,	3.3	48
28	Scattering of electron vortex beams on a magnetic crystal: Towards atomic-resolution magnetic measurements. <i>Physical Review B</i> , 2014 , 89,	3.3	46

27	Effective Doping of Monolayer Phosphorene by Surface Adsorption of Atoms for Electronic and Spintronic Applications. <i>IETE Journal of Research</i> , 2017 , 63, 205-215	0.9	39
26	First-principles cluster expansion study of functionalization of black phosphorene via fluorination and oxidation. <i>Physical Review B</i> , 2016 , 93,	3.3	38
25	Anisotropic plasmons, excitons, and electron energy loss spectroscopy of phosphorene. <i>Physical Review B</i> , 2017 , 96,	3.3	33
24	Thickness and Stacking Dependent Polarizability and Dielectric Constant of GrapheneHexagonal Boron Nitride Composite Stacks. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 17620-17626	3.8	28
23	Rate of excitation energy transfer between fluorescent dyes and nanoparticles. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2007 , 190, 335-341	4.7	23
22	Weber-Fechner type nonlinear behavior in zigzag edge graphene nanoribbons. <i>Physical Review B</i> , 2010 , 82,	3.3	18
21	Strain-tunable charge carrier mobility of atomically thin phosphorus allotropes. <i>Physical Review B</i> , 2018 , 97,	3.3	17
20	Polymorphs of two dimensional phosphorus and arsenic: insight from an evolutionary search. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 11282-11288	3.6	15
19	Sensory-organ-like response determines the magnetism of zigzag-edged honeycomb nanoribbons. <i>Physical Review B</i> , 2013 , 87,	3.3	12
18	Two-Dimensional MoSi ₂ N ₄ : An Excellent 2-D Semiconductor for Field-Effect Transistors. <i>IEEE Transactions on Electron Devices</i> , 2022 , 69, 406-413	2.9	7
17	Significant Enhancement of the Stark Effect in Rippled Monolayer Blue Phosphorus. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 5171-5177	3.8	6
16	Adsorption of magnetic transition metals on borophene: an ab initio study. <i>European Physical Journal B</i> , 2018 , 91, 1	1.2	5
15	X-ray absorption spectra: Graphene, h-BN, and their alloy. <i>Physical Review B</i> , 2013 , 87,	3.3	5
14	First principles prediction of amorphous phases using evolutionary algorithms. <i>Journal of Chemical Physics</i> , 2016 , 145, 014106	3.9	5
13	Interlayer decoupling in twisted bilayers of phosphorus and arsenic: A computational study. <i>FlatChem</i> , 2019 , 16, 100112	5.1	3
12	Electronic structure and transport in amorphous metal oxide and amorphous metal oxynitride semiconductors. <i>Journal of Applied Physics</i> , 2019 , 126, 125702	2.5	3
11	Decoupled strain response of ferroic properties in a multiferroic VOCl ₂ monolayer. <i>Physical Review B</i> , 2021 , 103,	3.3	3
10	Mapping Magnetic Properties of Materials At Atomic Spatial Resolution. <i>Microscopy and Microanalysis</i> , 2015 , 21, 499-500	0.5	2

9	Ab-initio study of doping versus adsorption in monolayer MoS ₂ 2014 ,		2
8	External-strain-induced semimetallic and metallic phase of chlorographene. <i>Physical Review Materials</i> , 2018 , 2,	3.2	2
7	Role of disconnections in mobility of the austenite-ferrite interphase boundary in Fe. <i>Physical Review Materials</i> , 2018 , 2,	3.2	2
6	Performance Investigation of p-FETs Based on Highly Air-Stable Monolayer Pentagonal PdSe ₂ <i>IEEE Transactions on Electron Devices</i> , 2021 , 1-7	2.9	2
5	Compact Modeling of Multi-Layered MoS ₂ FETs Including Negative Capacitance Effect. <i>IEEE Journal of the Electron Devices Society</i> , 2020 , 8, 1177-1183	2.3	2
4	Ferromagnetism in Mn nanorods. <i>Journal of Applied Physics</i> , 2017 , 121, 084304	2.5	1
3	Strain-tunable in-plane ferroelectricity and lateral tunnel junction in monolayer group-IV monochalcogenides. <i>Journal of Applied Physics</i> , 2022 , 131, 034101	2.5	1
2	Role of interface morphology on the martensitic transformation in pure Fe. <i>Materialia</i> , 2021 , 16, 101085	3.2	1
1	High electric field enhancement near electron-doped semiconductor nanoribbons. <i>Chemical Physics Letters</i> , 2012 , 546, 99-105	2.5	