

Somnath Bhowmick

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/9141480/publications.pdf>

Version: 2024-02-01

49
papers

3,318
citations

279487

23
h-index

243296

44
g-index

49
all docs

49
docs citations

49
times ranked

5897
citing authors

#	ARTICLE	IF	CITATIONS
1	Symmetry-dependent phonon renormalization in monolayer MoS ₂ transistor. Physical Review B, 2012, 85, .	1.1	865
2	Polymorphism of Two-Dimensional Boron. Nano Letters, 2012, 12, 2441-2445.	4.5	545
3	BN White Graphene with "Colorful" Edges: The Energies and Morphology. Nano Letters, 2011, 11, 3113-3116.	4.5	301
4	Electric field induced gap modification in ultrathin blue phosphorus. Physical Review B, 2015, 91, .	1.1	139
5	Quantum Dots and Nanoroads of Graphene Embedded in Hexagonal Boron Nitride. Journal of Physical Chemistry C, 2011, 115, 9889-9893.	1.5	135
6	Effect of strain on the thermal conductivity of solids. Journal of Chemical Physics, 2006, 125, 164513.	1.2	130
7	Edge state magnetism of single layer graphene nanostructures. Journal of Chemical Physics, 2008, 128, 244717.	1.2	96
8	Doping Strategies for Monolayer MoS ₂ via Surface Adsorption: A Systematic Study. Journal of Physical Chemistry C, 2014, 118, 30309-30314.	1.5	90
9	Resonance energy transfer from a fluorescent dye to a metal nanoparticle. Journal of Chemical Physics, 2006, 125, 181102.	1.2	89
10	SnP ₃ : A Previously Unexplored Two-Dimensional Material. Journal of Physical Chemistry C, 2018, 122, 18185-18191.	1.5	85
11	Edge Stabilities of Hexagonal Boron Nitride Nanoribbons: A First-Principles Study. Journal of Chemical Theory and Computation, 2011, 7, 720-724.	2.3	72
12	Boundaries for Efficient Use of Electron Vortex Beams to Measure Magnetic Properties. Physical Review Letters, 2013, 111, 105504.	2.9	72
13	Thickness and electric-field-dependent polarizability and dielectric constant in phosphorene. Physical Review B, 2016, 93, .	1.1	66
14	Four allotropes of semiconducting layered arsenic that switch into a topological insulator via an electric field: Computational study. Physical Review B, 2016, 94, .	1.1	57
15	Anisotropy of the Stone-Wales defect and warping of graphene nanoribbons: A first-principles analysis. Physical Review B, 2010, 81, .	1.1	55
16	Achieving Atomic Resolution Magnetic Dichroism by Controlling the Phase Symmetry of an Electron Probe. Physical Review Letters, 2014, 113, 145501.	2.9	54
17	Anisotropic plasmons, excitons, and electron energy loss spectroscopy of phosphorene. Physical Review B, 2017, 96, .	1.1	52
18	Scattering of electron vortex beams on a magnetic crystal: Towards atomic-resolution magnetic measurements. Physical Review B, 2014, 89, .	1.1	51

#	ARTICLE	IF	CITATIONS
19	Effective Doping of Monolayer Phosphorene by Surface Adsorption of Atoms for Electronic and Spintronic Applications. IETE Journal of Research, 2017, 63, 205-215.	1.8	46
20	First-principles cluster expansion study of functionalization of black phosphorene via fluorination and oxidation. Physical Review B, 2016, 93, .	1.1	42
21	Thickness and Stacking Dependent Polarizability and Dielectric Constant of Graphene-Hexagonal Boron Nitride Composite Stacks. Journal of Physical Chemistry C, 2016, 120, 17620-17626.	1.5	37
22	Two-Dimensional MoSi ₂ N ₄ : An Excellent 2-D Semiconductor for Field-Effect Transistors. IEEE Transactions on Electron Devices, 2022, 69, 406-413.	1.6	28
23	Rate of excitation energy transfer between fluorescent dyes and nanoparticles. Journal of Photochemistry and Photobiology A: Chemistry, 2007, 190, 335-341.	2.0	27
24	Strain-tunable charge carrier mobility of atomically thin phosphorus allotropes. Physical Review B, 2018, 97, .	1.1	23
25	Weber-Fechner type nonlinear behavior in zigzag edge graphene nanoribbons. Physical Review B, 2010, 82, .	1.1	21
26	Polymorphs of two dimensional phosphorus and arsenic: insight from an evolutionary search. Physical Chemistry Chemical Physics, 2017, 19, 11282-11288.	1.3	20
27	Sensory-organ-like response determines the magnetism of zigzag-edged honeycomb nanoribbons. Physical Review B, 2013, 87, .	1.1	15
28	Role of interface morphology on the martensitic transformation in pure Fe. Materialia, 2021, 16, 101085.	1.3	11
29	Significant Enhancement of the Stark Effect in Rippled Monolayer Blue Phosphorus. Journal of Physical Chemistry C, 2018, 122, 5171-5177.	1.5	9
30	Decoupled strain response of ferroic properties in a multiferroic VOCl_2 monolayer. Physical Review B, 2021, 103, .	1.1	9
31	Adsorption of magnetic transition metals on borophene: an ab initio study. European Physical Journal B, 2018, 91, 1.	0.6	8
32	First principles prediction of amorphous phases using evolutionary algorithms. Journal of Chemical Physics, 2016, 145, 014106.	1.2	7
33	Temperature-Dependent Superplasticity and Strengthening in CoNiCrFeMn High Entropy Alloy Nanowires Using Atomistic Simulations. Nanomaterials, 2021, 11, 2111.	1.9	7
34	Role of disconnections in mobility of the austenite-ferrite interphase boundary in Fe. Physical Review Materials, 2018, 2, .	0.9	7
35	Electronic structure and transport in amorphous metal oxide and amorphous metal oxynitride semiconductors. Journal of Applied Physics, 2019, 126, .	1.1	6
36	Compact Modeling of Multi-Layered MoS ₂ FETs Including Negative Capacitance Effect. IEEE Journal of the Electron Devices Society, 2020, 8, 1177-1183.	1.2	6

#	ARTICLE	IF	CITATIONS
37	Performance Investigation of p-FETs Based on Highly Air-Stable Monolayer Pentagonal PdSe ₂ . IEEE Transactions on Electron Devices, 2021, 68, 6551-6557.	1.6	6
38	X-ray absorption spectra: Graphene, h -BN, and their alloy. Physical Review B, 2013, 87, .	1.1	5
39	Ab-initio study of doping versus adsorption in monolayer MoS ₂ . , 2014, , .		5
40	External-strain-induced semimetallic and metallic phase of chlorographene. Physical Review Materials, 2018, 2, .	0.9	4
41	Strain-tunable in-plane ferroelectricity and lateral tunnel junction in monolayer group-IV monochalcogenides. Journal of Applied Physics, 2022, 131, 034101.	1.1	4
42	Interlayer decoupling in twisted bilayers of $\hat{\Gamma}^2$ -phosphorus and arsenic: A computational study. FlatChem, 2019, 16, 100112.	2.8	3
43	K_2CoS_2 : A two-dimensional in-plane antiferromagnetic insulator. Physical Review B, 2020, 102, .		
44	Mapping Magnetic Properties of Materials At Atomic Spatial Resolution. Microscopy and Microanalysis, 2015, 21, 499-500.	0.2	2
45	Ferromagnetism in $\hat{\Gamma}^{\pm}$ -Mn nanorods. Journal of Applied Physics, 2017, 121, 084304.	1.1	2
46	Performance projection of mono and multi-layer silicane FETs in the ballistic limit. , 2016, , .		1
47	High electric field enhancement near electron-doped semiconductor nanoribbons. Chemical Physics Letters, 2012, 546, 99-105.	1.2	0
48	Strain Dependent Carrier Mobility in $8 \hat{\Gamma}^{\pm}$ Pmmn Borophene: ab-initio study. , 2018, , .		0
49	Thermoelectric Properties of CrI ₃ Monolayer. , 2018, , .		0