# Somnath Bhowmick

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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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 | Strain-tunable in-plane ferroelectricity and lateral tunnel junction in monolayer group-IV monochalcogenides. *Journal of Applied Physics*, **2022**, 131, 034101 | 2.5 | 1 |
| 43 | Two-Dimensional MoSi2N4: An Excellent 2-D Semiconductor for Field-Effect Transistors. *IEEE Transactions on Electron Devices*, **2022**, 69, 406-413 | 2.9 | 7 |
| 42 | Performance Investigation of p-FETs Based on Highly Air-Stable Monolayer Pentagonal PdSe*IEEE Transactions on Electron Devices*, **2021**, 1-7 | 2.9 | 2 |
| 41 | Role of interface morphology on the martensitic transformation in pure Fe. *Materialia*, **2021**, 16, 101085 | 3.2 | 1 |
| 40 | Decoupled strain response of ferroic properties in a multiferroic VOCl2 monolayer. *Physical Review B*, **2021**, 103, | 3.3 | 3 |
| 39 | Compact Modeling of Multi-Layered MoS2 FETs Including Negative Capacitance Effect. *IEEE Journal of the Electron Devices Society*, **2020**, 8, 1177-1183 | 2.3 | 2 |
| 38 | Interlayer decoupling in twisted bilayers of phosphorus and arsenic: A computational study. *FlatChem*, **2019**, 16, 100112 | 5.1 | 3 |
| 37 | Electronic structure and transport in amorphous metal oxide and amorphous metal oxynitride semiconductors. *Journal of Applied Physics*, **2019**, 126, 125702 | 2.5 | 3 |
| 36 | Significant Enhancement of the Stark Effect in Rippled Monolayer Blue Phosphorus. *Journal of Physical Chemistry C*, **2018**, 122, 5171-5177 | 3.8 | 6 |
| 35 | Adsorption of magnetic transition metals on borophene: an ab initio study. *European Physical Journal B*, **2018**, 91, 1 | 1.2 | 5 |
| 34 | Strain-tunable charge carrier mobility of atomically thin phosphorus allotropes. *Physical Review B*, **2018**, 97, | 3.3 | 17 |
| 33 | SnP3: A Previously Unexplored Two-Dimensional Material. *Journal of Physical Chemistry C*, **2018**, 122, 18185-18191 | 3.8 | 56 |
| 32 | External-strain-induced semimetallic and metallic phase of chlorographene. *Physical Review Materials*, **2018**, 2, | 3.2 | 2 |
| 31 | Role of disconnections in mobility of the austenite-ferrite interphase boundary in Fe. *Physical Review Materials*, **2018**, 2, | 3.2 | 2 |
| 30 | Effective Doping of Monolayer Phosphorene by Surface Adsorption of Atoms for Electronic and Spintronic Applications. *IETE Journal of Research*, **2017**, 63, 205-215 | 0.9 | 39 |
| 29 | Ferromagnetism in Mn nanorods. *Journal of Applied Physics*, **2017**, 121, 084304 | 2.5 | 1 |
| 28 | Polymorphs of two dimensional phosphorus and arsenic: insight from an evolutionary search. *Physical Chemistry Chemical Physics*, **2017**, 19, 11282-11288 | 3.6 | 15 |

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| 27 | Anisotropic plasmons, excitons, and electron energy loss spectroscopy of phosphorene. *Physical Review B*, **2017**, 96, | 3.3 | 33 |
| 26 | First-principles cluster expansion study of functionalization of black phosphorene via fluorination and oxidation. *Physical Review B*, **2016**, 93, | 3.3 | 38 |
| 25 | Thickness and electric-field-dependent polarizability and dielectric constant in phosphorene. *Physical Review B*, **2016**, 93, | 3.3 | 48 |
| 24 | Four allotropes of semiconducting layered arsenic that switch into a topological insulator via an electric field: Computational study. *Physical Review B*, **2016**, 94, | 3.3 | 50 |
| 23 | Thickness and Stacking Dependent Polarizability and Dielectric Constant of Graphene–Hexagonal Boron Nitride Composite Stacks. *Journal of Physical Chemistry C*, **2016**, 120, 17620-17626 | 3.8 | 28 |
| 22 | First principles prediction of amorphous phases using evolutionary algorithms. *Journal of Chemical Physics*, **2016**, 145, 014106 | 3.9 | 5 |
| 21 | Mapping Magnetic Properties of Materials At Atomic Spatial Resolution. *Microscopy and Microanalysis*, **2015**, 21, 499-500 | 0.5 | 2 |
| 20 | Electric field induced gap modification in ultrathin blue phosphorus. *Physical Review B*, **2015**, 91, | 3.3 | 111 |
| 19 | Achieving atomic resolution magnetic dichroism by controlling the phase symmetry of an electron probe. *Physical Review Letters*, **2014**, 113, 145501 | 7.4 | 49 |
| 18 | Ab-initio study of doping versus adsorption in monolayer M0S2 **2014**, | | 2 |
| 17 | Doping Strategies for Monolayer MoS2 via Surface Adsorption: A Systematic Study. *Journal of Physical Chemistry C*, **2014**, 118, 30309-30314 | 3.8 | 77 |
| 16 | Scattering of electron vortex beams on a magnetic crystal: Towards atomic-resolution magnetic measurements. *Physical Review B*, **2014**, 89, | 3.3 | 46 |
| 15 | X-ray absorption spectra: Graphene, h-BN, and their alloy. *Physical Review B*, **2013**, 87, | 3.3 | 5 |
| 14 | Boundaries for efficient use of electron vortex beams to measure magnetic properties. *Physical Review Letters*, **2013**, 111, 105504 | 7.4 | 65 |
| 13 | Sensory-organ-like response determines the magnetism of zigzag-edged honeycomb nanoribbons. *Physical Review B*, **2013**, 87, | 3.3 | 12 |
| 12 | High electric field enhancement near electron-doped semiconductor nanoribbons. *Chemical Physics Letters*, **2012**, 546, 99-105 | 2.5 | |
| 11 | Symmetry-dependent phonon renormalization in monolayer MoS2 transistor. *Physical Review B*, **2012**, 85, | 3.3 | 707 |
| 10 | Polymorphism of two-dimensional boron. *Nano Letters*, **2012**, 12, 2441-5 | 11.5 | 435 |

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| 9 | BN white graphene with "colorful" edges: the energies and morphology. *Nano Letters*, **2011**, 11, 3113-6 | 11.5 | 261 |
| 8 | Quantum Dots and Nanoroads of Graphene Embedded in Hexagonal Boron Nitride. *Journal of Physical Chemistry C*, **2011**, 115, 9889-9893 | 3.8 | 127 |
| 7 | Edge Stabilities of Hexagonal Boron Nitride Nanoribbons: A First-Principles Study. *Journal of Chemical Theory and Computation*, **2011**, 7, 720-4 | 6.4 | 61 |
| 6 | Anisotropy of the Stone-Wales defect and warping of graphene nanoribbons: A first-principles analysis. *Physical Review B*, **2010**, 81, | 3.3 | 48 |
| 5 | Weber-Fechner type nonlinear behavior in zigzag edge graphene nanoribbons. *Physical Review B*, **2010**, 82, | 3.3 | 18 |
| 4 | Edge state magnetism of single layer graphene nanostructures. *Journal of Chemical Physics*, **2008**, 128, 244717 | 3.9 | 88 |
| 3 | Rate of excitation energy transfer between fluorescent dyes and nanoparticles. *Journal of Photochemistry and Photobiology A: Chemistry*, **2007**, 190, 335-341 | 4.7 | 23 |
| 2 | Effect of strain on the thermal conductivity of solids. *Journal of Chemical Physics*, **2006**, 125, 164513 | 3.9 | 110 |
| 1 | Resonance energy transfer from a fluorescent dye to a metal nanoparticle. *Journal of Chemical Physics*, **2006**, 125, 181102 | 3.9 | 82 |