Huabing Shu

List of Publications by Year
in descending order

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46 papers	1,799 citations	304602 22 h-index	265120 42 g-index
46 all docs	46 docs citations	46 times ranked	1975 citing authors

#	Article	IF	Citations
1	Electronic and optical properties of van der Waals heterostructures of g-GaN and transition metal dichalcogenides. Applied Surface Science, 2019, 492, 513-519.	3.1	178
2	Electronic and Optical Properties of Edge-Functionalized Graphene Quantum Dots and the Underlying Mechanism. Journal of Physical Chemistry C, 2015, 119, 24950-24957.	1.5	136
3	Effects of strain and surface modification on stability, electronic and optical properties of GaN monolayer. Applied Surface Science, 2019, 479, 475-481.	3.1	129
4	Anomalous Size Dependence of Optical Properties in Black Phosphorus Quantum Dots. Journal of Physical Chemistry Letters, 2016, 7, 370-375.	2.1	99
5	Electronic and Optical Properties of Graphene Quantum Dots: The Role of Many-Body Effects. Journal of Physical Chemistry C, 2015, 119, 4983-4989.	1.5	79
6	Theoretical Study of GaN/BP van der Waals Nanocomposites with Strain-Enhanced Electronic and Optical Properties for Optoelectronic Applications. ACS Applied Nano Materials, 2019, 2, 6482-6491.	2.4	75
7	Revealing the underlying absorption and emission mechanism of nitrogen doped graphene quantum dots. Nanoscale, 2016, 8, 19376-19382.	2.8	74
8	Efficient Carrier Separation in Graphitic Zinc Oxide and Blue Phosphorus van der Waals Heterostructure. Journal of Physical Chemistry C, 2017, 121, 3648-3653.	1.5	71
9	Electronic structures and optical properties of arsenene and antimonene under strain and an electric field. Journal of Materials Chemistry C, 2018, 6, 83-90.	2.7	68
10	Enhancing electronic and optical properties of monolayer MoSe₂via a MoSe₂/blue phosphorene heterobilayer. Physical Chemistry Chemical Physics, 2019, 21, 15760-15766.	1.3	68
11	Greatly Enhanced Optical Absorption of a Defective MoS₂ Monolayer through Oxygen Passivation. ACS Applied Materials & Interfaces, 2016, 8, 13150-13156.	4.0	59
12	A MoSSe/blue phosphorene vdw heterostructure with energy conversion efficiency of 19.9% for photocatalytic water splitting. Semiconductor Science and Technology, 2020, 35, 125008.	1.0	56
13	The stacking dependent electronic structure and optical properties of bilayer black phosphorus. Physical Chemistry Chemical Physics, 2016, 18, 6085-6091.	1.3	54
14	Adjustable electro-optical properties of novel graphene-like SiC2 via strain engineering. Applied Surface Science, 2021, 559, 149956.	3.1	51
15	Structural stability, tunable electronic and optical properties of two-dimensional WS2 and GaN heterostructure: First-principles calculations. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2020, 261, 114672.	1.7	46
16	Mechanical, electronic and optical properties of a novel B₂P₆ monolayer: ultrahigh carrier mobility and strong optical absorption. Physical Chemistry Chemical Physics, 2021, 23, 24915-24921.	1.3	46
17	Arsenene-Based Heterostructures: Highly Efficient Bifunctional Materials for Photovoltaics and Photocatalytics. ACS Applied Materials & Interfaces, 2017, 9, 42856-42861.	4.0	44
18	Strain effects on stability, electronic and optical properties of two-dimensional C₄X₂ (X = F, Cl, Br). Journal of Materials Chemistry C, 2021, 9, 4505-4513.	2.7	44

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19	Novel electronic and optical properties of ultrathin silicene/arsenene heterostructures and electric field effects. Physical Chemistry Chemical Physics, 2017, 19, 10644-10650.	1.3	42
20	Electronic, photocatalytic, and optical properties of two-dimensional boron pnictides. Journal of Materials Science, 2019, 54, 2278-2288.	1.7	37
21	Probing pristine and defective NiB6 monolayer as promising anode materials for Li/Na/K ion batteries. Applied Surface Science, 2020, 527, 146580.	3.1	33
22	Quasi-particle energies and optical excitations of hydrogenated and fluorinated germanene. Physical Chemistry Chemical Physics, 2015, 17, 4542-4550.	1.3	32
23	Penta-BCN monolayer with high specific capacity and mobility as a compelling anode material for rechargeable batteries. Physical Chemistry Chemical Physics, 2021, 23, 17693-17702.	1.3	24
24	Tensile strain effects on electronic and optical properties of functionalized diamondene-like Si4. Journal of Materials Science, 2021, 56, 5684-5696.	1.7	22
25	Photoabsorption Tolerance of Intrinsic Point Defects and Oxidation in Black Phosphorus Quantum Dots. Journal of Physical Chemistry Letters, 2017, 8, 161-166.	2.1	21
26	Gas adsorption on the pristine monolayer GeP3: A first-principles calculation. Vacuum, 2019, 164, 181-185.	1.6	19
27	Two-Dimensional Phosphorene, Arsenene, and Antimonene Quantum Dots: Anomalous Size-Dependent Behaviors of Optical Properties. Journal of Physical Chemistry C, 2019, 123, 25775-25780.	1.5	18
28	First-Principles Study of Electronic and Optical Properties of Two-Dimensional WSSe/BSe van der Waals Heterostructure with High Solar-to-Hydrogen Efficiency. Catalysts, 2021, 11, 991.	1.6	18
29	A type-II blue phosphorus/MoSe₂ van der Waals heterostructure: improved electronic and optical properties via vertical electric field. Materials Advances, 2020, 1, 1849-1857.	2.6	16
30	Tunable electronic and optical properties of monolayer silicane under tensile strain: A many-body study. Journal of Chemical Physics, 2014, 141, 064707.	1.2	14
31	Electronic and optical properties of phosphorene-like arsenic phosphorus: a many-body study. Materials Research Express, 2018, 5, 036302.	0.8	13
32	Novel Janus diamane C₄FCl: a stable and moderate bandgap semiconductor with a huge excitonic effect. Physical Chemistry Chemical Physics, 2021, 23, 18951-18957.	1.3	13
33	Modelling of monolayer penta-PtN2 as an anode material for Li/Na-ion storage. Materials Chemistry and Physics, 2021, 262, 124312.	2.0	12
34	Thickness-Dependent Electronic and Optical Properties of Bernal-Stacked Few-Layer Germanane. Journal of Physical Chemistry C, 2015, 119, 15526-15531.	1.5	11
35	Performance effects of doping engineering on graphene-like C3N as an anode material for alkali metal ion batteries. Materials Science in Semiconductor Processing, 2020, 109, 104946.	1.9	11
36	Highly-anisotropic carrier transport and optical properties of two-dimensional titanium trisulfide. Journal of Materials Science, 2022, 57, 3486-3496.	1.7	11

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37	Metallic Penta-BN2 monolayer: A novel platform for non-lithium-ion batteries with high capacity and splendid cyclicity. Materials Science in Semiconductor Processing, 2022, 149, 106849.	1.9	9
38	Metallic penta-Graphene/penta-BN2 heterostructure with high specific capacity: A novel application platform for Li/Na-ion batteries. Journal of Alloys and Compounds, 2022, 901, 163538.	2.8	8
39	Electronic, transport, and optical properties of atomically thin silicon phosphide: first-principles calculations. Materials Research Express, 2019, 6, 026428.	0.8	7
40	Multidimensional B4N materials as novel anode materials for lithium ion batteries. Physical Chemistry Chemical Physics, 2020, 22, 19913-19922.	1.3	7
41	Theoretical probing the anchoring properties of BNP2 monolayer for lithium-sulfur batteries. Applied Surface Science, 2022, 594, 153393.	3.1	7
42	Rational design of intrinsic and defective BGe monolayer as the anode material for Li-ion batteries. Journal of Solid State Chemistry, 2022, 314, 123418.	1.4	6
43	Promising application of a SiC₂/C₃B heterostructure as a new platform for lithium-ion batteries. Physical Chemistry Chemical Physics, 2022, 24, 6926-6934.	1.3	5
44	Novel C₃B/SiC₂ Heterobilayer: Electroâ€Optical Properties Induced by Different Interlayer Coupling. Advanced Theory and Simulations, 2021, 4, .	1.3	3
45	Structural, electronic, and optical properties of C3B and C3B0Â·5N0.5 monolayers: A many-body study. Physica E: Low-Dimensional Systems and Nanostructures, 2022, 138, 115119.	1.3	2
46	Extensive theoretical studies on the low-lying electronic states of BBr+. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2016, 159, 60-67.	2.0	1