Polarity-Reversed Robust Carrier Mobility in Monolaye

Journal of the American Chemical Society

136, 6269-6275

DOI: 10.1021/ja4109787

Citation Report

#	Article	IF	Citations
4	Fabrication of poly(methyl methacrylate)-MoS2/graphene heterostructure for memory device application. Journal of Applied Physics, 2014, 116, .	1.1	44
5	Reducing Band Gap and Enhancing Carrier Mobility of Boron Nitride Nanoribbons by Conjugated Ï€ Edge States. Journal of Physical Chemistry C, 2014, 118, 25051-25056.	1.5	25
6	Phonon thermal conductivity of monolayer MoS2: A comparison with single layer graphene. Applied Physics Letters, 2014, 105, .	1.5	97
7	MoS2 nanoribbons as promising thermoelectric materials. Applied Physics Letters, 2014, 105, .	1.5	113
8	Electronic Properties of Edge-Hydrogenated Phosphorene Nanoribbons: A First-Principles Study. Journal of Physical Chemistry C, 2014, 118, 22368-22372.	1.5	117
9	Edge-Specific Au/Ag Functionalization-Induced Conductive Paths in Armchair MoS₂ Nanoribbons. Chemistry of Materials, 2014, 26, 5625-5631.	3.2	26
10	Simulation Evidence of Hexagonalâ€toâ€Tetragonal ZnSe Structure Transition: A Monolayer Material with a Wideâ€Range Tunable Direct Bandgap. Advanced Science, 2015, 2, 1500290.	5.6	44
11	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>TiS</mml:mi><mml:mn>3</mml:mn></mml:msub></m Width-independent band gap and strain-tunable electronic properties. Physical Review B, 2015, 92, .	3.8	58
12	First-Principles Determination of Ultralow Thermal Conductivity of monolayer WSe2. Scientific Reports, 2015, 5, 15070.	1.6	78
13	Robust Direct Bandgap Characteristics of One- and Two-Dimensional ReS2. Scientific Reports, 2015, 5, 13783.	1.6	68
14	Thermal management in MoS2 based integrated device using near-field radiation. Applied Physics Letters, 2015, 107, .	1.5	39
15	Metallic and ferromagnetic MoS2 nanobelts with vertically aligned edges. Nano Research, 2015, 8, 2946-2953.	5.8	30
17	Degenerate Effect on the Mobility of Holes in Graphane: A Study Based on Density Functional Theory Coupled with Deformation Potential Theory. ChemPhysChem, 2015, 16, 3015-3020.	1.0	5
18	Titanium Trisulfide Monolayer: Theoretical Prediction of a New Directâ€Gap Semiconductor with High and Anisotropic Carrier Mobility. Angewandte Chemie - International Edition, 2015, 54, 7572-7576.	7.2	239
19	Optical Absorption of Armchair MoS₂ Nanoribbons: Enhanced Correlation Effects in the Reduced Dimension. Journal of Physical Chemistry C, 2015, 119, 13901-13906.	1.5	20
20	Electronic Properties of Phosphorene/Graphene and Phosphorene/Hexagonal Boron Nitride Heterostructures. Journal of Physical Chemistry C, 2015, 119, 13929-13936.	1.5	295
21	Remote p-type Doping in GaSb/InAs Core-shell Nanowires. Scientific Reports, 2015, 5, 10813.	1.6	11
22	Tuning magnetic anistropy by charge injection and strain in Fe/MoS₂bilayer heterostructures. Journal Physics D: Applied Physics, 2015, 48, 485001.	1.3	13

#	Article	IF	Citations
23	Giant Phononic Anisotropy and Unusual Anharmonicity of Phosphorene: Interlayer Coupling and Strain Engineering. Advanced Functional Materials, 2015, 25, 2230-2236.	7.8	198
24	Carrier mobility of MoS₂nanoribbons with edge chemical modification. Physical Chemistry Chemical Physics, 2015, 17, 6865-6873.	1.3	47
25	Energetics, Charge Transfer, and Magnetism of Small Molecules Physisorbed on Phosphorene. Journal of Physical Chemistry C, 2015, 119, 3102-3110.	1.5	347
26	Theoretical investigation on electronic properties and carrier mobilities of armchair graphyne nanoribbons. Chemical Physics, 2015, 457, 114-121.	0.9	11
27	Unexpected Magnetic Semiconductor Behavior in Zigzag Phosphorene Nanoribbons Driven by Half-Filled One Dimensional Band. Scientific Reports, 2015, 5, 8921.	1.6	88
28	Effects of Molecular Configuration on Charge Diffusion Kinetics within Hole-Transporting Materials for Perovskites Solar Cells. Journal of Physical Chemistry C, 2015, 119, 8584-8590.	1.5	40
29	Strain effects on thermoelectric properties of two-dimensional materials. Mechanics of Materials, 2015, 91, 382-398.	1.7	137
30	First-Principles Prediction of the Charge Mobility in Black Phosphorus Semiconductor Nanoribbons. Journal of Physical Chemistry Letters, 2015, 6, 4141-4147.	2.1	51
31	Strain engineering on the thermal conductivity and heat flux of thermoelectric Bi2Te3 nanofilm. Nano Energy, 2015, 17, 104-110.	8.2	40
32	Electronic and photonic behavior of (Fe or Co)-C codoped TiO2 mediated by H ions: First principles calculations. Chemical Physics Letters, 2015, 638, 161-167.	1.2	4
33	High Carrier Mobility and Pronounced Light Absorption in Methyl-Terminated Germanene: Insights from First-Principles Computations. Journal of Physical Chemistry Letters, 2015, 6, 4252-4258.	2.1	47
34	Not your familiar two dimensional transition metal disulfide: structural and electronic properties of the PdS₂monolayer. Journal of Materials Chemistry C, 2015, 3, 9603-9608.	2.7	135
35	Modulation of Electronic Structure of Armchair MoS₂ Nanoribbon. Journal of Physical Chemistry C, 2015, 119, 22164-22171.	1.5	39
36	Modulation of Electronic Structure of Armchair MoS2Nanoribbon. Journal of Physical Chemistry A, 2015, , 150902124434000.	1.1	1
37	High and anisotropic carrier mobility in experimentally possible Ti₂CO₂(MXene) monolayers and nanoribbons. Nanoscale, 2015, 7, 16020-16025.	2.8	225
38	Electronic and transport properties of phosphorene nanoribbons. Physical Review B, 2015, 92, .	1.1	145
39	Band gap engineering of graphene with inter-layer embedded BN: From first principles calculations. Diamond and Related Materials, 2015, 54, 103-108.	1.8	9
40	Phase transition, effective mass and carrier mobility of MoS2 monolayer under tensile strain. Applied Surface Science, 2015, 325, 27-32.	3.1	132

#	Article	IF	Citations
41	Layer-dependent Band Alignment and Work Function of Few-Layer Phosphorene. Scientific Reports, 2014, 4, 6677.	1.6	731
42	Revealing the Origins of 3D Anisotropic Thermal Conductivities of Black Phosphorus. Advanced Electronic Materials, 2016, 2, 1600040.	2.6	85
43	Magnetic properties in AlN nanosheet doped with alkali metals: A first-principles study. Physica Status Solidi (B): Basic Research, 2016, 253, 1816-1823.	0.7	12
44	Thermal conduction across the one-dimensional interface between a MoS2 monolayer and metal electrode. Nano Research, 2016, 9, 2372-2383.	5.8	35
45	Acute mechano-electronic responses in twisted phosphorene nanoribbons. Nanoscale, 2016, 8, 14778-14784.	2.8	8
46	Tinselenidene: a Two-dimensional Auxetic Material with Ultralow Lattice Thermal Conductivity and Ultrahigh Hole Mobility. Scientific Reports, 2016, 6, 19830.	1.6	155
47	Mobility anisotropy of two-dimensional semiconductors. Physical Review B, 2016, 94, .	1.1	198
48	Electronic structures and edge effects of Ga 2 S 2 nanoribbons. Chinese Physics B, 2016, 25, 107101.	0.7	1
49	Decoupled electron and phonon transports in hexagonal boron nitride-silicene bilayer heterostructure. Journal of Applied Physics, 2016, 119, .	1.1	29
50	Mn₂C monolayer: a 2D antiferromagnetic metal with high NÃ©el temperature and large spinâ€“orbit coupling. Nanoscale, 2016, 8, 12939-12945.	2.8	131
51	Width and defect effects on the electronic transport of zigzag MoS₂nanoribbons. Journal Physics D: Applied Physics, 2016, 49, 245304.	1.3	27
52	COMPARISON OF ELECTRONIC AND OPTICAL PROPERTIES OF GaN MONOLAYER AND BULK STRUCTURE: A FIRST PRINCIPLE STUDY. Surface Review and Letters, 2016, 23, 1650026.	0.5	5
53	Two-dimensional stanane: strain-tunable electronic structure, high carrier mobility, and pronounced light absorption. Physical Chemistry Chemical Physics, 2016, 18, 14638-14643.	1.3	33
54	Application of ZnTiO3 in quantum-dot-sensitized solar cells and numerical simulations using first-principles theory. Journal of Alloys and Compounds, 2016, 681, 88-95.	2.8	34
55	Tuning the electronic and optical properties of graphane/silicane and fhBN/silicane nanosheets via interfacial dihydrogen bonding and electrical field control. Journal of Materials Chemistry C, 2016, 4, 8962-8972.	2.7	16
56	A promising two-dimensional solar cell donor: Black arsenicâ€“phosphorus monolayer with 1.54 eV direct bandgap and mobility exceeding 14,000 cm2Vâ^'1sâ^'1. Nano Energy, 2016, 28, 433-439.	8.2	212
57	Multifunctional heterostructures constructed using MoS₂ and WS₂ nanoribbons. Physical Chemistry Chemical Physics, 2016, 18, 27468-27475.	1.3	8
58	Tunable electronic structures in MPX₃ (M = Zn, Cd; X = S, Se) monolayers by strain engineering. RSC Advances, 2016, 6, 89901-89906.	1.7	19

#	Article	IF	Citations
59	A graphene-like Mg₃N₂monolayer: high stability, desirable direct band gap and promising carrier mobility. Physical Chemistry Chemical Physics, 2016, 18, 30379-30384.	1.3	29
60	First-Principles Prediction of the Electronic Structure and Carrier Mobility in Hexagonal Boron Phosphide Sheet and Nanoribbons. Journal of Physical Chemistry C, 2016, 120, 25037-25042.	1.5	92
61	MnPSe₃ Monolayer: A Promising 2D Visibleâ€Light Photohydrolytic Catalyst with High Carrier Mobility. Advanced Science, 2016, 3, 1600062.	5.6	291
62	Phosphorene: what can we know from computations?. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2016, 6, 5-19.	6.2	128
63	A promising two-dimensional channel material: monolayer antimonide phosphorus. Science China Materials, 2016, 59, 648-656.	3.5	28
64	Lowâ€Dimensional Transition Metal Dichalcogenide Nanostructures Based Sensors. Advanced Functional Materials, 2016, 26, 7034-7056.	7.8	208
65	Direct Fabrication of Functional Ultrathin Single-Crystal Nanowires from Quasi-One-Dimensional van der Waals Crystals. Nano Letters, 2016, 16, 6188-6195.	4.5	37
66	Ab initio study of carrier mobility of few-layer InSe. Applied Physics Express, 2016, 9, 035203.	1.1	79
67	Germanene: a new electronic gas sensing material. RSC Advances, 2016, 6, 102264-102271.	1.7	68
68	The hydrogen-induced structural stability and promising electronic properties of molybdenum and tungsten dinitride nanosheets: a first-principles study. Journal of Materials Chemistry C, 2016, 4, 7485-7493.	2.7	35
69	Tunable electronic and dielectric properties of Î²-phosphorene nanoflakes for optoelectronic applications. RSC Advances, 2016, 6, 101835-101845.	1.7	5
70	Modulating Carrier Density and Transport Properties of MoS₂ by Organic Molecular Doping and Defect Engineering. Chemistry of Materials, 2016, 28, 8611-8621.	3.2	105
71	Theoretical perspective of energy harvesting properties of atomically thin BiI₃. Journal of Materials Chemistry A, 2016, 4, 19086-19094.	5.2	47
72	Titanium trisulfide (TiS3): a 2D semiconductor with quasi-1D optical and electronic properties. Scientific Reports, 2016, 6, 22214.	1.6	107
73	Photonics and optoelectronics of two-dimensional materials beyond graphene. Nanotechnology, 2016, 27, 462001.	1.3	259
74	Performance of arsenene and antimonene double-gate MOSFETs from first principles. Nature Communications, 2016, 7, 12585.	5.8	278
75	Large Area Fabrication of Semiconducting Phosphorene by Langmuir-Blodgett Assembly. Scientific Reports, 2016, 6, 34095.	1.6	67
76	Covalent Functionalization of Black Phosphorus from First-Principles. Journal of Physical Chemistry Letters, 2016, 7, 4540-4546.	2.1	71

#	Article	IF	Citations
77	Monolayer Molybdenum Disulfide Nanoribbons with High Optical Anisotropy. Advanced Optical Materials, 2016, 4, 756-762.	3.6	74
78	Tuning the electronic properties and work functions of graphane/fully hydrogenated h-BN heterobilayers via heteronuclear dihydrogen bonding and electric field control. Physical Chemistry Chemical Physics, 2016, 18, 16386-16395.	1.3	41
79	LaPtSb: a half-Heusler compound with high thermoelectric performance. Physical Chemistry Chemical Physics, 2016, 18, 17912-17916.	1.3	75
80	A Honeycomb BeN₂ Sheet with a Desirable Direct Band Gap and High Carrier Mobility. Journal of Physical Chemistry Letters, 2016, 7, 2664-2670.	2.1	100
81	Strain enhancement of acoustic phonon limited mobility in monolayer TiS₃. Physical Chemistry Chemical Physics, 2016, 18, 14434-14441.	1.3	27
82	Two-dimensional BX (X = P, As, Sb) semiconductors with mobilities approaching graphene. Nanoscale, 2016, 8, 13407-13413.	2.8	122
83	Tuning carrier mobility of phosphorene nanoribbons by edge passivation and strain. Physics Letters, Section A: General, Atomic and Solid State Physics, 2016, 380, 614-620.	0.9	26
84	Substitutionally doped phosphorene: electronic properties and gas sensing. Nanotechnology, 2016, 27, 065708.	1.3	130
85	Tunable, Strain-Controlled Nanoporous MoS₂ Filter for Water Desalination. ACS Nano, 2016, 10, 1829-1835.	7.3	212
86	Germanium monosulfide monolayer: a novel two-dimensional semiconductor with a high carrier mobility. Journal of Materials Chemistry C, 2016, 4, 2155-2159.	2.7	212
87	Graphene-based materials for supercapacitor electrodes â€“ A review. Journal of Materiomics, 2016, 2, 37-54.	2.8	620
88	Al₂C Monolayer Sheet and Nanoribbons with Unique Direction-Dependent Acoustic-Phonon-Limited Carrier Mobility and Carrier Polarity. Journal of Physical Chemistry Letters, 2016, 7, 302-307.	2.1	30
89	A CO monolayer: first-principles design of a new direct band-gap semiconductor with excellent mechanical properties. Nanoscale, 2017, 9, 5445-5450.	2.8	33
90	Electronic characteristics of p-type transparent SnO monolayer with high carrier mobility. Applied Surface Science, 2017, 401, 114-119.	3.1	36
91	Titanium Trisulfide Monolayer as a Potential Thermoelectric Material: A First-Principles-Based Boltzmann Transport Study. ACS Applied Materials & Interfaces, 2017, 9, 2509-2515.	4.0	99
92	Two-dimensional WS₂nanoribbon deposition by conversion of pre-patterned amorphous silicon. Nanotechnology, 2017, 28, 04LT01.	1.3	18
93	Tetragonal-structured anisotropic 2D metal nitride monolayers and their halides with versatile promises in energy storage and conversion. Journal of Materials Chemistry A, 2017, 5, 2870-2875.	5.2	42
94	Excellent Thermoelectric Properties in monolayer WSe2 Nanoribbons due to Ultralow Phonon Thermal Conductivity. Scientific Reports, 2017, 7, 41418.	1.6	36

#	Article	IF	Citations
95	GeP₃: A Small Indirect Band Gap 2D Crystal with High Carrier Mobility and Strong Interlayer Quantum Confinement. Nano Letters, 2017, 17, 1833-1838.	4.5	338
96	The ideal strength of two-dimensional stanene may reach or exceed the Griffith strength estimate. Nanoscale, 2017, 9, 7055-7062.	2.8	29
97	Width-dependent structural stability and magnetic properties ofÂmonolayer zigzag MoS₂ nanoribbons. Modern Physics Letters B, 2017, 31, 1750017.	1.0	12
98	Computational study of a new resonant tunneling diode based on an $$hbox {MoS}_{2}$$ MoS 2 nanoribbon with sulfur line vacancies. Journal of Computational Electronics, 2017, 16, 253-261.	1.3	1
99	Tetra-silicene: A Semiconducting Allotrope of Silicene with Negative Poissonâ€™s Ratios. Journal of Physical Chemistry C, 2017, 121, 9627-9633.	1.5	57
100	Antimonene Oxides: Emerging Tunable Direct Bandgap Semiconductor and Novel Topological Insulator. Nano Letters, 2017, 17, 3434-3440.	4.5	250
101	Fabrication of MoSe2 nanoribbons via an unusual morphological phase transition. Nature Communications, 2017, 8, 15135.	5.8	70
102	Compressive strain induced enhancement in thermoelectric-power-factor in monolayer MoS₂nanosheet. Journal of Physics Condensed Matter, 2017, 29, 225501.	0.7	38
103	Effects of edge reconstruction on the common groups terminated zigzag phosphorene nanoribbon. Journal Physics D: Applied Physics, 2017, 50, 195301.	1.3	5
104	Exotic thermoelectric behavior in nitrogenated holey graphene. RSC Advances, 2017, 7, 25803-25810.	1.7	25
105	In-plane heterostructures of Sb/Bi with high carrier mobility. Nanotechnology, 2017, 28, 255201.	1.3	14
106	The Ultrafast Laser Pump-Probe Technique for Thermal Characterization of Materials With Micro/Nanostructures. Nanoscale and Microscale Thermophysical Engineering, 2017, 21, 177-198.	1.4	69
107	Thermoelectric and phonon transport properties of two-dimensional IVâ€“VI compounds. Scientific Reports, 2017, 7, 506.	1.6	224
108	Edge eigen-stress and eigen-displacement of armchair molybdenum disulfide nanoribbons. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 1568-1572.	0.9	4
109	Prediction of a new BeC monolayer with perfectly planar tetracoordinate carbons. Nanoscale, 2017, 9, 5854-5858.	2.8	56
110	Strain-Induced Optimization of Nanoelectromechanical Energy Harvesting and Nanopiezotronic Response in a MoS₂ Monolayer Nanosheet. Journal of Physical Chemistry C, 2017, 121, 9181-9190.	1.5	50
111	Topological insulating states in 2D transition metal dichalcogenides induced by defects and strain. Nanoscale, 2017, 9, 562-569.	2.8	28
112	High-Mobility Transport Anisotropy in Few-Layer MoO₃ and Its Origin. ACS Applied Materials & Interfaces, 2017, 9, 1702-1709.	4.0	51

#	Article	IF	Citations
113	Electronic structures and transport properties of a MoS₂â€“NbS₂ nanoribbon lateral heterostructure. Physical Chemistry Chemical Physics, 2017, 19, 1303-1310.	1.3	30
114	Stability and carrier mobility of organic-inorganic hybrid perovskite CH3NH3PbI3 in two-dimensional limit. Journal of Chemical Physics, 2017, 147, 164703.	1.2	16
115	Evolution of hydrogen by few-layered black phosphorus under visible illumination. Journal of Materials Chemistry A, 2017, 5, 24874-24879.	5.2	45
116	Strain and pH facilitated artificial photosynthesis in monolayer MoS₂ nanosheets. Journal of Materials Chemistry A, 2017, 5, 22265-22276.	5.2	40
117	Complete Separation of Carriers in the GeS/SnS Lateral Heterostructure by Uniaxial Tensile Strain. ACS Applied Materials & Interfaces, 2017, 9, 40969-40977.	4.0	34
118	Anisotropic ultrahigh hole mobility in two-dimensional penta-SiC₂ by strain-engineering: electronic structure and chemical bonding analysis. RSC Advances, 2017, 7, 45705-45713.	1.7	28
119	Charge injection driven switching between ferromagnetism and antiferromagnetism in transitional metal-doped MoS2 materials. Journal Physics D: Applied Physics, 2017, 50, 465006.	1.3	4
120	Hydrogenation Induced Carrier Mobility Polarity Reversal in Monolayer AlN. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1700260.	1.2	6
121	Intrinsic Charge Transport in Stanene: Roles of Bucklings and Electronâ€“Phonon Couplings. Advanced Electronic Materials, 2017, 3, 1700143.	2.6	47
122	First-principles study of SO2 sensors based on phosphorene and its isoelectronic counterparts: GeS, GeSe, SnS, SnSe. Chemical Physics Letters, 2017, 686, 83-87.	1.2	51
123	Magneto-electronic properties and carrier mobility in phagraphene nanoribbons: A theoretical prediction. Carbon, 2017, 124, 228-237.	5.4	28
124	Enhancement of hole mobility in InSe monolayer via an InSe and black phosphorus heterostructure. Nanoscale, 2017, 9, 14682-14689.	2.8	92
125	Electronic structure, carrier mobility and device properties for mixed-edge phagraphene nanoribbon by hetero-atom doping. Organic Electronics, 2017, 51, 277-286.	1.4	30
126	Giant anisotropic photogalvanic effect in a flexible AsSb monolayer with ultrahigh carrier mobility. Physical Chemistry Chemical Physics, 2017, 19, 27233-27239.	1.3	33
127	Thermoelectric properties of DO₃ V₃Al using first principles calculations. RSC Advances, 2017, 7, 44647-44654.	1.7	7
128	Anisotropic carrier mobility in buckled two-dimensional GaN. Physical Chemistry Chemical Physics, 2017, 19, 23492-23496.	1.3	24
129	Puckered Arsenene: A Promising Room-Temperature Thermoelectric Material from First-Principles Prediction. Journal of Physical Chemistry C, 2017, 121, 19080-19086.	1.5	56
130	Ultrathin Layers of PdPX (X=S, Se): Two Dimensional Semiconductors for Photocatalytic Water Splitting. Chemistry - A European Journal, 2017, 23, 13612-13616.	1.7	66

#	Article	IF	Citations
131	Effect of Ti doping on mechanical and optical properties of super-hard I2d-CN2 materials. RSC Advances, 2017, 7, 37943-37951.	1.7	3
132	Thermoelectric properties of two-dimensional transition metal dichalcogenides. Journal of Materials Chemistry C, 2017, 5, 7684-7698.	2.7	204
133	Ultra low lattice thermal conductivity and high carrier mobility of monolayer SnS₂and SnSe₂: a first principles study. Physical Chemistry Chemical Physics, 2017, 19, 20677-20683.	1.3	166
134	Partially planar BP₃with high electron mobility as a phosphorene analog. Journal of Materials Chemistry C, 2017, 5, 11267-11274.	2.7	37
135	GeAs₂: A IVâ€“V Group Two-Dimensional Semiconductor with Ultralow Thermal Conductivity and High Thermoelectric Efficiency. Chemistry of Materials, 2017, 29, 6261-6268.	3.2	80
136	Layer-controlled band alignment, work function and optical properties of few-layer GeSe. Physica B: Condensed Matter, 2017, 519, 90-94.	1.3	27
137	Electronic and optical properties of the monolayer group-IV monochalcogenides <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>M</mml:mi><mml:mi>X</mml:mi></mml:mrow></mml:m		

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149	Intrinsic electronic transport and thermoelectric power factor in n-type doped monolayer MoS₂. New Journal of Physics, 2018, 20, 043009.	1.2	23
150	Photoluminescence Quenching in Selfâ€Assembled CsPbBr₃ Quantum Dots on Fewâ€Layer Black Phosphorus Sheets. Angewandte Chemie - International Edition, 2018, 57, 7682-7686.	7.2	54
151	Ultrathin tellurium dioxide: emerging direct bandgap semiconductor with high-mobility transport anisotropy. Nanoscale, 2018, 10, 8397-8403.	2.8	66
152	A comprehensive study on carrier mobility and artificial photosynthetic properties in group VI B transition metal dichalcogenide monolayers. Journal of Materials Chemistry A, 2018, 6, 8693-8704.	5.2	204
153	Single-Crystal Antimonene Films Prepared by Molecular Beam Epitaxy: Selective Growth and Contact Resistance Reduction of the 2D Material Heterostructure. ACS Applied Materials & Interfaces, 2018, 10, 15058-15064.	4.0	43
154	Layer-dependent transport and optoelectronic property in two-dimensional perovskite: (PEA)₂Pbl₄. Nanoscale, 2018, 10, 8677-8688.	2.8	169
155	Universal Scaling of Intrinsic Resistivity in Twoâ€Dimensional Metallic Borophene. Angewandte Chemie, 2018, 130, 4675-4679.	1.6	4
156	Surface Terminationâ€"A Key Factor to Influence Electronic and Optical Properties of CsSnI3. Journal of Physical Chemistry C, 2018, 122, 9275-9282.	1.5	50
157	Influence of Mo-vacancy concentration on the structural, electronic and optical properties of monolayer MoS2: A first-principles study. Materials Chemistry and Physics, 2018, 209, 146-151.	2.0	31
158	Investigation on adsorption properties of CO and NO gas molecules on aluminene nanosheet: A density functional application. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2018, 229, 193-200.	1.7	54
159	Prediction of a <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>BeP</mml:mi><mml:mn>2</mml:mn></mml:msub></mm monolayer with a compression-induced Dirac semimetal state. Physical Review B, 2018, 97, .	1.1	11
160	Monolayer PdSe2: A promising two-dimensional thermoelectric material. Scientific Reports, 2018, 8, 2764.	1.6	133
161	A two-dimensional CaSi monolayer with quasi-planar pentacoordinate silicon. Nanoscale Horizons, 2018, 3, 327-334.	4.1	51
162	The germanium telluride monolayer: a two dimensional semiconductor with high carrier mobility for photocatalytic water splitting. Journal of Materials Chemistry A, 2018, 6, 4119-4125.	5.2	87
163	Porous silaphosphorene, silaarsenene and silaantimonene: a sweet marriage of Si and P/As/Sb. Journal of Materials Chemistry A, 2018, 6, 3738-3746.	5.2	14
164	Largeâ€Scale Fabrication of MoS₂ Ribbons and Their Lightâ€Induced Electronic/Thermal Properties: Dichotomies in the Structural and Defect Engineering. Advanced Functional Materials, 2018, 28, 1704863.	7.8	25
165	First principles study of optical properties of molybdenum disulfide: From bulk to monolayer. Superlattices and Microstructures, 2018, 115, 10-18.	1.4	35
166	Recent progress in 2D group-VA semiconductors: from theory to experiment. Chemical Society Reviews, 2018, 47, 982-1021.	18.7	697

#	Article	IF	Citations
167	Oxygen-induced degradation of the electronic properties of thin-layer InSe. Physical Chemistry Chemical Physics, 2018, 20, 2238-2250.	1.3	23
168	AgKTe: An intrinsic semiconductor material with high thermoelectric properties at room temperature. Journal of Alloys and Compounds, 2018, 739, 35-40.	2.8	14
169	Thermoelectric and topological properties of half-Heusler compounds ZrIrX(As, Sb, Bi). Physics Letters, Section A: General, Atomic and Solid State Physics, 2018, 382, 673-678.	0.9	18
170	The functionalization effect of benzoic acid and anisole on the photocatalytic activity of monolayer MoS2. Applied Surface Science, 2018, 437, 314-320.	3.1	13
171	MoS₂/ZnO van der Waals heterostructure as a high-efficiency water splitting photocatalyst: a first-principles study. Physical Chemistry Chemical Physics, 2018, 20, 13394-13399.	1.3	292
172	Photoluminescence Quenching in Selfâ€Assembled CsPbBr₃ Quantum Dots on Fewâ€Layer Black Phosphorus Sheets. Angewandte Chemie, 2018, 130, 7808-7812.	1.6	22
173	Plasmon-Mediated Electron Injection from Au Nanorods into MoS2: Traditional versus Photoexcitation Mechanism. CheM, 2018, 4, 1112-1127.	5.8	71
174	Thermal properties of transition-metal dichalcogenide. Chinese Physics B, 2018, 27, 034402.	0.7	17
175	Thermal Stability and Flexibility of Hydrogen Terminated Phosphorene Nanoflakes. Journal of Physical Chemistry C, 2018, 122, 8535-8542.	1.5	5
176	A Numerical Analysis of Electronic and Optical Properties of the Zigzag MoS₂ Nanoribbon Under Uniaxial Strain. IEEE Transactions on Electron Devices, 2018, 65, 1988-1994.	1.6	7
177	Computational design and property predictions for two-dimensional nanostructures. Materials Today, 2018, 21, 391-418.	8.3	78
178	Al₃ (A = As, Sb) Single Layers and Their vdW Heterostructure for Photocatalysis and Solar Cell Applications. Journal of Physical Chemistry C, 2018, 122, 7656-7663.	1.5	34
179	Pd₂Se₃monolayer: a novel two-dimensional material with excellent electronic, transport, and optical properties. Journal of Materials Chemistry C, 2018, 6, 4494-4500.	2.7	36
180	Structural and electronic properties of PdS 2 nanoribbons. Journal of Magnetism and Magnetic Materials, 2018, 458, 310-316.	1.0	10
181	Two-dimensional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>n</mml:mi></mml:math> -InSe/ <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>p</mml:mi></mml:math> -GeSe(SnS) van der Waals heterojunctions: High carrier mobility and broadband performance. Physical Review B, 2018, 97, .	1.1	113
182	Theoretical design of sandwich two-dimensional structures for photocatalysts and nano-optoelectronic devices. Journal of Materials Science, 2018, 53, 8274-8284.	1.7	7
183	2D carbon sheets with negative Gaussian curvature assembled from pentagonal carbon nanoflakes. Physical Chemistry Chemical Physics, 2018, 20, 9123-9129.	1.3	6
184	Electric field improved the sensitivity of CO on substitutionally doped antimonene. Applied Surface Science, 2018, 427, 388-395.	3.1	77

#	Article	IF	Citations
185	Tuning the Electronic Properties, Effective Mass and Carrier Mobility of MoS2 Monolayer by Strain Engineering: First-Principle Calculations. Journal of Electronic Materials, 2018, 47, 730-736.	1.0	66
186	Two-dimensional silicon crystals with sizable band gaps and ultrahigh carrier mobility. Nanoscale, 2018, 10, 1265-1271.	2.8	28
187	Stabilizing benzene-like planar N₆rings to form a single atomic honeycomb BeN₃sheet with high carrier mobility. Nanoscale, 2018, 10, 949-957.	2.8	18
188	The role of Andersonâ€™s rule in determining electronic, optical and transport properties of transition metal dichalcogenide heterostructures. Physical Chemistry Chemical Physics, 2018, 20, 30351-30364.	1.3	47
189	Promising photovoltaic and solid-state-lighting materials: two-dimensional Ruddlesdenâ€“Popper type lead-free halide double perovskites Cs_{n+1}In_{n/2}Sb_{n/2}I_{3n+1}(n= 3) and Cs_{n+1}In_{n/2}Sb_{n/2}Cl_{3n+1}/Cs_{m+1}Cu_{m/2}Bi_{m/2}	2.7	19
190	Hexagonal M₂C₃ (M = As, Sb, and Bi) monolayers: new functional materials with desirable band gaps and ultrahigh carrier mobility. Journal of Materials Chemistry C, 2018, 6, 12689-12697.	2.7	42
191	Two-dimensional few-layer group-III metal monochalcogenides as effective photocatalysts for overall water splitting in the visible range. Journal of Materials Chemistry A, 2018, 6, 22768-22777.	5.2	90
192	Emergence of high piezoelectricity along with robust electron mobility in Janus structures in semiconducting Group IVB dichalcogenide monolayers. Journal of Materials Chemistry A, 2018, 6, 24885-24898.	5.2	127
193	Insights into High Conductivity of the Two-Dimensional Iodine-Oxidized sp²-c-COF. ACS Applied Materials & Interfaces, 2018, 10, 43595-43602.	4.0	37
194	Exploring a Novel Atomic Layer with Extremely Low Lattice Thermal Conductivity: ZnPSe₃ and Its Thermoelectrics. Journal of Physical Chemistry C, 2018, 122, 27917-27924.	1.5	18
195	Interlayer-Decoupled Sc-Based Mxene with High Carrier Mobility and Strong Light-Harvesting Ability. Journal of Physical Chemistry Letters, 2018, 9, 6915-6920.	2.1	49
196	Understanding the behavior of electronic and phonon transports in germanium based two dimensional chalcogenides. Journal of Applied Physics, 2018, 124, .	1.1	22
197	Multifunctional two-dimensional semiconductors SnP₃: universal mechanism of layer-dependent electronic phase transition. Journal of Physics Condensed Matter, 2018, 30, 475702.	0.7	12
198	Thermoelectric properties of four typical silicon allotropes. Modelling and Simulation in Materials Science and Engineering, 2018, 26, 085006.	0.8	7
199	Theoretical investigation on thermoelectric properties of spin gapless semiconductor $$hbox {Cr}_{2}hbox {ZnSi}$$ Cr 2 ZnSi. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	1.1	8
200	High Thermoelectric Performance Originating from the Grooved Bands in the ZrSe₃ Monolayer. ACS Applied Materials & Interfaces, 2018, 10, 37031-37037.	4.0	29
201	What Limits the Intrinsic Mobility of Electrons and Holes in Two Dimensional Metal Dichalcogenides?. Journal of the American Chemical Society, 2018, 140, 17895-17900.	6.6	121
202	Simple Parallel-Plate Capacitors to Highâ€“Energy Density Future Supercapacitors. , 2018, , 247-301.		7

#	Article	IF	Citations
203	Novel Two-Dimensional Semiconductor SnP₃ with High Carrier Mobility, Good Light Absorption, and Strong Interlayer Quantum Confinement. Journal of Physical Chemistry C, 2018, 122, 24359-24367.	1.5	42
204	Visible-Light Driven Overall Conversion of CO₂ and H₂O to CH₄ and O₂ on 3D-SiC@2D-MoS₂ Heterostructure. Journal of the American Chemical Society, 2018, 140, 14595-14598.	6.6	361
205	Unusual Electronic and Optical Properties of Two-Dimensional Ga₂O₃ Predicted by Density Functional Theory. Journal of Physical Chemistry C, 2018, 122, 24592-24599.	1.5	58
206	Physical Properties and Photovoltaic Application of Semiconducting Pd2Se3 Monolayer. Nanomaterials, 2018, 8, 832.	1.9	16
207	First-principles calculations of the electronic properties of SiC-based bilayer and trilayer heterostructures. Physical Chemistry Chemical Physics, 2018, 20, 24726-24734.	1.3	77
208	Progress in Contact, Doping and Mobility Engineering of MoS2: An Atomically Thin 2D Semiconductor. Crystals, 2018, 8, 316.	1.0	118
209	Electronic properties of a Ï€-conjugated Cairo pentagonal lattice: Direct band gap, ultrahigh carrier mobility, and slanted Dirac cones. Physical Review B, 2018, 98, .	1.1	22
210	Charge transport in germanium doped phosphorene nanoribbons. RSC Advances, 2018, 8, 19479-19485.	1.7	8
211	A first-principles study of the effects of electronâ€“phonon coupling on the thermoelectric properties: a case study of the SiGe compound. Journal of Materials Chemistry A, 2018, 6, 12125-12131.	5.2	33
212	Enhancement of photoluminescence and hole mobility in 1- to 5-layer InSe due to the top valence-band inversion: strain effect. Nanoscale, 2018, 10, 11441-11451.	2.8	58
213	Highâ€Yield Production of Monolayer FePS₃ Quantum Sheets via Chemical Exfoliation for Efficient Photocatalytic Hydrogen Evolution. Advanced Materials, 2018, 30, e1707433.	11.1	110
214	Organosilicon modification to enhance the stability of black phosphorus nanosheets under ambient conditions. Journal of Materials Chemistry B, 2018, 6, 4065-4070.	2.9	36
215	Effect of tensile strain on the band structure and carrier transport of germanium monosulphide monolayer: a firstâ€principles study. Micro and Nano Letters, 2018, 13, 600-605.	0.6	14
216	First-principles study on the electrical and thermal properties of the semiconducting Sc₃(CN)F₂ MXene. RSC Advances, 2018, 8, 22452-22459.	1.7	24
217	One-dimensional thermoelectrics induced by Rashba spin-orbit coupling in two-dimensional BiSb monolayer. Nano Energy, 2018, 52, 163-170.	8.2	41
218	SnP₃: A Previously Unexplored Two-Dimensional Material. Journal of Physical Chemistry C, 2018, 122, 18185-18191.	1.5	85
219	Graphene a promising electrode material for supercapacitors-A review. International Journal of Energy Research, 2018, 42, 4284-4300.	2.2	111
220	Two-dimensional zigzag-shaped Cd₂C monolayer with a desirable bandgap and high carrier mobility. Journal of Materials Chemistry C, 2018, 6, 9175-9180.	2.7	19

#	Article	IF	Citations
221	In-plane thermal transport in black phosphorene/graphene layered heterostructures: a molecular dynamics study. Physical Chemistry Chemical Physics, 2018, 20, 21151-21162.	1.3	41
222	From MoO₂@MoS₂ Coreâ€“Shell Nanorods to MoS₂ Nanobelts. Physica Status Solidi (B): Basic Research, 2018, 255, 1800254.	0.7	23
223	Achieving ultrahigh carrier mobilities and opening the band gap in two-dimensional Si₂BN. Physical Chemistry Chemical Physics, 2018, 20, 21716-21723.	1.3	30
224	Properties, Preparation and Applications of Low Dimensional Transition Metal Dichalcogenides. Nanomaterials, 2018, 8, 463.	1.9	38
225	Computational study of the NO, SO2, and NH3 adsorptions on fragments of 3N-graphene and Al/3N graphene. Journal of Molecular Modeling, 2018, 24, 210.	0.8	6
226	Theoretical Prediction of Two-Dimensional SnP₃ as a Promising Anode Material for Na-Ion Batteries. ACS Applied Energy Materials, 2018, 1, 3850-3859.	2.5	54
227	Electronic and optical properties of heterostructures based on transition metal dichalcogenides and graphene-like zinc oxide. Scientific Reports, 2018, 8, 12009.	1.6	173
228	Spontaneous Direct Band Gap, High Hole Mobility, and Huge Exciton Energy in Atomic-Thin TiO₂ Nanosheet. Chemistry of Materials, 2018, 30, 6449-6457.	3.2	50
229	Enhanced thermoelectric performance of two dimensional MS2 (MÂ=ÂMo, W) through phase engineering. Journal of Materiomics, 2018, 4, 329-337.	2.8	21
230	Strain-engineering tunable electron mobility of monolayer IVâ€“V group compounds. Nanoscale, 2018, 10, 16750-16758.	2.8	43
231	Few-Layer PdSe₂ Sheets: Promising Thermoelectric Materials Driven by High Valley Convergence. ACS Omega, 2018, 3, 5971-5979.	1.6	87
232	Electronic structures and optical properties of P and Cl atoms adsorbed/substitutionally doped monolayer MoS 2. Solid State Communications, 2018, 280, 6-12.	0.9	22
233	Valley-selective circular dichroism and high carrier mobility of graphene-like BC₆N. Nanoscale, 2018, 10, 13179-13186.	2.8	37
234	First-principles insight on elastic, electronic, and thermoelectric transport properties of BAgX (Xâ€¯=â€¯Ti,) Tj ETQq1 1 0.784314 rgBT	2.0	12
235	Heptazine-based porous graphitic carbon nitride: a visible-light driven photocatalyst for water splitting. Journal of Materials Chemistry A, 2019, 7, 20799-20805.	5.2	25
236	Electronic and transport properties and physical field coupling effects for net-Y nanoribbons. Nanotechnology, 2019, 30, 485703.	1.3	10
237	Halogenation of SiGe monolayers: robust changes in electronic and thermal transport. Physical Chemistry Chemical Physics, 2019, 21, 19488-19498.	1.3	16
238	Real-space exciton distribution in strained-siligraphene g-SiC7. Journal of Applied Physics, 2019, 126, .	1.1	8

#	Article	IF	Citations
239	Promising photocatalysts with high carrier mobility for water splitting in monolayer Ge2P4S2 and Ge2As4S2. International Journal of Hydrogen Energy, 2019, 44, 21536-21545.	3.8	16
240	Unravelling the physisorption characteristics of H2S molecule on biaxially strained single-layer MoS2. Nanoscale Advances, 2019, 1, 3452-3462.	2.2	10
241	Strain-engineered indirectâ€“direct band-gap transitions of PbPdO₂ slab with preferred (0â€‰0â€‰2) orientation. Journal of Physics Condensed Matter, 2019, 31, 405501.	0.7	14
242	Gallium Thiophosphate: An Emerging Bidirectional Auxetic Two-Dimensional Crystal with Wide Direct Band Gap. Journal of Physical Chemistry Letters, 2019, 10, 4455-4462.	2.1	35
243	Two-dimensional nanoporous metal chalcogenophosphates MP2X6 with high electron mobilities. Applied Surface Science, 2019, 493, 1334-1339.	3.1	8
244	Modulation of Electronic Behaviors of InSe Nanosheet and Nanoribbons: The Firstâ€Principles Study. Advanced Theory and Simulations, 2019, 2, 1900099.	1.3	3
245	Structural engineering of bilayer PtSe₂ thin films: a first-principles study. Journal of Physics Condensed Matter, 2019, 31, 455001.	0.7	16
246	Edge-modulated dual spin-filter effect in zigzag-shaped buckling Ag₂S nanoribbons. Physical Chemistry Chemical Physics, 2019, 21, 15623-15629.	1.3	6
247	Direct Wide Bandgap 2D GeSe₂ Monolayer toward Anisotropic UV Photodetection. Advanced Optical Materials, 2019, 7, 1900622.	3.6	70
248	Thermoelectric Performance of Two-Dimensional AlX (X = S, Se, Te): A First-Principles-Based Transport Study. ACS Omega, 2019, 4, 17773-17781.	1.6	38
249	Solventâ€Exchange Strategy toward Aqueous Dispersible MoS₂ Nanosheets and Their Nitrogenâ€Rich Carbon Sphere Nanocomposites for Efficient Lithium/Sodium Ion Storage. Small, 2019, 15, e1903816.	5.2	31
250	Exosomes derived from platelet-rich plasma mediate hyperglycemia-induced retinal endothelial injury via targeting the TLR4 signaling pathway. Experimental Eye Research, 2019, 189, 107813.	1.2	42
251	Functionalized MXenes as ideal electrodes for Janus MoSSe. Physical Chemistry Chemical Physics, 2019, 21, 70-76.	1.3	35
252	Single-layer CdPSe3: A promising thermoelectric material persisting in high temperatures. Applied Physics Letters, 2019, 115, 193105.	1.5	10
253	Dependence of the magnetic interactions in MoS₂ monolayer on Mn-doping configurations. Journal of Physics Condensed Matter, 2019, 31, 465802.	0.7	5
254	2D Ca₃Sn₂S₇ Chalcogenide Perovskite: A Grapheneâ€Like Semiconductor with Direct Bandgap 0.5 eV and Ultrahigh Carrier Mobility 6.7â€‰Ã—â€‰10⁴ cm² V^{â^'1} s^{â^'1}. Advanced Materials, 2019, 31, e1905643.	11.1	28
255	Valley drift and valley current modulation in strained monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2019, 100, .	1.1	27
256	First-principle prediction of the electronic property and carrier mobility in boron arsenide nanotubes and nanoribbons. Journal of Applied Physics, 2019, 126, 124303.	1.1	3

#	Article	IF	Citations
257	Exploring the adsorption of CO toxic gas on pristine and M-doped (M = Ti, Cr, Fe, Ni and Zn) GaN nanosheets. New Journal of Chemistry, 2019, 43, 15280-15292.	1.4	18
258	First-Principles Study on Transition-Metal Dichalcogenide/BSe van der Waals Heterostructures: A Promising Water-Splitting Photocatalyst. Journal of Physical Chemistry C, 2019, 123, 22742-22751.	1.5	110
259	Two-Dimensional T-NiSe₂ as a Promising Anode Material for Potassium-Ion Batteries with Low Average Voltage, High Ionic Conductivity, and Superior Carrier Mobility. ACS Applied Materials & Interfaces, 2019, 11, 35661-35666.	4.0	49
260	Hydrogenated PtP₂ monolayer: theoretical predictions on the structure and charge carrier mobility. Journal of Materials Chemistry C, 2019, 7, 12231-12239.	2.7	21
261	The sp² character of new two-dimensional AsB with tunable electronic properties predicted by theoretical studies. Physical Chemistry Chemical Physics, 2019, 21, 20981-20987.	1.3	5
262	SnP₂S₆ monolayer: a promising 2D semiconductor for photocatalytic water splitting. Physical Chemistry Chemical Physics, 2019, 21, 21064-21069.	1.3	30
263	Superior Thermoelectric Performance of Ordered Double Transition Metal MXenes: Cr₂TiC₂T₂ (T = â^'OH or â^'F). Journal of Physical Chemistry Letters, 2019, 10, 5721-5728.	2.1	49
264	Unique SchrÃ¶dinger semimetal state in ternary Be₂P₃N honeycomb lattice. Journal of Materials Chemistry C, 2019, 7, 4118-4123.	2.7	8
265	Effects of Ga substitution on electronic and thermoelectric properties of gapless semiconductor V₃Al. RSC Advances, 2019, 9, 3847-3855.	1.7	3
266	First-principles calculations of aluminium nitride monolayer with chemical functionalization. Applied Surface Science, 2019, 481, 1549-1553.	3.1	36
267	Metal doped armchair graphene nanoribbons: electronic structure, carrier mobility and device properties. Physical Chemistry Chemical Physics, 2019, 21, 1830-1840.	1.3	30
268	Direction-control of anisotropic electronic behaviors via ferroelasticity in two-dimensional Î±-MPI (M = Zr, Hf). Materials Horizons, 2019, 6, 1930-1937.	6.4	39
269	Highly in-plane anisotropic 2D semiconductors Î²-AuSe with multiple superior properties: a first-principles investigation. Journal of Physics Condensed Matter, 2019, 31, 395501.	0.7	10
270	Two-dimensional silicon chalcogenides with high carrier mobility for photocatalytic water splitting. Journal of Materials Science, 2019, 54, 11485-11496.	1.7	30
271	Theoretical investigating of graphene/antimonene heterostructure as a promising high cycle capability anodes for fast-charging lithium ion batteries. Applied Surface Science, 2019, 491, 451-459.	3.1	33
272	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
273	Electronic Doping Controlled Migration of Dislocations in Polycrystalline 2D WS₂. Small, 2019, 15, e1805145.	5.2	4
274	Lead-free double perovskites Cs₂InCuCl₆ and (CH₃NH₃)₂InCuCl₆: electronic, optical, and electrical properties. Nanoscale, 2019, 11, 11173-11182.	2.8	35

#	Article	IF	Citations
275	Bilayer MSe₂ (MÂ= Zr, Hf) as promising two-dimensional thermoelectric materials: a first-principles study. RSC Advances, 2019, 9, 12394-12403.	1.7	35
276	Two-photon absorption within layered Bi₂Te₃ topological insulators and the role of nonlinear transmittance therein. Journal of Materials Chemistry C, 2019, 7, 7027-7034.	2.7	26
277	Strain-engineered robust and Schottky-barrier-free contact in 2D metalâ€“semiconductor heterostructure. Electronic Structure, 2019, 1, 015010.	1.0	10
278	Atomic-Scale Dynamics and Storage Performance of Na/K on FeF₃ Nanosheet. ACS Applied Materials & Interfaces, 2019, 11, 17425-17434.	4.0	8
279	Enhanced Valley Splitting of Transition-Metal Dichalcogenide by Vacancies in Robust Ferromagnetic Insulating Chromium Trihalides. ACS Applied Materials & Interfaces, 2019, 11, 18858-18864.	4.0	28
280	Nonvolatile Electrical Control and Heterointerfaceâ€Induced Halfâ€Metallicity of 2D Ferromagnets. Advanced Functional Materials, 2019, 29, 1901420.	7.8	109
281	Photocatalytic performance enhancement of two-dimensional Ruddlesden-Popper type perovskite K₂La₂Ti₃O₁₀ by nitrogen-doping. Materials Research Express, 2019, 6, 075047.	0.8	11
282	Tuning the Magnetic and Electronic Properties of Janus MoSSe Nanoribbon by Edge Modification: A Firstâ€Principles Study. Physica Status Solidi (B): Basic Research, 2019, 256, 1900106.	0.7	8
283	CVD Grown MoS 2 Nanoribbons on MoS 2 Covered Sapphire(0001) Without Catalysts. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1900063.	1.2	26
284	Optimized band gap and fast interlayer charge transfer in two-dimensional perovskite oxynitride Ba2NbO3N and Sr2NbO3/Ba2NbO3N bonded heterostructure visible-light photocatalysts for overall water splitting. Journal of Colloid and Interface Science, 2019, 546, 20-31.	5.0	26
285	Flexible Molybdenum Disulfide (MoS₂) Atomic Layers for Wearable Electronics and Optoelectronics. ACS Applied Materials & Interfaces, 2019, 11, 11061-11105.	4.0	277
286	Flexible, auxetic and strain-tunable two dimensional penta-X₂C family as water splitting photocatalysts with high carrier mobility. Journal of Materials Chemistry A, 2019, 7, 7791-7799.	5.2	66
287	Electronic structure, carrier mobility and strain modulation of CH (SiH, GeH) nanoribbons. Journal of Physics Condensed Matter, 2019, 31, 165502.	0.7	11
288	SnTe monolayer: Tuning its electronic properties with doping. Superlattices and Microstructures, 2019, 130, 12-19.	1.4	8
289	Strain effects on the mechanical properties of Group-V monolayers with buckled honeycomb structures. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 112, 59-65.	1.3	20
290	High thermoelectric efficiency in monolayer PbI₂ from 300 K to 900 K. Inorganic Chemistry Frontiers, 2019, 6, 920-928.	3.0	29
291	Strain-enhanced properties of van der Waals heterostructure based on blue phosphorus and g-GaN as a visible-light-driven photocatalyst for water splitting. RSC Advances, 2019, 9, 4816-4823.	1.7	86
292	2D Triphosphides: SbP3 and GaP3 monolayer as promising photocatalysts for water splitting. International Journal of Hydrogen Energy, 2019, 44, 5948-5954.	3.8	52

#	Article	IF	Citations
293	Potential Applications of Halide Double Perovskite Cs₂AgInX₆ (X = Cl, Br) in Flexible Optoelectronics: Unusual Effects of Uniaxial Strains. Journal of Physical Chemistry Letters, 2019, 10, 1120-1125.	2.1	44
294	Deriving MoS₂ nanoribbons from their flakes by chemical vapor deposition. Nanotechnology, 2019, 30, 255602.	1.3	22
295	Recent progress in 2D group IVâ€“IV monochalcogenides: synthesis, properties and applications. Nanotechnology, 2019, 30, 252001.	1.3	104
296	Control of highly anisotropic electrical conductance of tellurene by strain-engineering. Nanoscale, 2019, 11, 21775-21781.	2.8	11
297	Two-dimensional MgX₂Se₄ (X = Al, Ga) monolayers with tunable electronic properties for optoelectronic and photocatalytic applications. Nanoscale, 2019, 11, 19806-19813.	2.8	21
298	Significant enhancement in the thermoelectric performance of Bi₂O₂S through dimensionality reduction. Journal of Materials Chemistry C, 2019, 7, 14986-14992.	2.7	33
299	Electronâ€“phonon scattering limited hole mobility at room temperature in a MoS₂ monolayer: first-principles calculations. Physical Chemistry Chemical Physics, 2019, 21, 22879-22887.	1.3	16
300	Monolayer SnP₃: an excellent p-type thermoelectric material. Nanoscale, 2019, 11, 19923-19932.	2.8	119
301	Two-dimensional group-VA nanomaterials beyond black phosphorus: synthetic methods, properties, functional nanostructures and applications. Journal of Materials Chemistry A, 2019, 7, 25712-25771.	5.2	49
302	Enhanced electronâ€“phonon scattering in Janus MoSSe. New Journal of Physics, 2019, 21, 113040.	1.2	11
303	Comparative investigation of the mechanical, electrical and thermal transport properties in graphene-like C3B and C3N. Journal of Applied Physics, 2019, 126, .	1.1	32
304	A van der Waals Heterostructure Based on Graphene-like Gallium Nitride and Boron Selenide: A High-Efficiency Photocatalyst for Water Splitting. ACS Omega, 2019, 4, 21689-21697.	1.6	78
305	Electronic properties of polymorphic two-dimensional layered chromium disulphide. Nanoscale, 2019, 11, 20123-20132.	2.8	72
306	Electron delocalization in single-layer phthalocyanine-based covalent organic frameworks: a first principle study. RSC Advances, 2019, 9, 29440-29447.	1.7	11
307	Understanding the transport and contact properties of metal/BN-MoS2 interfaces to realize high performance MoS2 FETs. Journal of Alloys and Compounds, 2019, 771, 1052-1061.	2.8	10
308	Rational design of C₂N-based type-II heterojunctions for overall photocatalytic water splitting. Nanoscale Advances, 2019, 1, 154-161.	2.2	70
309	Modulation the electronic property of 2D monolayer MoS2 by amino acid. Applied Materials Today, 2019, 14, 151-158.	2.3	61
310	Linear magneto-electron-light interaction in ultranarrow armchair graphene and boronitrene nanoribbons. Diamond and Related Materials, 2019, 92, 86-91.	1.8	7

#	Article	IF	Citations
311	Two-Dimensional PC₆ with Direct Band Gap and Anisotropic Carrier Mobility. Journal of the American Chemical Society, 2019, 141, 1599-1605.	6.6	144
312	First-principle studies on electron transport properties in four-terminal MoS2 nanoribbons. Physica B: Condensed Matter, 2019, 554, 90-96.	1.3	4
313	Electronic, transport, and optical properties of atomically thin silicon phosphide: first-principles calculations. Materials Research Express, 2019, 6, 026428.	0.8	7
314	First-principle study of electronic and optical properties of two-dimensional materials-based heterostructures based on transition metal dichalcogenides and boron phosphide. Applied Surface Science, 2019, 476, 70-75.	3.1	154
315	First-principles study of the surface reparation of ultrathin InSe with Se-atom vacancies by thiol chemistry. Applied Surface Science, 2019, 475, 487-493.	3.1	6
316	A new carbon phase with direct bandgap and high carrier mobility as electron transport material for perovskite solar cells. Npj Computational Materials, 2019, 5, .	3.5	67
317	Ab initio STUDY OF POINT DEFECTS IN 2D GRAPHENE LAYER. Surface Review and Letters, 2019, 26, 1850142.	0.5	6
318	Semiconducting SN₂ monolayer with three-dimensional auxetic properties: a global minimum with tetracoordinated sulfurs. Nanoscale, 2020, 12, 85-92.	2.8	21
319	Two-dimensional ZnO/BSe van der waals heterostructure used as a promising photocatalyst for water splitting: A DFT study. Journal of Alloys and Compounds, 2020, 812, 152049.	2.8	87
320	Pressure-induced band engineering, work function and optical properties of surface F-functionalized Sc2C MXene. Journal of Physics and Chemistry of Solids, 2020, 137, 109218.	1.9	28
321	Theoretical prediction of two-dimensional ZnO/GaN van der Waals heterostructure as a photocatalyst for water splitting. Chemical Physics, 2020, 528, 110539.	0.9	73
322	Thermal Transport in 2D Semiconductorsâ€"Considerations for Device Applications. Advanced Functional Materials, 2020, 30, 1903929.	7.8	71
323	Nb2SiTe4 and Nb2GeTe4: Unexplored 2D Ternary Layered Tellurides with High Stability, Narrow Band Gap and High Electron Mobility. Journal of Electronic Materials, 2020, 49, 959-968.	1.0	39
324	The spin-transport properties of single edge oxidized zigzag MoS2 nanoribbon. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 116, 113783.	1.3	7
325	Two-dimensional H-TiO2/MoS2(WS2) van der Waals heterostructures for visible-light photocatalysis and energy conversion. Applied Surface Science, 2020, 504, 144425.	3.1	48
326	Prediction of staggered stacking 2D BeP semiconductor with unique anisotropic electronic properties. Journal of Physics Condensed Matter, 2020, 32, 085301.	0.7	2
327	Tunable electric properties of bilayer MX2 (Mâ€¯=â€¯Ge, Sn; Xâ€¯=â€¯S, Se) with different strain and external electric field. Physica B: Condensed Matter, 2020, 581, 411673.	1.3	5
328	Strain-engineering the in-plane electrical anisotropy of GeSe monolayers. Physical Chemistry Chemical Physics, 2020, 22, 914-918.	1.3	16

#	Article	IF	Citations
329	As₂S₃, As₂Se₃ and As₂Te₃ nanosheets: superstretchable semiconductors with anisotropic carrier mobilities and optical properties. Journal of Materials Chemistry C, 2020, 8, 2400-2410.	2.7	45
330	Investigation of growth-induced strain in monolayer MoS2 grown by chemical vapor deposition. Applied Surface Science, 2020, 508, 145126.	3.1	29
331	High Thermoelectric Performance of New Two-Dimensional IVâ€“VI Compounds: A First-Principles Study. Journal of Physical Chemistry C, 2020, 124, 1812-1819.	1.5	51
332	A type-II GaSe/GeS heterobilayer with strain enhanced photovoltaic properties and external electric field effects. Journal of Materials Chemistry C, 2020, 8, 89-97.	2.7	42
333	HfN₂ monolayer: A new direct-gap semiconductor with high and anisotropic carrier mobility*. Chinese Physics B, 2020, 29, 023102.	0.7	15
334	Breakdown of the electron delocalization in hexagonal borophene toward tunable energy gap. Applied Surface Science, 2020, 507, 144940.	3.1	1
335	Intriguing electronic structures and carrier mobilities of two-dimensional GaN nanosheets: Thickness and surface effects. Computational Materials Science, 2020, 172, 109337.	1.4	13
336	Janus Bi2XYZ monolayers for light harvesting and energy conversion from first-principles calculations. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 117, 113823.	1.3	4
337	The synergistic effect of proton intercalation and electron transfer via electro-activated molybdenum disulfide/graphite felt toward hydrogen evolution reaction. Journal of Catalysis, 2020, 381, 175-185.	3.1	21
338	Strain-tunable electronic properties and lithium storage of 2D transition metal carbide (MXene) Ti₂CO₂ as a flexible electrode. Journal of Materials Chemistry A, 2020, 8, 760-769.	5.2	35
339	Theoretical Investigation of Monolayer RhTeCl Semiconductors as Photocatalysts for Water Splitting. Journal of Physical Chemistry C, 2020, 124, 639-646.	1.5	18
340	Interfacing Boron Monophosphide with Molybdenum Disulfide for an Ultrahigh Performance in Thermoelectrics, Two-Dimensional Excitonic Solar Cells, and Nanopiezotronics. ACS Applied Materials & Interfaces, 2020, 12, 3114-3126.	4.0	84
341	PBCFâ€Graphene: A 2D Sp² Hybridized Honeycomb Carbon Allotrope with a Direct Band Gap. ChemNanoMat, 2020, 6, 139-147.	1.5	54
342	The Thermoelectric Properties of Monolayer MAs2 (M = Ni, Pd and Pt) from First-Principles Calculations. Nanomaterials, 2020, 10, 2043.	1.9	11
343	Staggering transport of edge states and symmetry analysis of electronic and optical properties of stanene. Nanoscale, 2020, 12, 20890-20897.	2.8	2
344	Ferroelectricity and phase transitions in In₂Se₃ van der Waals material. Nanoscale, 2020, 12, 22688-22697.	2.8	35
345	Optical, electronic, and mechanical properties of p-type conductive oxide BaBiO3: A density functional theory study. Chemical Physics Letters, 2020, 761, 138054.	1.2	8
346	All Boron Atoms in a ScB₁₂ Monolayer Contribute to the Hydrogen Evolution Reaction. Journal of Physical Chemistry C, 2020, 124, 23221-23229.	1.5	14

#	Article	IF	Citations
347	Longitudinal unzipping of 2D transition metal dichalcogenides. Nature Communications, 2020, 11, 5032.	5.8	18
348	KAgX (X = S, Se): High-Performance Layered Thermoelectric Materials for Medium-Temperature Applications. ACS Applied Materials & Interfaces, 2020, 12, 36102-36109.	4.0	68
349	2D XBiSe3(XÂ=ÂAs, Sb) monolayers with high anisotropic mobility and enhanced optical absorption in visible light region. Applied Surface Science, 2020, 530, 147137.	3.1	13
350	Chemical ordering and pressure-induced isostructural and electronic transitions in MoSSe crystal. Physical Review B, 2020, 102, .	1.1	12
351	Ab initio study of strain and electric field dependent variation in electronic and thermoelectric properties of PdS2. Materials Today Communications, 2020, 24, 100976.	0.9	12
352	Electronic structures and charge carrier mobilities of boron-graphdiyne sheet and nanoribbons. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 124, 114354.	1.3	6
353	Chemical vapor deposition of layered two-dimensional MoSi ₂ N ₄ materials. Science, 2020, 369, 670-674.	6.0	556
354	A first-principles study of electronic structure and photocatalytic performance of two-dimensional van der Waals MTe2â€“As (MÂ=ÂMo, W) heterostructures. International Journal of Hydrogen Energy, 2020, 45, 27089-27097.	3.8	35
355	GeN3 monolayer: A promising 2D high-efficiency photo- hydrolytic catalyst with High carrier mobility transport anisotropy. Applied Catalysis B: Environmental, 2020, 279, 119368.	10.8	36
356	Two-dimensional penta-SiAs₂: a potential metal-free photocatalyst for overall water splitting. Journal of Materials Chemistry C, 2020, 8, 11980-11987.	2.7	24
357	Modulation in structural and electronic properties of 2D Ga2O3 by chemical passivation. Journal of Materials Chemistry C, 2020, 8, 12551-12559.	2.7	13
358	Device Architecture for Visible and Near-Infrared Photodetectors Based on Two-Dimensional SnSe2 and MoS2: A Review. Micromachines, 2020, 11, 750.	1.4	19
359	Ultrathin porphyrin and tetra-indole covalent organic frameworks for organic electronics applications. Journal of Chemical Physics, 2020, 153, 044702.	1.2	21
360	Excellent thermoelectric properties of monolayer RbAgM (M = Se and Te): first-principles calculations. Physical Chemistry Chemical Physics, 2020, 22, 26364-26371.	1.3	13
361	Strain-Induced Ultrahigh Electron Mobility and Thermoelectric Figure of Merit in Monolayer Î±-Te. ACS Applied Materials & Interfaces, 2020, 12, 43901-43910.	4.0	36
362	Rashba Splitting in Two Dimensional Hybrid Perovskite Materials for High Efficient Solar and Heat Energy Harvesting. Journal of Physical Chemistry Letters, 2020, 11, 7679-7686.	2.1	14
363	Electronic and photocatalytic properties of two-dimensional boron phosphide/SiC van der Waals heterostructure with direct type-II band alignment: a first principles study. RSC Advances, 2020, 10, 32027-32033.	1.7	18
364	Noble metal-free MoS2-modified In2S3 for excellent visible-NIR-light-driven photocatalytic of Cr6+ removal in alkaline wastewater. Journal of Nanoparticle Research, 2020, 22, 1.	0.8	8

#	Article	IF	Citations
365	Theoretical prediction of silicether: a two-dimensional hyperconjugated disilicon monoxide nanosheet. Nanoscale Advances, 2020, 2, 2835-2841.	2.2	6
366	Two-dimensional Dirac spin-gapless semiconductors with tunable perpendicular magnetic anisotropy and a robust quantum anomalous Hall effect. Materials Horizons, 2020, 7, 2071-2077.	6.4	45
367	Spin-selective response tunability in two-dimensional nanomagnet. Journal of Physics Condensed Matter, 2020, 32, 415301.	0.7	14
368	Fibrous red phosphorene: a promising two-dimensional optoelectronic and photocatalytic material with a desirable band gap and high carrier mobility. Physical Chemistry Chemical Physics, 2020, 22, 13713-13720.	1.3	27
369	Strain-enhanced power conversion efficiency of a BP/SnSe van der Waals heterostructure. Physical Chemistry Chemical Physics, 2020, 22, 14787-14795.	1.3	21
370	Modulation of electronic and transport properties of bilayer heterostructures: <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>InSe</mml:mi><mml:mo>/</mml:mo><mml:msub><mml:mi>MoS</mml:mi> and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>InSe</mml:mi><mml:mo>/</mml:mo><mml:mi>h</mml:mi></mml:m -BN as the prototype. Physical Review B, 2020, 101, .	1.1	25
371	Thermoelectric properties of monolayer GeAsSe and SnSbTe. Journal of Materials Chemistry C, 2020, 8, 9763-9774.	2.7	22
372	Ballistic Transport in High-Performance and Low-Power Sub-5 nm Two-Dimensional ZrNBr MOSFETs. IEEE Electron Device Letters, 2020, 41, 1029-1032.	2.2	14
373	Tunable Properties of Novel Ga₂O₃ Monolayer for Electronic and Optoelectronic Applications. ACS Applied Materials & Interfaces, 2020, 12, 30659-30669.	4.0	87
374	Ohmic/Schottky barrier engineering in metal/SnP3 heterostructures. Journal of Alloys and Compounds, 2020, 831, 154800.	2.8	14
375	First-principles simulation of monolayer hydrogen passivated Bi₂O₂S₂â€“metal interfaces. Physical Chemistry Chemical Physics, 2020, 22, 7853-7863.	1.3	9
376	High-efficiency photocatalyst for water splitting: a Janus MoSSe/XN (Xâ€‰â€‰=â€‰â€‰Ga, Al) van der Waals heterostructure. Journal Physics D: Applied Physics, 2020, 53, 185504.	1.3	110
377	Bulk and Monolayer ZrS₃ as Promising Anisotropic Thermoelectric Materials: A Comparative Study. Journal of Physical Chemistry C, 2020, 124, 6536-6543.	1.5	50
378	Elasticity, piezoelectricity, and mobility in two-dimensional BiTeI from a first-principles study. Journal Physics D: Applied Physics, 2020, 53, 245301.	1.3	13
379	Room Temperature Bound Excitons and Strain-Tunable Carrier Mobilities in Janus Monolayer Transition-Metal Dichalcogenides. Journal of Physical Chemistry Letters, 2020, 11, 3116-3128.	2.1	38
380	Enhanced photoresponse of highly air-stable palladium diselenide by thickness engineering. Nanophotonics, 2020, 9, 2467-2474.	2.9	10
381	Thermoelectric Properties of NiCl3 Monolayer: A First-Principles-Based Transport Study. Nanomaterials, 2020, 10, 411.	1.9	7
382	Analytical study of the electronic and optical properties of the armchair MoS2 nanoribbons. Physica B: Condensed Matter, 2020, 594, 412337.	1.3	3

#	Article	IF	Citations
383	Two-dimensional IVâ€“VI materials with in-plane negative Poisson's ratio and anisotropic carrier mobility. Journal of Materials Chemistry C, 2020, 8, 10382-10389.	2.7	28
384	Two-dimensional Bi2Se3 monolayer with high mobility and enhanced optical absorption in the UVâ€“visible light region. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 124, 114272.	1.3	20
385	Anisotropic PC₆N Monolayer with Wide Band Gap and Ultrahigh Carrier Mobility. Journal of Physical Chemistry C, 2020, 124, 4330-4337.	1.5	14
386	Ultralow lattice thermal conductivity and anisotropic thermoelectric performance of AA stacked SnSe bilayer. Applied Surface Science, 2020, 512, 145640.	3.1	37
387	Multiple Regulation over Growth Direction, Band Structure, and Dimension of Monolayer WS₂ by a Quartz Substrate. Chemistry of Materials, 2020, 32, 2508-2517.	3.2	21
388	Copper halide diselenium: predicted two-dimensional materials with ultrahigh anisotropic carrier mobilities. RSC Advances, 2020, 10, 8016-8026.	1.7	10
389	Design of Lead-Free and Stable Two-Dimensional Dionâ€“Jacobson-Type Chalcogenide Perovskite Aâ€²La2B3S10 (Aâ€² = Ba/Sr/Ca; B = Hf/Zr) with Optimal Band Gap, Strong Optical Absorption, and High Efficiency for Photovoltaics. Chemistry of Materials, 2020, 32, 2450-2460.	3.2	19
390	Stability, electronic and mechanical properties of chalcogen (Se and Te) monolayers. Physical Chemistry Chemical Physics, 2020, 22, 5749-5755.	1.3	23
391	Two-dimensional M2CO2/MoS2 (M = Ti, Zr and Hf) van der Waals heterostructures for overall water splitting: A density functional theory study. Ceramics International, 2020, 46, 13377-13384.	2.3	22
392	Band structure, effective mass, and carrier mobility of few-layer h-AlN under layer and strain engineering. APL Materials, 2020, 8, .	2.2	28
393	Two-Dimensional 111-Type In -Based Halide Perovskite Cs3In2X9(X=Cl,Br,I) with Optimal Band Gap for Photovoltaics and Defect-Insensitive Blue Emission. Physical Review Applied, 2020, 13, .	1.5	14
394	Solutionâ€Processed Silicane Fieldâ€Effect Transistor: Operation Due to Stacking Defects on the Channel. Advanced Functional Materials, 2020, 30, 1908746.	7.8	4
395	Ternary chalcogenides XGaS₂ (X = Ag or Cu) for photocatalytic hydrogen generation from water splitting under irradiation of visible light. International Journal of Quantum Chemistry, 2020, 120, e26166.	1.0	6
396	Strain and electric field dependent variation in electronic and thermoelectric properties of PtS2. Results in Physics, 2020, 17, 103088.	2.0	14
397	High electron mobility, controllable magnetism and anomalous light absorption in a monolayered tin mononitride semiconductor. Journal of Materials Chemistry C, 2020, 8, 6396-6402.	2.7	6
398	Electronegativity, phase transition, and ferroelectricity of TeSe2 few-layers. Journal of Physics Condensed Matter, 2020, 32, 045301.	0.7	2
399	High thermoelectric figure of merit and thermopower of HfTe₅ at room temperature. Journal of Physics Condensed Matter, 2020, 32, 345501.	0.7	3
400	Magneto-electronics, transport properties, and tuning effects of arsenene armchair nanotubes doped with transition metal atoms. Nanotechnology, 2020, 31, 315206.	1.3	15

#	Article	IF	Citations
401	Emerging pnictogen-based 2D semiconductors: sensing and electronic devices. Nanoscale, 2020, 12, 10430-10446.	2.8	22
402	Ultrahigh capacity 2D anode materials for lithium/sodium-ion batteries: an entirely planar B₇P₂ monolayer with suitable pore size and distribution. Journal of Materials Chemistry A, 2020, 8, 10301-10309.	5.2	44
403	Stressâ€Driven Phase Transitions of SrI₂: A Firstâ€Principles Investigation. Physica Status Solidi (B): Basic Research, 2020, 257, 1900726.	0.7	13
404	DFT coupled with NEGF study of the electronic properties and ballistic transport performances of 2D SbSiTe₃. Nanoscale, 2020, 12, 9958-9963.	2.8	11
405	Monolayer Bi₂Se_{3â^'x}Te_x: novel two-dimensional semiconductors with excellent stability and high electron mobility. Physical Chemistry Chemical Physics, 2020, 22, 9685-9692.	1.3	11
406	Engineering of MoS2 nanoribbons as high-performance materials for biosensing applications. Applied Surface Science, 2021, 540, 148349.	3.1	5
407	Two-dimensional blue-phase CX (X = S, Se) monolayers with high carrier mobility and tunable photocatalytic water splitting capability. Chinese Chemical Letters, 2021, 32, 1977-1982.	4.8	31
408	Gate Stack Engineering in MoS₂ Fieldâ€Effect Transistor for Reduced Channel Doping and Hysteresis Effect. Advanced Electronic Materials, 2021, 7, 2000395.	2.6	19
409	Band structure engineering through van der Waals heterostructing superlattices of <scp>twoâ€dimensional</scp> transition metal dichalcogenides. InformaÄnÃ-MateriÃ¡ly, 2021, 3, 201-211.	8.5	27
410	CdInGaS4: An unexplored two- dimensional materials with desirable band gap for optoelectronic devices. Journal of Alloys and Compounds, 2021, 854, 157220.	2.8	19
411	The unique carrier mobility of Janus MoSSe/GaN heterostructures. Frontiers of Physics, 2021, 16, 1.	2.4	18
412	Insights on the optoelectronic properties in two-dimensional Janus lateral In2SeTe/Ga2STe heterostructure. Thin Solid Films, 2021, 718, 138479.	0.8	8
413	Prediction of semiconducting SiP2 monolayer with negative Possionâ€™s ratio, ultrahigh carrier mobility and CO2 capture ability. Chinese Chemical Letters, 2021, 32, 1089-1094.	4.8	42
414	The Dionâ€“Jacobson perovskite CsSbCl₄: a promising Pb-free solar-cell absorber with optimal bandgap â^¼1.4 eV, strong optical absorption â^¼10⁵cm^{â^'1}, and large power-conversion efficiency above 20%. Journal of Materials Chemistry A, 2021, 9, 16436-16446.	5.2	13
415	Elongated heterometal double-sites promote nitrogen reduction on two-dimensional MMâ€²B₇ monolayers. Journal of Materials Chemistry A, 2021, 9, 10855-10868.	5.2	16
416	Tuning the electronic and magnetic properties of hydrogen saturated zigzag silicene nanoribbon doped with B atoms chain. Ferroelectrics, 2021, 570, 77-87.	0.3	0
417	The optical properties and carrier mobility of MH₃ (M = Co, Rh and Ir) monolayers. Physical Chemistry Chemical Physics, 2021, 23, 18078-18084.	1.3	3
418	Auxetic, flexible, and strain-tunable two-dimensional th-AlN for photocatalytic visible light water splitting with anisotropic high carrier mobility. Journal of Materials Chemistry C, 2021, 9, 4971-4977.	2.7	29

#	Article	IF	Citations
419	Valley pseudospin in monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi><mml:msub><mml:mi>Si</mml:mi><mml:m mathvariant="normal">N</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:mrow></mml:math> and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi><mml:msub><mml:mi>Si</mml:mi><mml:m Physical Review B, 2021, 103, .	1.1	82
420	Application of graphene in energy storage device â€“ A review. Renewable and Sustainable Energy Reviews, 2021, 135, 110026.	8.2	452
421	The unique carrier mobility of monolayer Janus MoSSe nanoribbons: a first-principles study. Dalton Transactions, 2021, 50, 10252-10260.	1.6	8
422	Tunable electronic and optical properties in buckling a non-lamellar B₃S monolayer. Physical Chemistry Chemical Physics, 2021, 23, 18669-18677.	1.3	4
423	Performance limit of monolayer MoSi₂N₄ transistors. Journal of Materials Chemistry C, 2021, 9, 14683-14698.	2.7	32
424	Single-Layer BI: A Multifunctional Semiconductor with Ferroelectricity, Ultrahigh Carrier Mobility, and Negative Poissonâ€™s Ratio. Physical Review Applied, 2021, 15, .	1.5	3
425	Significant improvement in thermoelectric performance of SnSe/SnS via nano-heterostructures. Physical Chemistry Chemical Physics, 2021, 23, 3794-3801.	1.3	13
426	CrSbS₃ monolayer: a potential phase transition ferromagnetic semiconductor. Nanoscale, 2021, 13, 14067-14072.	2.8	5
427	Boosting the photon absorption, exciton dissociation, and photocatalytic hydrogen- and oxygen-evolution reactions by built-in electric fields in Janus platinum dichalcogenides. Journal of Materials Chemistry C, 2021, 9, 15026-15033.	2.7	28
428	Ordered boron phosphorus codoped graphene realizing widely tunable quasi Dirac-cone gap. Journal of Materials Chemistry C, 2021, 9, 4316-4321.	2.7	1
429	Properties of diamane anchored with different groups. Physical Chemistry Chemical Physics, 2021, 23, 14195-14204.	1.3	8
430	First-principles explorations on P₈ and N₂ assembled nanowire and nanosheet. Nano Express, 2021, 2, 010004.	1.2	3
431	Novel Two-Dimensional Layered MoSi2Z4 (Z = P, As): New Promising Optoelectronic Materials. Nanomaterials, 2021, 11, 559.	1.9	52
432	Emergence of â^’s, â^’pâ€“d band inversion in zincblende gold iodide topological insulator and its thermoelectric properties. Journal of Physics Condensed Matter, 2021, 33, 155402.	0.7	5
433	2D Materials Bridging Experiments and Computations for Electro/Photocatalysis. Advanced Energy Materials, 2022, 12, 2003841.	10.2	116
434	A Biaxial Strain Sensor Using a Single MoS2 Grating. Nanoscale Research Letters, 2021, 16, 31.	3.1	2
435	High intrinsic lattice thermal conductivity in monolayer MoSi₂N₄. New Journal of Physics, 2021, 23, 033005.	1.2	74
436	Anisotropic Janus SiP₂ Monolayer as a Photocatalyst for Water Splitting. Journal of Physical Chemistry Letters, 2021, 12, 2464-2470.	2.1	49

#	Article	IF	Citations
437	Thermal conductivity and enhanced thermoelectric performance of SnTe bilayer. Journal of Materials Science, 2021, 56, 10424-10437.	1.7	11
438	Two-dimensional bipolar ferromagnetic semiconductors from layered antiferromagnets. Physical Review Materials, 2021, 5, .	0.9	22
439	Time-Domain Ab Initio Insights into the Reduced Nonradiative Electronâ€“Hole Recombination in ReSe₂/MoS₂ van der Waals Heterostructure. Journal of Physical Chemistry Letters, 2021, 12, 2682-2690.	2.1	20
440	Two-Dimensional Tetrahex-GeC₂: A Material with Tunable Electronic and Optical Properties Combined with Ultrahigh Carrier Mobility. ACS Applied Materials & Interfaces, 2021, 13, 14489-14496.	4.0	15
441	ÐÐ°Ð·Ñ€Ð°Ð±Ð¾Ñ‚Ð°Ð½Ð¸Ðµ Ð¿Ð¾Ñ€Ñ‚Ð°Ñ‚Ð¸Ð²Ð½Ð¾Ð³Ð¾ Ñ‚Ñ€Ð°Ð½Ñ Ð½Ð° Ð¾ÑÐ½Ð¾Ð²Ðµ Ð¾Ð¿Ñ‚Ð¸Ð¼Ð¸Ð·Ð¸Ñ€Ð¾Ð²Ð°Ð½Ð½Ñ‹Ñ… Ð¼Ð¾Ð´ÐµÐ»ÐµÐ¹ Ð¼Ð½Ð¾Ð³Ð¾Ñ‡Ð°ÑÑ‚Ð¸Ñ‡Ð½Ñ‹Ñ… Ð¿Ð¾Ñ‚ÐµÐ½Ñ†Ð¸Ð°Ð»Ð¾Ð²		
442	Spin-polarized gate-tuned transport property of a four-terminal MoS2 device: a theoretical study. Journal of Materials Science, 2021, 56, 11847-11865.	1.7	1
443	Highly Anisotropic Thermoelectric Properties of Two-Dimensional As₂Te₃. ACS Applied Electronic Materials, 2021, 3, 1610-1620.	2.0	24
444	Exceptional piezoelectricity, high thermal conductivity and stiffness and promising photocatalysis in two-dimensional MoSi2N4 family confirmed by first-principles. Nano Energy, 2021, 82, 105716.	8.2	303
445	Two dimensional MoSSe/BSe vdW heterostructures as potential photocatalysts for water splitting with high carrier mobilities. International Journal of Hydrogen Energy, 2021, 46, 14247-14258.	3.8	27
446	Structural, Electronic, and Optical Properties of Hexagonal XC 6 (X=N, P, As, and Sb) Monolayers. ChemPhysChem, 2021, 22, 1124-1133.	1.0	0
447	Pd₄S₃Se₃, Pd₄S₃Te₃, and Pd₄Se₃Te₃: Candidate Two-Dimensional Janus Materials for Photocatalytic Water Splitting. Chemistry of Materials, 2021, 33, 4128-4134.	3.2	59
448	Arsenic carbide allotropes prediction: An efficient platform for hole-conductions, optical and photocatalysis applications. Applied Surface Science, 2021, 562, 150109.	3.1	2
449	Excellent thermoelectric performance is predicted in Sb2Te with natural superlattice structure. Chinese Physics B, 0, , .	0.7	0
450	Two-dimensional plasmonic polarons in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>n</mml:mi></mml:math> -doped monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi>MoS</mml:mi></mml:mrow><mml:mn>2</mml:mn> Physical Review B, 2021, 103, .	1.1	13
451	MoS₂ Nanosheet/ZnS Composites for the Visible-Light-Assisted Photocatalytic Degradation of Oxytetracycline. ACS Applied Nano Materials, 2021, 4, 4721-4734.	2.4	61
452	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>DFT</mml:mi><mml:mo>+</mml:mo><mml:mi>U</mml:mi> investigation of magnetocrystalline anisotropy of Mn-doped transition-metal dichalcogenide monolayers. Physical Review Materials, 2021, 5, .	0.9	8
453	NbS2Cl2 monolayer: A promising 2D semiconductor for photocatalytic water splitting. FlatChem, 2021, 27, 100237.	2.8	5
455	Applications of 2D-Layered Palladium Diselenide and Its van der Waals Heterostructures in Electronics and Optoelectronics. Nano-Micro Letters, 2021, 13, 143.	14.4	61

#	Article	IF	Citations
456	Two-dimensional phosphorus-based binary nanosheets for photocatalyzing water splitting: A first-principles study. Chemical Physics Letters, 2021, 772, 138594.	1.2	6
457	Flexoelectricity and transport properties of phosphorene nanoribbons under mechanical bending. Physical Review B, 2021, 103, .	1.1	13
458	Computational Search for Better Thermoelectric Performance in Nickel-Based Half-Heusler Compounds. ACS Omega, 2021, 6, 18269-18280.	1.6	19
459	2D Vâ€“VI Binary Nanosheets with Square Lattice: A Theoretical Investigation. Physica Status Solidi (B): Basic Research, 2021, 258, 2100178.	0.7	4
460	Electronic structures and anisotropic carrier mobilities of monolayer ternary metal iodides MLaI₅ (M=Mg, Ca, Sr, Ba). Journal of Physics Condensed Matter, 2021, 33, 355301.	0.7	0
461	Strain effects on monolayer MoSi2N4: Ideal strength and failure mechanism. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 131, 114753.	1.3	33
462	Tunable Schottky contact in graphene/InP3 van der Waals heterostructures. Applied Surface Science, 2021, 554, 149608.	3.1	19
463	Sb₂TeSe₂ Monolayers: Promising 2D Semiconductors for Highly Efficient Excitonic Solar Cells. ACS Omega, 2021, 6, 20590-20597.	1.6	14
464	Predicted hexagonal titanium nitride monolayer as an intrinsic ferromagnetic semiconductor. EPJ Applied Physics, 2021, 95, 10601.	0.3	1
465	Effect of Tensile Strain on Performance Parameters of Different Structures of MoS2ÂMonolayer. Silicon, 2022, 14, 4935-4943.	1.8	2
466	Electronic structures and physical properties of Mg, C, and S doped g-GaN. Superlattices and Microstructures, 2021, 156, 106930.	1.4	5
467	Ultrahigh Carrier Mobility in the Two-Dimensional Semiconductors B₈Si₄, B₈Ge₄, and B₈Sn₄. Chemistry of Materials, 2021, 33, 6475-6483.	3.2	104
468	Excitonic instability and electronic properties of AlSb in the two-dimensional limit. Physical Review B, 2021, 104, .	1.1	9
469	Type-II GeC/ZnTe heterostructure with high-efficiency of photoelectrochemical water splitting. Applied Physics Letters, 2021, 119, .	1.5	17
470	Anisotropic and High-Mobility C₃S Monolayer as a Photocatalyst for Water Splitting. Journal of Physical Chemistry Letters, 2021, 12, 8320-8327.	2.1	18
471	First-principles study of the quasi-one-dimensional organic-inorganic hybrid perovskites <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mrow><mml:mo>(</mml:mo><mml:mi>MV</mml:mi><mml:mi mathvariant="normal">I</mml:mi><mml:mn>3</mml:mn></mml:msub><mml:msub><mml:mi>Cl</mml:mi><mml:mn>2</mml:mn><mml:		

#	Article	IF	Citations
474	First-principles investigation on the thickness-dependent optoelectronic properties of two-dimensional perovskite BA2SnI4. Physica B: Condensed Matter, 2021, 616, 413070.	1.3	3
475	Achievement of strain-driven ultrahigh carrier mobility in Î²-TeO2. Materials Research Bulletin, 2021, 141, 111343.	2.7	5
476	Electronic states, mechanical properties and doping effects of one-dimensional atomic wires of SiX2 (XÂ=ÂS, Se). Applied Surface Science, 2021, 559, 149894.	3.1	12
477	Calcination effects of 2D molybdenum disulfides. Materials Characterization, 2021, 179, 111351.	1.9	5
478	High thermoelectric performance of half-Heusler ZrXPb (X = Ni, Pd, and Pt) compounds from first principle calculation. Journal of Physics Condensed Matter, 2021, 33, 465501.	0.7	6
479	Study on electronic properties and charge transfer doping of organic molecules adsorbed g-GaN monolayer. Semiconductor Science and Technology, 2021, 36, 125020.	1.0	4
480	Adsorption of habitat and industry-relevant molecules on the MoSi2N4 monolayer. Applied Surface Science, 2021, 564, 150326.	3.1	50
481	Interfacing 2D M2X (MÂ=ÂNa, K, Cs; XÂ=ÂO, S, Se, Te) monolayers for 2D excitonic and tandem solar cells. Applied Surface Science, 2021, 563, 150304.	3.1	18
482	Electric field tunable bandgap and anisotropic high carrier mobility in SiAs2/GeAs2 lateral heterostructure. Computational Materials Science, 2021, 198, 110697.	1.4	6
483	Two-dimensional phosphorus polymorph possessing both wide band gap and strong anisotropy. Solid State Communications, 2021, , 114540.	0.9	1
484	Theoretical study on the electronic structure, optical and photocatalytic properties of type-II As/CdO van der Waals heterostructure. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 134, 114888.	1.3	11
485	DFT computation of two-dimensional CdO/GaS van der Waals heterostructure: Tunable absorption spectra for water splitting application. Vacuum, 2021, 192, 110434.	1.6	21
486	The first-principles prediction of two-dimensional indium-arsenide bilayers. Materials Science in Semiconductor Processing, 2021, 134, 106041.	1.9	3
487	Significantly enhanced photocatalytic performance of the N-doped GeP3 monolayer: A first-principles study. Applied Surface Science, 2021, 566, 150628.	3.1	7
488	2D CoGeSe3 monolayer as a visible-light photocatalyst with high carrier mobility: Theoretical prediction. Applied Surface Science, 2021, 565, 150588.	3.1	6
489	Electronic and optical properties of two-dimensional GaN/ZnO heterojunction tuned by different stacking configurations. Journal of Colloid and Interface Science, 2022, 607, 913-921.	5.0	31
490	Structural, electronic, and optic properties of Se nanotubes. Physica B: Condensed Matter, 2022, 624, 413417.	1.3	4
491	Prediction of allotropes of tellurium with molecular, one- and two-dimensional covalent nets for photofunctional applications. RSC Advances, 2021, 11, 29965-29975.	1.7	4

#	Article	IF	Citations
492	Two-Dimensional IVâ€“V Monolayers with Highly Anisotropic Carrier Mobility and Electric Transport Properties. Journal of Physical Chemistry Letters, 2021, 12, 1058-1065.	2.1	23
493	Group-IV(A) Janus dichalcogenide monolayers and their interfaces straddle gigantic shear and in-plane piezoelectricity. Nanoscale, 2021, 13, 5460-5478.	2.8	89
494	In situ TEM study of edge reconstruction and evolution in monolayer black phosphorus. Nanoscale, 2021, 13, 4133-4139.	2.8	9
495	Typeâ€ II AsP/As van der Waals Heterostructures: Tunable Anisotropic Electronic Structures and Optical Properties. Advanced Materials Interfaces, 2021, 8, 2001555.	1.9	11
496	Effective CO Migration among Multiabsorbed Sites Achieves the Low-Barrier and High-Selective Conversion to C2 Products on the Ni₂B₅ Monolayer. ACS Applied Materials & Interfaces, 2021, 13, 3845-3855.	4.0	11
497	Tuning photoluminescence spectra of MoS₂ with liquid crystals. Nanoscale, 2021, 13, 16641-16648.	2.8	5
498	Î³-GeSe nanotubes: a one-dimensional semiconductor with high carrier mobility potential for photocatalytic water splitting. Journal of Materials Chemistry C, 2021, 9, 15158-15164.	2.7	15
499	Thickness-induced band-gap engineering in lead-free double perovskite Cs₂AgBiBr₆ for highly efficient photocatalysis. Physical Chemistry Chemical Physics, 2021, 23, 12439-12448.	1.3	14
500	Group 11 Transition-Metal Halide Monolayers: High Promises for Photocatalysis and Quantum Cutting. Journal of Physical Chemistry Letters, 2021, 12, 525-531.	2.1	25
501	Solar Cells Based on Two-Dimensional WTe₂/PtXY (X, Y = S, Se) Heterostructures with High Photoelectric Conversion Efficiency and Low Power Consumption. ACS Applied Energy Materials, 2021, 4, 357-364.	2.5	25
502	Exploring the Efficient Na/K Storage Mechanism and Vacancy Defect-Boosted Li⁺ Diffusion Based on VSe₂/MoSe₂ Heterostructure Engineering. ACS Applied Materials & Interfaces, 2021, 13, 2072-2080.	4.0	19
503	Intriguing electronic and optical properties of two-dimensional Janus transition metal dichalcogenides. Physical Chemistry Chemical Physics, 2018, 20, 18571-18578.	1.3	141
504	Significant enhancement of the thermoelectric properties of CaP₃ through reducing the dimensionality. Materials Advances, 2020, 1, 3322-3332.	2.6	14
505	Strain engineering and lattice vibration manipulation of atomically thin TaS₂ films. RSC Advances, 2020, 10, 16718-16726.	1.7	4
506	Strong anisotropy and layer-dependent carrier mobility of two-dimensional semiconductor ZrGeTe₄. Journal of Physics Condensed Matter, 2020, 32, 325502.	0.7	9
507	Interfaces between MoO_x and MoX ₂ (X = S, Se, and Te)*. Chinese Physics B, 2020, 29, 116802.	0.7	7
508	New two-dimensional phase of tin chalcogenides: Candidates for high-performance thermoelectric materials. Physical Review Materials, 2019, 3, .	0.9	44
509	Recent advances in low-dimensional Janus materials: theoretical and simulation perspectives. Materials Advances, 2021, 2, 7543-7558.	2.6	38

#	Article	IF	Citations
510	New Materials and Structures for Efficient Terahertz (THz) Spectroscopy. Journal of Communications Technology and Electronics, 2021, 66, 1045-1052.	0.2	0
511	Theoretical Study of Anisotropic Carrier Mobility for Two-Dimensional Nb₂Se₉ Material. ACS Omega, 2021, 6, 26782-26790.	1.6	8
512	Rational design of porous GeP2S6 monolayer for photocatalytic water splitting under the irradiation of visible light. FlatChem, 2021, 30, 100296.	2.8	3
513	Tuning the electronic property of monolayer MoS2 adsorbed on metal Au substrate: a first-principles study. Wuli Xuebao/Acta Physica Sinica, 2015, 64, 187101.	0.2	1
514	First-principles study on multiphase property and phase transition of monolayer MoS2. Wuli Xuebao/Acta Physica Sinica, 2016, 65, 127101.	0.2	0
515	Graphene and Its Derivatives for Supercapacitor Application. , 2022, , 465-474.		2
516	Predicting two-dimensional diphosphorus silicide monolayer by the global optimization method. Chemical Physics Letters, 2020, 752, 137514.	1.2	0
517	Intrinsic Electric Field and Excellent Photocatalytic Solarâ€toâ€Hydrogen Efficiency in 2D Janus Transition Metal Dichalcogenide. Physica Status Solidi - Rapid Research Letters, 2022, 16, 2100417.	1.2	2
518	Origin of phonon-limited mobility in two-dimensional metal dichalcogenides. Journal of Physics Condensed Matter, 2022, 34, 013003.	0.7	13
519	Low lattice thermal conductivity and its role in the remarkable thermoelectric performance of newly predicted SiS2 and SiSe2 monolayers. Computational Materials Science, 2022, 201, 110931.	1.4	12
520	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
521	Excellent thermoelectric performances of the SiSe2 monolayer and layered bulk. Applied Surface Science, 2022, 575, 151799.	3.1	16
522	T-carbon: Experiments, properties, potential applications and derivatives. Nano Today, 2022, 42, 101346.	6.2	23
523	First-principle studies on the metal/semiconductor properties and strain-tuned electronic structures of SnP3 monolayer. Computational Materials Science, 2022, 203, 111047.	1.4	3
524	Novel 2D boron nitride with optimal direct band gap: A theoretical prediction. Applied Surface Science, 2022, 578, 151929.	3.1	19
525	3D graphene-like semiconductor Ba2HfTe4 with electronic structure similar to graphene and bandgap close to silicon. Cell Reports Physical Science, 2021, 2, 100658.	2.8	4
526	Band Bending Mechanism in CdO/Arsenene Heterostructure: A Potential Direct Z-scheme Photocatalyst. Frontiers in Chemistry, 2021, 9, 788813.	1.8	21
527	Designing stable 2D materials solely from VIA elements. Applied Physics Letters, 2021, 119, .	1.5	6

#	Article	IF	Citations
528	Tunable spin polarization and electronic structure of bottom-up synthesized <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi>MoSi</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub><mml:mrow><mml:mi mathvariant="normal">N</mml:mi></mml:mrow><mml:mn>4</mml:mn></mml:msub></mml:math> materials. Physical Review B, 2021, 104, .	1.1	37
529	First-principles calculations to investigate Zr substitution enhanced thermoelectric performance of p-type Zr Hf1â^'CoBi (xâ€¯=â€¯0,0.25,0.5,0.75,1) compounds. Physics Letters, Section A: General, Atomic and Solid State Physics, 2022, 424, 127839.	0.9	2
530	KP15: Natural van der Waals material with ultra-low thermal conductivity and excellent thermoelectric performance. Journal of Applied Physics, 2021, 130, 195104.	1.1	0
531	Recent progress in red phosphorus-based photocatalysts for photocatalytic water remediation and hydrogen production. Applied Materials Today, 2022, 26, 101345.	2.3	10
532	Unexpected band gap evolution and high carrier mobility sparked by the orbital variation in two-dimensional GaGeX (X = S, Se, Te). Physica E: Low-Dimensional Systems and Nanostructures, 2022, 138, 115112.	1.3	4
533	Highly-anisotropic carrier transport and optical properties of two-dimensional titanium trisulfide. Journal of Materials Science, 2022, 57, 3486-3496.	1.7	11
534	An ab initio study of two-dimensional anisotropic monolayers ScXY (X = S and Se; Y = Cl and Br) for photocatalytic water splitting applications with high carrier mobilities. Physical Chemistry Chemical Physics, 2022, 24, 3770-3779.	1.3	11
535	Solution phase growth and analysis of super-thin zigzag tin selenide nanoribbons. Nanotechnology, 2022, 33, 135601.	1.3	3
536	Thermoelectric performance of MoSi₂As₄monolayer. Europhysics Letters, 2022, 137, 16002.	0.7	6
537	Zero Poisson's ratio in single-layer arsenic. Nanoscale, 2022, 14, 969-975.	2.8	1
538	A multiferroic iron arsenide monolayer. Nanoscale Advances, 2022, 4, 1324-1329.	2.2	5
539	Carrier mobility of one-dimensional vanadium selenide (V2Se9) monolayer and nanoribbon systems: DFT study. Nanotechnology, 2022, 33, 135703.	1.3	3
540	Direct Detection of Inhomogeneity in CVD-Grown 2D TMD Materials via K-Means Clustering Raman Analysis. Nanomaterials, 2022, 12, 414.	1.9	4
541	Substitutional transition metal doping in MoSi₂N₄ monolayer: structural, electronic and magnetic properties. Physical Chemistry Chemical Physics, 2022, 24, 3035-3042.	1.3	10
542	Field-Effect Transistor Based on MoSi₂N₄ and WSi₂N₄ Monolayers Under Biaxial Strain: A Computational Study of the Electronic Properties. IEEE Transactions on Electron Devices, 2022, 69, 863-869.	1.6	15
543	The elastic, electron, phonon, and vibrational properties of monolayer XO2 (XÂ=ÂCr, Mo, W) from first principles calculations. Materials Today Communications, 2022, 30, 103183.	0.9	6
544	Discovery of high thermoelectric performance of WS2-WSe2 nanoribbons with superlattice and Janus structures. Journal of Alloys and Compounds, 2022, 903, 163850.	2.8	7
545	Two-dimensional semiconductor materials with high stability and electron mobility in group-11 chalcogenide compounds: MNX (M = Cu, Ag, Au; N = Cu, Ag, Au; X = S, Se, Te; M â‰ N). Nanoscale, 2022, 14, 4271-4280.	2.8	6

#	Article	IF	Citations
546	Mobility driven thermoelectric and optical properties of two-dimensional halide-based hybrid perovskites: impact of organic cation rotation. Physical Chemistry Chemical Physics, 2022, 24, 8867-8880.	1.3	7
547	Prediction of atomically thin two-dimensional single monolayer SnGe with high carrier mobility: a DFT study. New Journal of Chemistry, 2022, 46, 5368-5373.	1.4	2
548	Electronic and optical properties of a novel two-dimensional semiconductor material TlPt₂S₃: a first-principles study. Physical Chemistry Chemical Physics, 2022, 24, 7642-7652.	1.3	11
549	Low thermal conductivity and high performance anisotropic thermoelectric properties of XSe (X =) Tj ETQq1 1 0.784314 rgBT /Overlo	1.3	19
550	Two-dimensional ferroelectric MoS₂/Ga₂O₃ heterogeneous bilayers with highly tunable photocatalytic and electrical properties. Nanoscale, 2022, 14, 5551-5560.	2.8	21
551	Quantum transport of short-gate MOSFETs based on monolayer MoSi₂N₄. Physical Chemistry Chemical Physics, 2022, 24, 6616-6626.	1.3	4
552	Layered post-transition-metal dichalcogenide SnGe₂N₄ as a promising photoelectric material: a DFT study. RSC Advances, 2022, 12, 10249-10257.	1.7	4
553	Devices and defects in two-dimensional materials: outlook and perspectives. , 2022, , 339-401.		1
554	Adsorption Behavior of Environmental Gas Molecules on Pristine and Defective MoSi₂N₄: Possible Application as Highly Sensitive and Reusable Gas Sensors. ACS Omega, 2022, 7, 8706-8716.	1.6	20
555	Structural, electronic, and transport properties of 1D Ta2Ni3Se8 semiconducting material. Applied Physics Letters, 2022, 120, .	1.5	6
556	Strain-tuned mechanical, electronic, and optoelectronic properties of two-dimensional transition metal sulfides ZrS2: a first-principles study. Journal of Molecular Modeling, 2022, 28, 63.	0.8	5
557	A Strong Two-Dimensional Semiconductor I-B₄C with High Carrier Mobility. Journal of Physical Chemistry C, 2022, 126, 6036-6046.	1.5	2
558	First-Principles Calculations on Semiconducting Îµ-GeS and Îµ-SnS Monolayer Nanosheets with Photocatalytic Activity for Sunlight-Driven Water Splitting. ACS Applied Nano Materials, 2022, 5, 3900-3912.	2.4	18
559	Two-Dimensional Metal/Semiconductor Contact in a Janus MoSH/MoSi₂N₄ van der Waals Heterostructure. Journal of Physical Chemistry Letters, 2022, 13, 2576-2582.	2.1	36
560	Quasi-Freestanding Bilayer Borophene on Ag(111). Nano Letters, 2022, 22, 3488-3494.	4.5	31
561	Effect of fully functionalization on carrier mobility of two-dimensional BN. Solid State Communications, 2022, 346, 114698.	0.9	4
562	Exploring a high-carrier-mobility black phosphorus/MoSe2 heterostructure for high-efficiency thin film solar cells. Solar Energy, 2022, 236, 576-585.	2.9	13
563	Computational prediction of high thermoelectric performance in MPtSn (M = Ti, Zr, and Hf) half-Heusler compounds by first-principle study. Solid State Sciences, 2022, 127, 106859.	1.5	5

#	Article	IF	Citations
564	Photocatalytic hydrogen evolution reaction with high solar-to-hydrogen efficiency driven by the Sb2S3 monolayer and RuI2/Sb2S3 heterostructure with solar light. Journal of Power Sources, 2022, 532, 231352.	4.0	40
565	Exploring the structural stability, electronic and thermal attributes of synthetic 2D materials and their heterostructures. Applied Surface Science, 2022, 590, 153131.	3.1	15
566	Thermoelectric characteristics of X$$_2$$YH$$_2$$ monolayers (X=Si, Ge; Y=P, As, Sb, Bi): a first-principles study. Scientific Reports, 2021, 11, 23840.	1.6	4
567	Nickel particleâ€“enabled width-controlled growth of bilayer molybdenum disulfide nanoribbons. Science Advances, 2021, 7, eabk1892.	4.7	19
568	Research Progress of Gas Sensing Performance of 2D Hexagonal WO3. Frontiers in Chemistry, 2021, 9, 786607.	1.8	2
569	Nanowire-to-Nanoribbon Conversion in Transition-Metal Chalcogenides: Implications for One-Dimensional Electronics and Optoelectronics. ACS Applied Nano Materials, 2022, 5, 1775-1782.	2.4	7
570	Red Phosphorus: An Up-and-Coming Photocatalyst on the Horizon for Sustainable Energy Development and Environmental Remediation. Chemical Reviews, 2022, 122, 3879-3965.	23.0	58
571	Anisotropic thermal and electrical transport properties induced high thermoelectric performance in an Ir₂Cl₂O₂ monolayer. Physical Chemistry Chemical Physics, 2022, 24, 11268-11277.	1.3	17
572	Effect of stress regulation on electronic structure and optical properties of TiOCl₂ monolayer. Wuli Xuebao/Acta Physica Sinica, 2022, 71, 077101.	0.2	2
573	Investigating the high field transport properties of Janus WSSe and MoSSe by DFT analysis and Monte Carlo simulations. Journal of Applied Physics, 2022, 131, .	1.1	4
574	Electronic and magnetic properties of the superhalogen Fe(NO3)3 absorbed monolayer MoS2: The regulating performance. Materials Today Communications, 2022, 31, 103569.	0.9	1
575	Theoretical investigations of Janus WSeTe monolayer and related van der Waals heterostructures with promising thermoelectric performance. Applied Surface Science, 2022, 593, 153402.	3.1	14
576	Monolayer SnI2: An Excellent p-Type Thermoelectric Material with Ultralow Lattice Thermal Conductivity. Materials, 2022, 15, 3147.	1.3	11
577	Highly tunable and strongly bound exciton in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>MoSi</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">N</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:mrow></mml:math> via strain engineering. Physical Review B, 2022, 105, .	1.1	11
578	First principles calculations investigation of optoelectronic properties and photocatalytic CO2 reduction of (MoSi2N4)5-n/(MoSiGeN4)n in-plane heterostructures. Results in Physics, 2022, 37, 105549.	2.0	19
579	Mechanical, optical and thermoelectric properties of Janus BiTeCl monolayer. Journal of Physics and Chemistry of Solids, 2022, 167, 110758.	1.9	10
580	Study on the Electronic Structure and Optical Properties of Two-dimensional Monolayer MoSi₂X₄ (X=N, P, As). Acta Chimica Sinica, 2022, 80, 510.	0.5	3
581	The quantum confinement effects on the electronic properties of monolayer GeS nanoribbon with tube-edged reconstruction. Nanotechnology, 2022, 33, 345202.	1.3	2

#	Article	IF	Citations
582	A Van Der Waals Cacl Semiconducting Electrene and Ferromagnetic Half-Metallicity Induced by Superhalogen Decoration. SSRN Electronic Journal, 0, , .	0.4	0
583	Constructing two-dimensional holey graphyne with unusual annulative Ï€-extension. Matter, 2022, 5, 2306-2318.	5.0	34
584	A DFT study of two-dimensional P2Si monolayer modified by single transition metal (Sc-Cu) atoms for efficient electrocatalytic CO2 reduction. Chinese Chemical Letters, 2023, 34, 107579.	4.8	5
585	Mechanical, electronic and photocatalytic properties of binary Ge-based materials GeX₂ (X) Tj ETQq1 1 0.784314 rgBT /O	2.7	9
586	Ab initio high-throughput screening of transition metal double chalcogenide monolayers as highly efficient bifunctional catalysts for photochemical and photoelectrochemical water splitting. Journal of Materials Chemistry A, 2022, 10, 14060-14069.	5.2	7
587	An emerging bidirectional auxetic post-phosphorene Îµ-SnO monolayer: A promising Janus semiconductor with photocatalytic activity for solar-driven water splitting reaction. International Journal of Hydrogen Energy, 2022, 47, 24761-24776.	3.8	9
588	Epitaxial growth of inch-scale single-crystal transition metal dichalcogenides through the patching of unidirectionally orientated ribbons. Nature Communications, 2022, 13, .	5.8	34
589	Carrier mobility predicted by born effective charge in Janus transition metal dichalcogenides monolayers. International Journal of Modern Physics C, 0, , .	0.8	0
590	Theoretical Prediction of the Monolayer Hf2Br4 as Promising Thermoelectric Material. Materials, 2022, 15, 4120.	1.3	2
591	Strain-Enhanced Thermoelectric Performance in GeS2 Monolayer. Materials, 2022, 15, 4016.	1.3	4
592	The metallic C6S monolayer with high specific capacity for K-ion batteries. Materials Today Chemistry, 2022, 25, 100951.	1.7	3
593	XSnS₃ (X = Ga, In) monolayer semiconductors as photo-catalysts for water splitting: a first principles study. Journal of Materials Chemistry C, 2022, 10, 11412-11423.	2.7	6
594	2d Boron-Nitride Featuring B4 Tetrahedros: an Efficient Photocatalyst for Water Splitting. SSRN Electronic Journal, 0, , .	0.4	0
595	Strain-tunable charge carrier transport properties and optical properties of CrI₃> monolayer using first-principles. Wuli Xuebao/Acta Physica Sinica, 2022, .	0.2	0
596	High-Performance Thermoelectric Î“-Gese and its Group-Iv Monochalcogenide Isostructural Family. SSRN Electronic Journal, 0, , .	0.4	0
597	Computational discovery of In₂XY₂ (X, Y = S, Se, and Te; X â‰ Y) monolayers as multifunctional energy conversion materials. Journal of Materials Chemistry C, 0, , .	2.7	4
598	Probing Strain-Induced Effects on Performance of Low-Dimensional Hybrid Perovskites for Solar Energy Harvesting. ACS Applied Materials & Interfaces, 2022, 14, 34603-34611.	4.0	3
599	Direct Z-Scheme Photocatalytic System: Insights into the Formative Factors of Photogenerated Carriers Transfer Channel from Ultrafast Dynamics. ACS Catalysis, 2022, 12, 9570-9578.	5.5	32

#	Article	IF	Citations
600	The BS Nanotubes with High Carrier Mobility for Potential Photocatalytic Hydrolysis Applications: First-Principles Study. Journal of Electronic Materials, 2022, 51, 6002-6010.	1.0	1
601	Janus Ga₂SSe nanotubes as efficient photocatalyst for overall water splitting. Nanotechnology, 2022, 33, 465703.	1.3	5
602	A novel two-dimensional transition metal dichalcogenide as water splitting photocatalyst with excellent performances. Frontiers in Chemistry, 0, 10, .	1.8	1
603	A van der Waals CaCl semiconducting electrene and ferromagnetic half-metallicity induced by superhalogen decoration. Materials Today Communications, 2022, 32, 104176.	0.9	0
605	Strain modulated electronic and optical properties of laterally stitched MoSi2N4/XSi2N4 (X=W, Ti) 2D heterostructures. Physica E: Low-Dimensional Systems and Nanostructures, 2022, 144, 115471.	1.3	12
606	First-principles study on the electronic properties of layered Ga2O3/TeO2 heterolayers for high-performance electronic devices. Applied Surface Science, 2022, 602, 154382.	3.1	4
607	Thermoelectric properties of monolayer MoSi2N4 and MoGe2N4 with large Seebeck coefficient and high carrier mobility: A first principles study. Journal of Solid State Chemistry, 2022, 315, 123447.	1.4	13
608	Two novel easily exfoliated quaternary chalcogenides with high performance of photocatalytic hydrogen production. Applied Surface Science, 2022, 604, 154555.	3.1	13
609	Quasi-Planar tetracoordiante carbon Networks with tunable electronic properties combined with Ultra-High carrier mobility and optical absorption Coefficient: Two-dimensional Be2C. Applied Surface Science, 2022, 604, 154644.	3.1	5
610	Tuning electronic behaviors of WS2 by molecular doping. Materials Today Communications, 2022, 33, 104226.	0.9	2
611	A family of Li B monolayers with a wide spectrum of potential applications. Applied Surface Science, 2022, 604, 154317.	3.1	31
612	Decoupling trade-off thermoelectric relations and controlled out-plane lattice dynamics in few-layer MoS2. Applied Physics Letters, 2022, 121, .	1.5	1
613	2D boron-nitride featuring B4 tetrahedros: An efficient photocatalyst for water splitting. Molecular Catalysis, 2022, 531, 112662.	1.0	0
614	A new phosphorene allotrope: the assembly of phosphorene nanoribbons and chains. Physical Chemistry Chemical Physics, 2022, 24, 22572-22579.	1.3	4
615	Two-dimensional type-II XSi₂P₄/MoTe₂ (X = Mo, W) van der Waals heterostructures with tunable electronic and optical properties. New Journal of Chemistry, 0, , .	1.4	3
616	Abnormally weak intervalley electron scattering in MoS₂ monolayer: insights from the matching between electron and phonon bands. Nanoscale, 2022, 14, 12007-12012.	2.8	2
617	Prediction of highly stable two-dimensional materials of boron and phosphorus: structural and electronic properties. Physical Chemistry Chemical Physics, 0, , .	1.3	0
618	High dimensionless figure of merit of the ZrI2 monolayer identified based on intrinsic carrier concentration and bipolar effect. Applied Physics Letters, 2022, 121, .	1.5	6

#	Article	IF	Citations
619	Phonon-limited transport of two-dimensional semiconductors: Quadrupole scattering and free carrier screening. Physical Review B, 2022, 106, .	1.1	8
620	<scp>2Dâ€TMDs</scp> based electrode material for supercapacitor applications. International Journal of Energy Research, 2022, 46, 22336-22364.	2.2	37
621	High-performance electron mobility and photoabsorption in Bi2O2Se nanoribbons. Applied Physics Letters, 2022, 121, .	1.5	3
622	Thermoelectric performance of novel single-layer ZrTeSe₄. Physical Chemistry Chemical Physics, 2022, 24, 28250-28256.	1.3	2
623	Penta-BCN monolayer: a metal-free photocatalyst with a high carrier mobility for water splitting. Physical Chemistry Chemical Physics, 2022, 24, 26863-26869.	1.3	1
624	The GaPS₂Se₂ monolayer: a novel stable 2D Janus semiconductor with anisotropic properties for spontaneous water splitting under the irradiation of solar light. Journal of Materials Chemistry C, 2022, 10, 17135-17144.	2.7	9
625	First-principles investigation of potential water-splitting photocatalysts and photovoltaic materials based on Janus transition-metal dichalcogenide/WSe₂ heterostructures. RSC Advances, 2022, 12, 31518-31524.	1.7	1
626	Electronic Band Gap Tuning and Calculations of Mechanical Strength and Deformation Potential by Applying Uniaxial Strain on MX₂ (M = Cr, Mo, W and X = S, Se) Monolayers and Nanoribbons. ACS Omega, 2022, 7, 40054-40066.	1.6	7
627	Pâ€Type 2D Semiconductors for Future Electronics. Advanced Materials, 2023, 35, .	11.1	15
628	Monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>C</mml:mi><mml:mn>2</mml:mn><mml:mo>/</mml:mo> (<mml:math) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 382 Td (xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow ideal IR-VIS light tran. Physical Review Materials, 2022, 6, .	0.9	2
629	Two-Dimensional Layered Simple Aliphatic Monoammonium Tin Perovskite Thin Films and Potential Applications in Field-Effect Transistors. ACS Applied Materials & Interfaces, 2022, 14, 50401-50413.	4.0	7
630	High-performance thermoelectric monolayer Î³-GeSe and its group-IV monochalcogenide isostructural family. Chemical Engineering Journal, 2023, 454, 140242.	6.6	16
631	Electronic structure, vibrational properties, and optical spectra of two- and three-dimensional hexagonal InSe: Layer-dependent ab initio calculations. Physical Review Materials, 2022, 6, .	0.9	1
632	MgXN₂ (X = Hf/Zr) Monolayers: Auxetic Semiconductor with Highly Anisotropic Optical/Mechanical Properties and Carrier Mobility. Journal of Physical Chemistry Letters, 2022, 13, 10534-10542.	2.1	2
633	Theoretical study on the electronic and transport properties of top and edge contact MoSi2N4/Au heterostructure. Physics Letters, Section A: General, Atomic and Solid State Physics, 2022, 456, 128535.	0.9	2
634	A type-II NGyne/GaSe heterostructure with high carrier mobility and tunable electronic properties for photovoltaic application. Nanotechnology, 0, , .	1.3	3
635	First-principles study on bilayer SnP₃ as a promising thermoelectric material. Physical Chemistry Chemical Physics, 2022, 24, 29693-29699.	1.3	2
636	Model for Nanopore Formation in Two-Dimensional Materials by Impact of Highly Charged Ions. Nano Letters, 2022, 22, 9679-9684.	4.5	5

#	Article	IF	Citations
637	High anisotropy in titanium trisulfide monolayer: Ultrahigh carrier mobilities and large excitonic absorption. Chemical Physics, 2023, 566, 111796.	0.9	1
638	Î±-In2O3 monolayer: A promising material as field-effect phototransistor and out-of-plane piezoelectric device. Applied Surface Science, 2023, 614, 156198.	3.1	10
639	Ni-Based Janus Pentagonal Monolayers as Promising Water-Splitting Photocatalysts. Journal of Physical Chemistry C, 2022, 126, 20354-20363.	1.5	6
640	Tuning the Electronic and Mechanical Properties of Kagome Graphene via Hydrogenation. Journal of Physical Chemistry C, 2022, 126, 21426-21437.	1.5	1
641	Stability, Electronic Structures, and Thermoelectric Properties of 2D Janus LiZnX (X = N, P, As). ACS Applied Energy Materials, 2022, 5, 14815-14824.	2.5	3
642	Boost solar-to-hydrogen efficiency by constructing heterostructures with the pristine and Se/Te-doped AgInP2S6 monolayers. Applied Surface Science, 2023, 614, 156254.	3.1	8
643	Two-Dimensional Halide Perovskite Materials Featuring 2-(Methylthio)ethylamine Organic Spacers for Efficient Solar and Thermal Energy Harvesting. Journal of Physical Chemistry C, 2022, 126, 21518-21526.	1.5	1
644	A semiconductor Sc₂S₃ monolayer with ultrahigh carrier mobility for UV blocking filter application. Physical Chemistry Chemical Physics, 2023, 25, 5550-5558.	1.3	1
645	Janus Î³-GeSSe Monolayer as a High-Performance Material for Photocatalysis and Thermoelectricity. ACS Applied Energy Materials, 2023, 6, 910-919.	2.5	9
646	Kirigami-Inspired Thermal Regulator. Physical Review Applied, 2023, 19, .	1.5	2
647	Metal halide HgI2 monolayer with auxetic property and photocatalysis application. Computational Materials Science, 2023, 219, 112007.	1.4	1
648	Cmc21-CdO: Emerging direct band gap semiconductor with ultrahigh mobility and enhanced visible-light optical absorptions. Physica B: Condensed Matter, 2023, 652, 414645.	1.3	1
649	Thermoelectric properties of two-dimensional double transition metal MXenes: ScYC<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si100.svg" display="inline" id="d1e1224"><mml:msub><mml:mrow><mml:mi>T</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:	1.9	7
650	Switchable large-gap quantum spin Hall state in the two-dimensional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>M</mml:mi><mml:mrow><mml:msub><mml:mi mathvariant="normal">Si</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi>Z</mml:mi><mml:mn>4</mml:mn></mml:msub></mml: class of materials. Physical Review B, 2022, 106, .	1.1	8
651	Investigation of adsorption behaviors, and electronic and magnetic properties for small gas molecules adsorbed on Pt-doped arsenene by density functional calculations. RSC Advances, 2023, 13, 3807-3817.	1.7	6
652	Two-dimensional MX₂Y₄ systems: ultrahigh carrier transport and excellent hydrogen evolution reaction performances. Physical Chemistry Chemical Physics, 2023, 25, 4519-4527.	1.3	17
653	Investigating the magnetic, thermoelectric, and thermodynamic properties of the GeCH3 single-layer considering external magnetic field, doping, and strain. Scientific Reports, 2023, 13, .	1.6	9
654	A Novel InSeâ€FET Biosensor based on Carrierâ€Scattering Regulation Derived from the DNA Probe Assemblyâ€Determined Electrostatic Potential Distribution. Advanced Functional Materials, 2023, 33, .	7.8	8

#	Article	IF	Citations
655	Prediction of Semiconducting 2D Nanofilms of Janus WSi₂P₂As₂ for Applications in Sub-5 nm Field-Effect Transistors. ACS Applied Nano Materials, 2023, 6, 1541-1548.	2.4	4
656	Monolayer BP: A Promising Photocatalyst for Water Splitting with High Carrier Mobility. Catalysis Letters, 2024, 154, 42-49.	1.4	0
657	Efficient photocatalytic hydrogen evolution and CO₂reduction by HfSe₂/GaAs₃and ZrSe₂/GaAs₃heterostructures with direct Z-schemes. Physical Chemistry Chemical Physics, 2023, 25, 8861-8870.	1.3	18
658	Systematic investigation of the mechanical, electronic, and interfacial properties of high mobility monolayer InAs from first-principles calculations. Physical Chemistry Chemical Physics, 2023, 25, 10769-10777.	1.3	2
659	2D Mg2M2X5 (MÂ=ÂB, Al, Ga, In, Tl; XÂ=ÂS, Se, Te) monolayers: Novel stable semiconductors for water splitting photocatalysts. Applied Surface Science, 2023, 621, 156892.	3.1	6
660	Nanodevice design and electronic transport properties of Ge2Sb2-based monolayers. Physica E: Low-Dimensional Systems and Nanostructures, 2023, 150, 115681.	1.3	3
661	First-principles study of thermoelectric performance of monolayer Ge₂<i>X</i>₄S₂ (<i>X </i>= P, As). Wuli Xuebao/Acta Physica Sinica, 2023, 72, 077201.	0.2	0
662	Triggering superconductivity, semiconducting states, and ternary valley structure in graphene via functionalization with Si-N layers. Physical Review B, 2023, 107, .	1.1	2
663	Indirect Z-scheme hydrogen production photocatalyst based on two-dimensional GeC/MoSi2N4 van der Waals heterostructures. International Journal of Hydrogen Energy, 2023, 48, 18301-18314.	3.8	9
664	Graphene/MoS2-Nanoribbons/Graphene Field-Effect Photodetectors: A Numerical Study. Journal of Electronic Materials, 2023, 52, 3046-3057.	1.0	2
665	Achieving type-II SnSSe/as van der waals heterostructure with satisfactory oxygen tolerance for optoelectronic and photovoltaic applications. Journal of Solid State Chemistry, 2023, 321, 123925.	1.4	3
666	Origin of contrasting trends of intrinsic electron mobility with tensile strain in hexagonal <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></m and triangular <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>PdSe</mml:mi><mml:mn>2</mml:mn></m Physical Review B, 2023, 107, .	1.1	1
667	Current Research Trends of Graphene Nanotechnology. , 2023, , 106-123.		0
668	Two-dimensional borocarbonitrides for photocatalysis and photovoltaics. Journal of Materials Chemistry C, 2023, 11, 3875-3884.	2.7	23
669	First-Principle Calculations to Investigate the Elastic, Thermoelectric, and Electronic Performances of XRhSn (Xâ€‰=â€‰V, Nb, Ta) Half-Heusler Compounds. Journal of Superconductivity and Novel Magnetism, 0, , .	0.8	1
670	Coupling of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>MoS</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></m Excitons with Lattice Phonons and Cavity Vibrational Phonons in Hybrid Nanobeam Cavities. Physical Review Letters, 2023, 130, .	2.9	4
671	High thermoelectric performance of two-dimensional SiPGaS/As heterostructures. Nanoscale, 2023, 15, 7302-7310.	2.8	3
672	Emerging Versatile Twoâ€Dimensional MoSi₂N₄ Family. Advanced Functional Materials, 2023, 33, .	7.8	27

#	Article	IF	Citations
673	Geometric, Electronic, and Transport Predictions on Two-Dimensional Semiconducting Silicon with Kagome Lattice: Implications for Nanoscale Field-Effect Transistor Applications. ACS Applied Nano Materials, 2023, 6, 6849-6857.	2.4	1
674	MatHub-2d: A database for transport in 2D materials and a demonstration of high-throughput computational screening for high-mobility 2D semiconducting materials. Science China Materials, 2023, 66, 2768-2776.	3.5	6
675	As-based ternary Janus monolayers for efficient thermoelectric and photocatalytic applications. Journal of Materials Chemistry A, 2023, 11, 10413-10424.	5.2	10
734	Graphene Edge Structures: Folding, Tubing, and Twisting. , 2023, , 1-39.		0