Atomically Thin Arsenene and Antimonene: Semimetala Bandâ€Gap Transitions

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Citation Report

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1	Introduction to carbon-based nanostructures. , 0, , 1-10.		0
2	Electronic properties of carbon-based nanostructures. , 0, , 11-90.		0
3	Single-layer crystalline phases of antimony: Antimonenes. Physical Review B, 2015, 91, .	1.1	261
4	Single Layer Bismuth Iodide: Computational Exploration of Structural, Electrical, Mechanical and Optical Properties. Scientific Reports, 2015, 5, 17558.	1.6	67
5	Strain-driven band inversion and topological aspects in Antimonene. Scientific Reports, 2015, 5, 16108.	1.6	203
6	GeSe monolayer semiconductor with tunable direct band gap and small carrier effective mass. Applied Physics Letters, 2015, 107, .	1.5	148
7	WS_2 saturable absorber for dissipative soliton mode locking at 106 and 155 µm. Optics Express, 2015, 23, 27509.	1.7	187
8	Synthesis of Atomically Thin Boron Films on Copper Foils. Angewandte Chemie - International Edition, 2015, 54, 15473-15477.	7.2	247
9	Synthetic Covalent and Nonâ€Covalent 2D Materials. Angewandte Chemie - International Edition, 2015, 54, 13876-13894.	7.2	157
11	Innovation and discovery of grapheneâ€ike materials via densityâ€functional theory computations. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2015, 5, 360-379.	6.2	205
13	Unexpected buckled structures and tunable electronic properties in arsenic nanosheets: insights from first-principles calculations. Journal of Physics Condensed Matter, 2015, 27, 225304.	0.7	33
14	Atomically Thin Group V Elemental Films: Theoretical Investigations of Antimonene Allotropes. ACS Applied Materials & Interfaces, 2015, 7, 11490-11496.	4.0	416
15	Size and edge roughness effects on thermal conductivity of pristine antimonene allotropes. Chemical Physics Letters, 2015, 641, 169-172.	1.2	60
16	2D materials via liquid exfoliation: a review on fabrication and applications. Science Bulletin, 2015, 60, 1994-2008.	4.3	270
17	Structural and electronic properties of atomically thin germanium selenide polymorphs. Science China Materials, 2015, 58, 929-935.	3.5	54
18	Electronic Structure and Carrier Mobility of Two-Dimensional α Arsenic Phosphide. Journal of Physical Chemistry C, 2015, 119, 20210-20216.	1.5	65
19	Versatile Single-Layer Sodium Phosphidostannate(II): Strain-Tunable Electronic Structure, Excellent Mechanical Flexibility, and an Ideal Gap for Photovoltaics. Journal of Physical Chemistry Letters, 2015, 6, 2682-2687.	2.1	60
20	Optimizing Hybridization of 1T and 2H Phases in MoS ₂ Monolayers to Improve Capacitances of Supercapacitors. Materials Research Letters, 2015, 3, 177-183.	4.1	149

#	Article	IF	CITATIONS
21	Electronic Structure and Carrier Mobilities of Arsenene and Antimonene Nanoribbons: A First-Principle Study. Nanoscale Research Letters, 2015, 10, 955.	3.1	137
22	Controllable synthesis and morphology evolution from two-dimensions to one-dimension of layered K ₂ V ₆ O ₁₆ ·nH ₂ O. CrystEngComm, 2015, 17, 3777-3782.	1.3	11
23	Structural and Electronic Properties of Layered Arsenic and Antimony Arsenide. Journal of Physical Chemistry C, 2015, 119, 6918-6922.	1.5	210
24	Topological Insulating Phases in Two-Dimensional Bismuth-Containing Single Layers Preserved by Hydrogenation. Journal of Physical Chemistry C, 2015, 119, 23599-23606.	1.5	95
25	Electronic properties of monolayer and bilayer arsenene under in-plain biaxial strains. Superlattices and Microstructures, 2015, 86, 501-507.	1.4	52
26	The electronic structures of group-V–group-IV hetero-bilayer structures: a first-principles study. Physical Chemistry Chemical Physics, 2015, 17, 27769-27776.	1.3	54
27	Hydrogen-induced stabilization and tunable electronic structures of penta-silicene: a computational study. Journal of Materials Chemistry C, 2015, 3, 11341-11348.	2.7	85
28	Noncovalent Molecular Doping of Twoâ€Đimensional Materials. ChemNanoMat, 2015, 1, 542-557.	1.5	41
29	Quantum spin hall insulators in strain-modified arsenene. Nanoscale, 2015, 7, 19152-19159.	2.8	151
30	Novel dual-petal nanostructured WS ₂ @MoS ₂ with enhanced photocatalytic performance and a comprehensive first-principles investigation. Journal of Materials Chemistry A, 2015, 3, 20225-20235.	5.2	41
31	Hydrogenated arsenenes as planar magnet and Dirac material. Applied Physics Letters, 2015, 107, .	1.5	137
32	Stable, highly-responsive and broadband photodetection based on large-area multilayered WS ₂ films grown by pulsed-laser deposition. Nanoscale, 2015, 7, 14974-14981.	2.8	274
33	Not your familiar two dimensional transition metal disulfide: structural and electronic properties of the PdS ₂ monolayer. Journal of Materials Chemistry C, 2015, 3, 9603-9608.	2.7	135
34	Ultrahigh-Capacity Molecular Hydrogen Storage of a Lithium-Decorated Boron Monolayer. Journal of Physical Chemistry C, 2015, 119, 19681-19688.	1.5	49
35	Theoretical investigation on two-dimensional non-traditional carbon materials employing three-membered ring and four-membered ring as building blocks. Carbon, 2015, 95, 1033-1038.	5.4	22
36	Temperature-dependent dielectric functions in atomically thin graphene, silicene, and arsenene. Applied Physics Letters, 2015, 107, .	1.5	17
37	Size, vacancy and temperature effects on Young's modulus of silicene nanoribbons. RSC Advances, 2015, 5, 96052-96061.	1.7	19
38	Graphene against Other Twoâ€Dimensional Materials: A Comparative Study on the Basis of Electronic Applications. , 2016, , .		4

ARTICLE IF CITATIONS # Tunable electronic structure and enhanced optical properties in guasi-metallic 39 2.7 27 hydrogenated/fluorinated SiC heterobilayer. Journal of Materials Chemistry C, 2016, 4, 7406-7414. Mechanical Isolation of Highly Stable Antimonene under Ambient Conditions. Advanced Materials, 11.1 444 2016, 28, 6332-6336. Electronic structures of p-type impurity in ZrS₂ monolayer. RSC Advances, 2016, 6, 41 1.7 6 58325-58328. The electronic structure and spin–orbit-induced spin splitting in antimonene with vacancy defects. RSC Advances, 2016, 6, 66140-66146. Semiconducting Groupâ€...15 Monolayers: A Broad Range of Band Gaps and High Carrier Mobilities. 43 315 1.6 Angewandte Chemie, 2016, 128, 1698-1701. Prediction of spin-dependent electronic structure in 3<i>d</i> 1.5 Applied Physics Letters, 2016, 109, . Enhanced hydrogen evolution performance of ultra thin nanoslice/nanopetal structured XS2 (X = W,) Tj EŢQq0 0 0 rgBT /Overl 45 Stable single-layer structure of group-V elements. Physical Review B, 2016, 94, . 1.1 108 46 47 An array of layers in silicon sulfides: Chainlike and monolayer. Physical Review B, 2016, 94, . 1.1 6 Evidencing the existence of exciting half-metallicity in two-dimensional TiCl3 and VCl3 sheets. 1.6 Scientific Reports, 2016, 6, 19407 Two-dimensional semiconductors: The case of silver thiolates. Applied Physics Letters, 2016, 109, . 49 1.5 8 Strain engineering band gap, effective mass and anisotropic Dirac-like cone in monolayer arsenene. AIP Advances, 2016, 6, . Electronic structure and optical properties of graphene/stanene heterobilayer. Physical Chemistry 51 1.3 115 Chemical Physics, 2016, 18, 16302-16309. First-Principles Study of Sulfur Dioxide Sensor Based on Phosphorenes. IEEE Electron Device Letters, 2.2 2016, 37, 660-662. Quantum spin Hall insulators in functionalized arsenene (AsX, X = F, OH and CH₃) 53 2.8 63 monolayers with pronounced light absorption. Nanoscale, 2016, 8, 9657-9666. Computational study of the structure, UV-vis absorption spectra and conductivity of 54 24 biphenylene-based polymers and their boron nitride analogues. RSC Advances, 2016, 6, 49505-49516. Stability, electronic structure and magnetic properties of vacancy and nonmetallic atom-doped buckled arsenene: first-principles study. RSC Advances, 2016, 6, 43794-43801. 55 1.7 31 Synthesis and structure determinantion of the first lead arsenide phosphide Pb2As x P14 \hat{a} (x ~ 3.7). Zeitschrift Fur Naturforschung - Section B Journal of Chemical Sciences, 2016, 71, 603-609.

#	Article	IF	CITATIONS
57	Two-Dimensional Phosphorus Porous Polymorphs with Tunable Band Gaps. Journal of the American Chemical Society, 2016, 138, 7091-7098.	6.6	119
58	The electronic and optical properties of novel germanene and antimonene heterostructures. Journal of Materials Chemistry C, 2016, 4, 5434-5441.	2.7	154
59	Intrinsic quantum spin Hall and anomalous Hall effects in h-Sb/Bi epitaxial growth on a ferromagnetic MnO ₂ thin film. Nanoscale, 2016, 8, 11202-11209.	2.8	16
60	A promising two-dimensional solar cell donor: Black arsenic–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
61	Design of lateral heterostructure from arsenene and antimonene. 2D Materials, 2016, 3, 035017.	2.0	66
62	A first-principle study of H <inf>2</inf> , CO, CH <inf>4</inf> , H <inf>2</inf> S and SO <inf>2</inf> gas molecules on antimonene. , 2016, , .		1
63	2D Structures Beyond Graphene. Semiconductors and Semimetals, 2016, 95, 1-33.	0.4	8
64	Theoretical insight into structure stability, elastic property and carrier mobility of monolayer arsenene under biaxial strains. Superlattices and Microstructures, 2016, 100, 324-334.	1.4	32
65	A first-principles study of transition metal doped arsenene. Superlattices and Microstructures, 2016, 100, 131-141.	1.4	26
66	Hydrothermal Synthesis of a rGO Nanosheet Enwrapped NiFe Nanoalloy for Superior Electrocatalytic Oxygen Evolution Reactions. Chemistry - A European Journal, 2016, 22, 14480-14483.	1.7	29
67	2D nanosheets-based novel architectures: Synthesis, assembly and applications. Nano Today, 2016, 11, 483-520.	6.2	95
68	An AlAs/germanene heterostructure with tunable electronic and optical properties via external electric field and strain. Journal of Materials Chemistry C, 2016, 4, 8171-8178.	2.7	81
69	Anisotropic Thermoelectric Response in Two-Dimensional Puckered Structures. Journal of Physical Chemistry C, 2016, 120, 18841-18849.	1.5	84
70	Growth of centimeter-scale high-quality In ₂ Se ₃ films for transparent, flexible and high performance photodetectors. Journal of Materials Chemistry C, 2016, 4, 8094-8103.	2.7	83
71	The realization of half-metal and spin-semiconductor for metal adatoms on arsenene. Applied Surface Science, 2016, 390, 60-67.	3.1	31
72	Synergistic Effect of Hybrid Multilayer In ₂ Se ₃ and Nanodiamonds for Highly Sensitive Photodetectors. ACS Applied Materials & Interfaces, 2016, 8, 20200-20211.	4.0	59
73	Tunable electronic structures of germanium monochalcogenide nanosheets via light non-metallic atom functionalization: a first-principles study. Physical Chemistry Chemical Physics, 2016, 18, 23080-23088.	1.3	18
74	Tunable electronic and magnetic properties of twoâ€dimensional materials and their oneâ€dimensional derivatives. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2016, 6, 324-350. 	6.2	71

		LPORT	
#	Article	IF	CITATIONS
75	Few‣ayer Antimonene by Liquidâ€Phase Exfoliation. Angewandte Chemie, 2016, 128, 14557-14561.	1.6	74
76	Influences of Stone–Wales defects on the structure, stability and electronic properties of antimonene: A first principle study. Physica B: Condensed Matter, 2016, 503, 126-129.	1.3	23
77	Hydrothermal synthesis of layer-controlled MoS2/graphene composite aerogels for lithium-ion battery anode materials. Applied Surface Science, 2016, 390, 209-215.	3.1	72
78	Edge or interface effect on bandgap openings in graphene nanostructures: A thermodynamic approach. Coordination Chemistry Reviews, 2016, 326, 1-33.	9.5	16
79	Few‣ayer Antimonene by Liquidâ€Phase Exfoliation. Angewandte Chemie - International Edition, 2016, 55, 14345-14349.	7.2	346
80	Multiple unpinned Dirac points in group-Va single-layers with phosphorene structure. Npj Computational Materials, 2016, 2, .	3.5	57
81	Electronic Structures and Li-Diffusion Properties of Group IV–V Layered Materials: Hexagonal Germanium Phosphide and Germanium Arsenide. Journal of Physical Chemistry C, 2016, 120, 23842-23850.	1.5	41
82	Schottky barrier-gated high performance photodetectors using a water-borne polymeric colloid. Nanoscale, 2016, 8, 14643-14649.	2.8	3
83	Emergence of Dirac and quantum spin Hall states in fluorinated monolayer As and AsSb. Physical Review B, 2016, 93, .	1.1	30
84	Direct band gaps in group IV-VI monolayer materials: Binary counterparts of phosphorene. Physical Review B, 2016, 93, .	1.1	156
85	Band alignment of two-dimensional semiconductors for designing heterostructures with momentum space matching. Physical Review B, 2016, 94, .	1.1	347
86	Single and bilayer bismuthene: Stability at high temperature and mechanical and electronic properties. Physical Review B, 2016, 94, .	1.1	295
87	Computational studies on the structural, electronic and optical properties of graphene-like MXenes (M ₂ CT ₂ , M = Ti, Zr, Hf; T = O, F, OH) and their potential applications as visible-light driven photocatalysts. Journal of Materials Chemistry A, 2016, 4, 12913-12920.	5.2	205
88	Polymorphism in Zintl Phases ACd ₄ Pn ₃ : Modulated Structures of NaCd ₄ Pn ₃ with Pn = P, As. Inorganic Chemistry, 2016, 55, 7764-7776.	1.9	11
89	Twoâ€Dimensional Phosphorus Oxides as Energy and Information Materials. Angewandte Chemie - International Edition, 2016, 55, 8575-8580.	7.2	35
90	Tuning Surface Properties of Low Dimensional Materials via Strain Engineering. Small, 2016, 12, 4028-4047.	5.2	56
91	Electronic properties of a pristine and NH ₃ /NO ₂ adsorbed buckled arsenene monolayer. RSC Advances, 2016, 6, 72634-72642.	1.7	27
92	Optical Identification of Topological Defect Types in Monolayer Arsenene by First-Principles Calculation. Journal of Physical Chemistry C, 2016, 120, 24917-24924.	1.5	24

#	Article	IF	CITATIONS
93	Two-dimensional antimonene single crystals grown by van der Waals epitaxy. Nature Communications, 2016, 7, 13352.	5.8	798
94	Theoretical perspective of energy harvesting properties of atomically thin Bil ₃ . Journal of Materials Chemistry A, 2016, 4, 19086-19094.	5.2	47
95	Stability of single-layer and multilayer arsenene and their mechanical and electronic properties. Physical Review B, 2016, 94, .	1.1	93
96	Optical properties of single-layer and bilayer arsenene phases. Physical Review B, 2016, 94, .	1.1	67
97	Design of graphene-like gallium nitride and WS2/WSe2 nanocomposites for photocatalyst applications. Science China Materials, 2016, 59, 1027-1036.	3.5	65
98	Erbium-doped fiber laser passively mode locked with few-layer WSe2/MoSe2 nanosheets. Scientific Reports, 2016, 6, 23583.	1.6	168
99	Predicted low thermal conductivities in antimony films and the role of chemical functionalization. Physical Chemistry Chemical Physics, 2016, 18, 30061-30067.	1.3	25
100	Ab initio study of magnetic properties in the adsorption of transition-metal atoms on arsenene. JETP Letters, 2016, 104, 557-562.	0.4	11
101	Unexpected electronic structure of the alloyed and doped arsenene sheets: First-Principles calculations. Scientific Reports, 2016, 6, 29114.	1.6	58
102	Comparative study of thermal properties of group-VA monolayers with buckled and puckered honeycomb structures. Physical Review B, 2016, 94, .	1.1	56
103	Twoâ€Dimensional Phosphorus Oxides as Energy and Information Materials. Angewandte Chemie, 2016, 128, 8717-8722.	1.6	9
104	Partial Oxidized Arsenene: Emerging Tunable Direct Bandgap Semiconductor. Scientific Reports, 2016, 6, 24981.	1.6	33
105	A theoretical review on electronic, magnetic and optical properties of silicene. Reports on Progress in Physics, 2016, 79, 126501.	8.1	155
106	Performance of arsenene and antimonene double-gate MOSFETs from first principles. Nature Communications, 2016, 7, 12585.	5.8	278
107	Multilayer Dye Aggregation at Dye/TiO2 Interface via π…π Stacking and Hydrogen Bond and Its Impact on Solar Cell Performance: A DFT Analysis. Scientific Reports, 2016, 6, 35893.	1.6	30
108	Quantum spin Hall insulator in halogenated arsenene films with sizable energy gaps. Scientific Reports, 2016, 6, 28487.	1.6	37
109	Nonlinear Saturable Absorption of Liquidâ€Exfoliated Molybdenum/Tungsten Ditelluride Nanosheets. Small, 2016, 12, 1489-1497.	5.2	211
110	SiTe monolayers: Si-based analogues of phosphorene. Journal of Materials Chemistry C, 2016, 4, 6353-6361.	2.7	54

#	Article	IF	CITATIONS
111	Interaction of Adatoms and Molecules with Single-Layer Arsenene Phases. Journal of Physical Chemistry C, 2016, 120, 14345-14355.	1.5	98
112	Two-dimensional BX (X = P, As, Sb) semiconductors with mobilities approaching graphene. Nanoscale, 2016, 8, 13407-13413.	2.8	122
113	Semiconducting Groupâ€15 Monolayers: A Broad Range of Band Gaps and High Carrier Mobilities. Angewandte Chemie - International Edition, 2016, 55, 1666-1669.	7.2	651
114	N- and p-type doping of antimonene. RSC Advances, 2016, 6, 14620-14625.	1.7	57
115	Monolayer hexagonal arsenene with tunable electronic structures and magnetic properties via impurity doping. Journal of Materials Chemistry C, 2016, 4, 362-370.	2.7	64
116	Effective removal of fluoride by porous MgO nanoplates and its adsorption mechanism. Journal of Alloys and Compounds, 2016, 675, 292-300.	2.8	103
117	First-principles analysis of seven novel phases of phosphorene with chirality. RSC Advances, 2016, 6, 22277-22284.	1.7	8
118	Modulating the electronic properties of monolayer MoS2 through heterostructure with monolayer gray arsenic. Materials and Design, 2016, 96, 257-262.	3.3	25
119	Electronic and magnetic properties of SnSe monolayers doped by Ga, In, As, and Sb: a first-principles study. Physical Chemistry Chemical Physics, 2016, 18, 8158-8164.	1.3	42
120	Interactions between lasers and two-dimensional transition metal dichalcogenides. Chemical Society Reviews, 2016, 45, 2494-2515.	18.7	61
121	Electron Counting and a Large Family of Two-Dimensional Semiconductors. Chemistry of Materials, 2016, 28, 1994-1999.	3.2	52
122	Fast and large-area growth of uniform MoS ₂ monolayers on molybdenum foils. Nanoscale, 2016, 8, 2234-2241.	2.8	104
123	Tuning Phosphorene Nanoribbon Electronic Structure through Edge Oxidization. Journal of Physical Chemistry C, 2016, 120, 2149-2158.	1.5	28
124	A theoretical study on the electronic property of a new two-dimensional material molybdenum dinitride. Physics Letters, Section A: General, Atomic and Solid State Physics, 2016, 380, 768-772.	0.9	27
125	Indiene 2D monolayer: a new nanoelectronic material. RSC Advances, 2016, 6, 8006-8014.	1.7	45
126	Weak Van der Waals Stacking, Wide-Range Band Gap, and Raman Study on Ultrathin Layers of Metal Phosphorus Trichalcogenides. ACS Nano, 2016, 10, 1738-1743.	7.3	396
127	A high performance, visible to mid-infrared photodetector based on graphene nanoribbons passivated with HfO ₂ . Nanoscale, 2016, 8, 327-332.	2.8	74
128	First-principles study of two-dimensional van der Waals heterojunctions. Computational Materials Science, 2016, 112, 518-526.	1.4	88

#	Article	IF	CITATIONS
129	Effects of applied strain and electric field on small-molecule sensing by stanene monolayers. Journal of Materials Science, 2017, 52, 5083-5096.	1.7	36
130	Schwarzer Phosphor neu entdeckt: vom Volumenmaterial zu Monoschichten. Angewandte Chemie, 2017, 129, 8164-8185.	1.6	59
131	Black Phosphorus Rediscovered: From Bulk Material to Monolayers. Angewandte Chemie - International Edition, 2017, 56, 8052-8072.	7.2	407
132	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
133	Modulation of silicene properties by AsSb with van der Waals interaction. RSC Advances, 2017, 7, 5827-5835.	1.7	10
134	Fabrication and current-voltage characteristics of Mo 1â^x W x S 2 /graphene oxide heterojunction diode. Surface and Coatings Technology, 2017, 320, 520-526.	2.2	Ο
135	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
136	Ultrasmall WS ₂ Quantum Dots with Visible Fluorescence for Protection of Cells and Animal Models from Radiation-Induced Damages. ACS Biomaterials Science and Engineering, 2017, 3, 460-470.	2.6	56
137	Ideal strength and elastic instability in single-layer 8-Pmmn borophene. RSC Advances, 2017, 7, 8654-8660.	1.7	53
138	Structural, electronic, and magnetic properties in transition-metal-doped arsenene: Ab initio study. Japanese Journal of Applied Physics, 2017, 56, 015201.	0.8	5
139	Electronic and optical properties of α -InX (X = S, Se and Te) monolayer: Under strain conditions. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 1313-1320.	0.9	39
140	Structural and electronic properties of arsenic nitrogen monolayer. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 1102-1106.	0.9	28
141	Arsenene as a promising candidate for NO and NO 2 sensor: A first-principles study. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 1092-1096.	0.9	76
142	Twoâ€Dimensional Metal Halide Perovskites: Theory, Synthesis, and Optoelectronics. Small Methods, 2017, 1, 1600018.	4.6	115
143	Synthesis and chemistry of elemental 2D materials. Nature Reviews Chemistry, 2017, 1, .	13.8	671
144	Mo1â^' x W x S2-based photodetector fabrication and photoconductive characteristics. Japanese Journal of Applied Physics, 2017, 56, 032201.	0.8	2
145	Lateral topological crystalline insulator heterostructure. 2D Materials, 2017, 4, 025038.	2.0	10
146	The conflicting role of buckled structure in phonon transport of 2D group-IV and group-V materials. Nanoscale, 2017, 9, 7397-7407.	2.8	131

#	Article	IF	CITATIONS
147	Topology-Scaling Identification of Layered Solids and Stable Exfoliated 2D Materials. Physical Review Letters, 2017, 118, 106101.	2.9	262
148	Optical Identification of Few-Layer Antimonene Crystals. ACS Photonics, 2017, 4, 600-605.	3.2	62
149	Electronic properties of single-layer antimony: Tight-binding model, spin-orbit coupling, and the strength of effective Coulomb interactions. Physical Review B, 2017, 95, .	1.1	33
150	Many-body Effect, Carrier Mobility, and Device Performance of Hexagonal Arsenene and Antimonene. Chemistry of Materials, 2017, 29, 2191-2201.	3.2	244
151	Functionalization of Single-Layer Nitrogene by Vacancy, Adatoms, and Molecules. Journal of Physical Chemistry C, 2017, 121, 6329-6338.	1.5	16
152	Fluorosilicene/chlorosilicene bilayer semiconductor with tunable electronic and optical properties. Journal of Applied Physics, 2017, 121, 055701.	1.1	1
153	2D Monoelemental Arsenene, Antimonene, and Bismuthene: Beyond Black Phosphorus. Advanced Materials, 2017, 29, 1605299.	11.1	601
154	Self-Assembly of the Lateral In ₂ Se ₃ /CuInSe ₂ Heterojunction for Enhanced Photodetection. ACS Applied Materials & Interfaces, 2017, 9, 7288-7296.	4.0	57
155	Layer-stacking effect on electronic structures of bilayer arsenene. Europhysics Letters, 2017, 117, 27002.	0.7	17
156	Stability, electronic and thermodynamic properties of aluminene from first-principles calculations. Applied Surface Science, 2017, 409, 85-90.	3.1	72
157	Electric-field tunable electronic structure in WSe 2 /arsenene van der Waals heterostructure. Superlattices and Microstructures, 2017, 104, 518-524.	1.4	17
158	Twoâ€Dimensional Metal Oxide Nanomaterials for Nextâ€Generation Rechargeable Batteries. Advanced Materials, 2017, 29, 1700176.	11.1	317
159	Electronic and magnetic properties of Ga, Ge, P and Sb doped monolayer arsenene. Journal of Solid State Chemistry, 2017, 251, 1-6.	1.4	21
160	On the chemically-assisted excitonic enhancement in environmentally-friendly solution dispersions of two-dimensional MoS ₂ and WS ₂ . Journal of Materials Chemistry C, 2017, 5, 5323-5333.	2.7	38
161	Centimeter-Scale Deposition of Mo _{0.5} W _{0.5} Se ₂ Alloy Film for High-Performance Photodetectors on Versatile Substrates. ACS Applied Materials & Interfaces, 2017, 9, 14920-14928.	4.0	74
162	Liquidâ€Phase Exfoliated Metallic Antimony Nanosheets toward High Volumetric Sodium Storage. Advanced Energy Materials, 2017, 7, 1700447.	10.2	172
163	Antimonene Oxides: Emerging Tunable Direct Bandgap Semiconductor and Novel Topological Insulator. Nano Letters, 2017, 17, 3434-3440.	4.5	250
164	Controlling the electronic and geometric structures of 2D insertions to realize high performance metal/insertion–MoS2 sandwich interfaces. Nanoscale, 2017, 9, 7429-7441.	2.8	24

#	ARTICLE	IF	CITATIONS
165	Layer-dependent electronic properties of phosphorene-like materials and phosphorene-based van der Waals heterostructures. Nanoscale, 2017, 9, 8616-8622.	2.8	44
166	Prediction on the light-assisted exfoliation of multilayered arsenene by the photo-isomerization of azobenzene. Nanoscale, 2017, 9, 7006-7011.	2.8	40
167	NiX ₂ (X = Cl and Br) sheets as promising spin materials: a first-principles study. RSC Advances, 2017, 7, 22541-22547.	1.7	25
168	Effects of hole doping and strain on magnetism in buckled phosphorene and arsenene. 2D Materials, 2017, 4, 025107.	2.0	40
169	Prediction of new group IV-V-VI monolayer semiconductors based on first principle calculation. Computational Materials Science, 2017, 135, 160-164.	1.4	19
170	Band gap engineering and visible light response for GaS monolayer by isovalent anion-cation codoping. Materials Chemistry and Physics, 2017, 198, 275-282.	2.0	19
171	Edge magnetism and electronic structure properties of zigzag nanoribbons of arsenene and antimonene. Journal of Physics and Chemistry of Solids, 2017, 110, 167-172.	1.9	29
172	Two-dimensional tetragonal AlP monolayer: strain-tunable direct–indirect band-gap and semiconductor–metal transitions. Journal of Materials Chemistry C, 2017, 5, 5999-6004.	2.7	34
173	The intriguing electronic and optical properties modulation in blue phosphorene/g-III-nitrides heterostructures. , 2017, , .		0
174	Van der Waals bilayer antimonene: A promising thermophotovoltaic cell material with 31% energy conversion efficiency. Nano Energy, 2017, 38, 561-568.	8.2	92
175	Antimonene Quantum Dots: Synthesis and Application as Nearâ€Infrared Photothermal Agents for Effective Cancer Therapy. Angewandte Chemie - International Edition, 2017, 56, 11896-11900.	7.2	465
176	Antimonene Quantum Dots: Synthesis and Application as Nearâ€Infrared Photothermal Agents for Effective Cancer Therapy. Angewandte Chemie, 2017, 129, 12058-12062.	1.6	93
177	Monolayer Bismuthene-Metal Contacts: A Theoretical Study. ACS Applied Materials & Interfaces, 2017, 9, 23128-23140.	4.0	73
178	Excellent Thermoelectric Performance Predicted in Two-Dimensional Buckled Antimonene: A First-Principles Study. Journal of Physical Chemistry C, 2017, 121, 13035-13042.	1.5	73
179	Tunable electronic properties of arsenene/GaS van der Waals heterostructures. RSC Advances, 2017, 7, 28393-28398.	1.7	65
180	An AlAs/germanene heterostructure with outstanding tunability of electronic properties. , 2017, , .		0
181	Mechanism of mechanically induced optoelectronic and spintronic phase transitions in 1D graphene spirals: insight into the role of interlayer coupling. Nanoscale, 2017, 9, 9693-9700.	2.8	14
182	Angle-resolved photoemission spectroscopy for the study of two-dimensional materials. Nano Convergence, 2017, 4, .	6.3	41

#	Article	IF	CITATIONS
183	Sulfur Dioxide and Nitrogen Dioxide Gas Sensor Based on Arsenene: A First-Principle Study. IEEE Electron Device Letters, 2017, 38, 661-664.	2.2	82
184	A tunable and sizable bandgap of a g-C ₃ N ₄ /graphene/g-C ₃ N ₄ sandwich heterostructure: a van der Waals density functional study. Journal of Materials Chemistry C, 2017, 5, 3830-3837.	2.7	86
185	Structures, mobility and electronic properties of point defects in arsenene, antimonene and an antimony arsenide alloy. Journal of Materials Chemistry C, 2017, 5, 4159-4166.	2.7	72
186	Oxidation Resistance of Monolayer Group-IV Monochalcogenides. ACS Applied Materials & Interfaces, 2017, 9, 12013-12020.	4.0	118
187	Lateral heterostructures of monolayer group-IV monochalcogenides: band alignment and electronic properties. Journal of Materials Chemistry C, 2017, 5, 3788-3795.	2.7	94
188	Two-dimensional nanosheets for electrocatalysis in energy generation and conversion. Journal of Materials Chemistry A, 2017, 5, 7257-7284.	5.2	220
189	Structural Complexity and Phonon Physics in 2D Arsenenes. Journal of Physical Chemistry Letters, 2017, 8, 1375-1380.	2.1	41
190	Recent Advances in Ultrathin Two-Dimensional Nanomaterials. Chemical Reviews, 2017, 117, 6225-6331.	23.0	3,940
191	Quartic Dispersion, Strong Singularity, Magnetic Instability, and Unique Thermoelectric Properties in Two-Dimensional Hexagonal Lattices of Group-VA Elements. Nano Letters, 2017, 17, 2589-2595.	4.5	33
192	Intrinsic point defects in buckled and puckered arsenene: a first-principles study. Physical Chemistry Chemical Physics, 2017, 19, 9862-9871.	1.3	38
193	Elemental two-dimensional nanosheets beyond graphene. Chemical Society Reviews, 2017, 46, 2127-2157.	18.7	285
194	Two-dimensional germanium monochalcogenide photocatalyst for water splitting under ultraviolet, visible to near-infrared light. Nanoscale, 2017, 9, 8608-8615.	2.8	124
195	Two-dimensional SiP: an unexplored direct band-gap semiconductor. 2D Materials, 2017, 4, 015030.	2.0	78
196	Epitaxial Growth and Airâ€6tability of Monolayer Antimonene on PdTe ₂ . Advanced Materials, 2017, 29, 1605407.	11.1	313
197	Few-layer arsenic trichalcogenides: Emerging two-dimensional semiconductors with tunable indirect-direct band-gaps. Journal of Alloys and Compounds, 2017, 699, 554-560.	2.8	33
198	Density Functional Theory Study of Bandgap Modulation of Si2N-h2D Crystal Nanoribbons and Nanotubes Under Elastic Strain. Journal of Electronic Materials, 2017, 46, 2241-2247.	1.0	3
199	AlN/BP Heterostructure Photocatalyst for Water Splitting. IEEE Electron Device Letters, 2017, 38, 145-148.	2.2	68
200	The intriguing electronic and optical properties modulation of hydrogen and fluorine codecorated silicene layers. Applied Surface Science, 2017, 398, 73-80.	3.1	12

#	Article	IF	CITATIONS
201	Electronic properties of layered phosphorus heterostructures. Physical Chemistry Chemical Physics, 2017, 19, 1229-1235.	1.3	10
202	First-principles investigation of hydrogen storage capacity of Y-decorated porous graphene. Applied Surface Science, 2017, 399, 463-468.	3.1	78
203	First Principles Investigation of Small Molecules Adsorption on Antimonene. IEEE Electron Device Letters, 2017, 38, 134-137.	2.2	109
204	All-Optical Switching of Two Continuous Waves in Few Layer Bismuthene Based on Spatial Cross-Phase Modulation. ACS Photonics, 2017, 4, 2852-2861.	3.2	164
205	A novel metal-free two-dimensional material for photocatalytic water splitting – phosphorus nitride (γ-PN). RSC Advances, 2017, 7, 50239-50245.	1.7	26
206	Giant Piezoelectric Effects in Monolayer Group-V Binary Compounds with Honeycomb Phases: A First-Principles Prediction. Journal of Physical Chemistry C, 2017, 121, 25576-25584.	1.5	78
207	Unlocking the Electrocatalytic Activity of Antimony for CO ₂ Reduction by Twoâ€Dimensional Engineering of the Bulk Material. Angewandte Chemie - International Edition, 2017, 56, 14718-14722.	7.2	164
208	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
209	Unlocking the Electrocatalytic Activity of Antimony for CO ₂ Reduction by Twoâ€Dimensional Engineering of the Bulk Material. Angewandte Chemie, 2017, 129, 14910-14914.	1.6	58
210	Noncovalent Functionalization and Charge Transfer in Antimonene. Angewandte Chemie - International Edition, 2017, 56, 14389-14394.	7.2	83
211	Noncovalent Functionalization and Charge Transfer in Antimonene. Angewandte Chemie, 2017, 129, 14581-14586.	1.6	26
212	Strain-induced Weyl and Dirac states and direct-indirect gap transitions in group-V materials. 2D Materials, 2017, 4, 045018.	2.0	22
213	Modulating the electronic and optical properties of monolayer arsenene phases by organic molecular doping. Nanotechnology, 2017, 28, 495202.	1.3	22
214	Investigation on electronic properties of functionalized arsenene nanoribbon and nanotubes: A first-principles study. Chemical Physics, 2017, 495, 35-41.	0.9	29
215	Interface effect on electronic and optical properties of antimonene/GaAs van der Waals heterostructures. Journal of Materials Chemistry C, 2017, 5, 9687-9693.	2.7	29
216	Atomic mechanism for the growth of wafer-scale single-crystal graphene: theoretical perspective and scanning tunneling microscopy investigations. 2D Materials, 2017, 4, 042002.	2.0	11
217	Few-layer antimonene decorated microfiber: ultra-short pulse generation and all-optical thresholding with enhanced long term stability. 2D Materials, 2017, 4, 045010.	2.0	260
218	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

#	Article	IF	CITATIONS
219	Considering the spin–orbit coupling effect on the photocatalytic performance of AlN/MX ₂ nanocomposites. Journal of Materials Chemistry C, 2017, 5, 9412-9420.	2.7	36
220	A new two-dimensional TeSe2 semiconductor: indirect to direct band-gap transitions. Science China Materials, 2017, 60, 747-754.	3.5	20
221	Point defects in buckled and asymmetric washboard phases of arsenic phosphorus: A first principles study. Computational Materials Science, 2017, 140, 290-298.	1.4	19
222	Strain engineering effect on surprising magnetic semiconducting behavior in zigzag arsenene nanoribbons. Computational Materials Science, 2017, 139, 185-190.	1.4	9
223	Arsenene/Ca(OH) ₂ van der Waals heterostructure: strain tunable electronic and photocatalytic properties. RSC Advances, 2017, 7, 44394-44400.	1.7	36
224	Spin-dependent transport characteristics of nanostructures based on armchair arsenene nanoribbons. Chinese Physics B, 2017, 26, 098509.	0.7	8
225	Bulk <i>β</i> -Te to few layered <i>β</i> -tellurenes: indirect to direct band-Gap transitions showing semiconducting property. Materials Research Express, 2017, 4, 095902.	0.8	58
226	Tunable Electronic Properties of Arsenene and Transition-Metal Dichalcogenide Heterostructures: A First-Principles Calculation. Journal of Physical Chemistry C, 2017, 121, 22040-22048.	1.5	29
227	Giant anisotropic photogalvanic effect in a flexible AsSb monolayer with ultrahigh carrier mobility. Physical Chemistry Chemical Physics, 2017, 19, 27233-27239.	1.3	33
228	Modulating band gap of C ₄ NP-h2D crystal nanoribbons and nanotubes under elastic strain. RSC Advances, 2017, 7, 41084-41090.	1.7	7
229	First-principles studies on the effects of halogen adsorption on monolayer antimony. Physical Chemistry Chemical Physics, 2017, 19, 25786-25795.	1.3	13
230	Two-dimensional semiconducting gold. Physical Review B, 2017, 95, .	1.1	10
231	Triplet fermions and Dirac fermions in borophene. Physical Review B, 2017, 96, .	1.1	64
232	Tunable Magnetism and Extraordinary Sunlight Absorbance in Indium Triphosphide Monolayer. Journal of the American Chemical Society, 2017, 139, 11125-11131.	6.6	265
233	First-principles study of the small molecule adsorption on the InSe monolayer. Applied Surface Science, 2017, 426, 244-252.	3.1	100
234	All‣ayered 2D Optoelectronics: A Highâ€Performance UV–vis–NIR Broadband SnSe Photodetector with Bi ₂ Te ₃ Topological Insulator Electrodes. Advanced Functional Materials, 2017, 27, 1701823.	7.8	222
235	Pnictogen (As, Sb, Bi) Nanosheets for Electrochemical Applications Are Produced by Shear Exfoliation Using Kitchen Blenders. Angewandte Chemie - International Edition, 2017, 56, 14417-14422.	7.2	216
236	A CNH monolayer: a direct gap 2D semiconductor with anisotropic electronic and optical properties. Journal of Materials Chemistry C, 2017, 5, 8498-8503.	2.7	13

#	Article	IF	CITATIONS
237	Repairing atomic vacancies in single-layer MoSe2 field-effect transistor and its defect dynamics. Npj Quantum Materials, 2017, 2, .	1.8	36
238	Pnictogen (As, Sb, Bi) Nanosheets for Electrochemical Applications Are Produced by Shear Exfoliation Using Kitchen Blenders. Angewandte Chemie, 2017, 129, 14609-14614.	1.6	87
239	Adsorption of Gas Molecules on Graphene‣ike ZnO Nanosheets: The Roles of Gas Concentration, Layer Number, and Heterolayer. Advanced Materials Interfaces, 2017, 4, 1700647.	1.9	33
240	Electrical Contacts in Monolayer Arsenene Devices. ACS Applied Materials & Interfaces, 2017, 9, 29273-29284.	4.0	76
241	Tunable electronic properties and optical properties of novel stanene/ZnO heterostructure: First-principles calculation. Computational Materials Science, 2017, 139, 179-184.	1.4	47
242	Strain and electric field tunable electronic structure of buckled bismuthene. RSC Advances, 2017, 7, 39546-39555.	1.7	53
243	Puckered Arsenene: A Promising Room-Temperature Thermoelectric Material from First-Principles Prediction. Journal of Physical Chemistry C, 2017, 121, 19080-19086.	1.5	56
244	Interfacial properties of borophene contacts with two-dimensional semiconductors. Physical Chemistry Chemical Physics, 2017, 19, 23982-23989.	1.3	42
245	Scalable Dry Production Process of a Superior 3D Netâ€Like Carbonâ€Based Iron Oxide Anode Material for Lithiumâ€lon Batteries. Angewandte Chemie, 2017, 129, 12823-12827.	1.6	21
246	Scalable Dry Production Process of a Superior 3D Netâ€Like Carbonâ€Based Iron Oxide Anode Material for Lithiumâ€lon Batteries. Angewandte Chemie - International Edition, 2017, 56, 12649-12653.	7.2	126
247	Tuning the Electronic and Optical Properties of Monolayers As, Sb, and Bi via Surface Charge Transfer Doping. Journal of Physical Chemistry C, 2017, 121, 19530-19537.	1.5	35
248	The effect of vacancies and the substitution of p-block atoms on single-layer buckled germanium selenide. RSC Advances, 2017, 7, 37815-37822.	1.7	20
249	A flexible, transparent and high-performance gas sensor based on layer-materials for wearable technology. Nanotechnology, 2017, 28, 415501.	1.3	25
250	Ab initio study on nonmetal and nonmagnetic metal atoms doped arsenene. JETP Letters, 2017, 106, 434-439.	0.4	7
251	Self-Assembly High-Performance UV–vis–NIR Broadband β-In ₂ Se ₃ /Si Photodetector Array for Weak Signal Detection. ACS Applied Materials & Interfaces, 2017, 9, 43830-43837.	4.0	95
252	Structure, Stability, and Kinetics of Vacancy Defects in Monolayer PtSe2: A First-Principles Study. ACS Omega, 2017, 2, 8640-8648.	1.6	40
253	Properties of Single-Layer Boron Sheets: First-Principle Study through MatCloud Platform. Communications in Theoretical Physics, 2017, 68, 125.	1.1	2
254	Novel penta-graphene nanotubes: strain-induced structural and semiconductor–metal transitions. Nanoscale, 2017, 9, 19310-19317.	2.8	18

#	Article	IF	CITATIONS
255	Absorption and Mid-IR SHG in Two-Dimensional Halogen and Hydrogen Saturated Silicene Series. Journal of Physical Chemistry C, 2017, 121, 27139-27146.	1.5	10
256	Magnetic coupling in nonmagnetic metal adsorption on arsenene monolayer: Ab initio study. AlP Advances, 2017, 7, .	0.6	13
257	Understanding the high-electrocatalytic performance of two-dimensional MoS ₂ nanosheets and their composite materials. Journal of Materials Chemistry A, 2017, 5, 24540-24563.	5.2	183
258	Large magneto-optical effects in hole-doped blue phosphorene and gray arsenene. Nanoscale, 2017, 9, 17405-17414.	2.8	25
259	Arsenene and Antimonene: Two-Dimensional Materials with High Thermoelectric Figures of Merit. Physical Review Applied, 2017, 8, .	1.5	120
260	New group-V elemental bilayers: A tunable structure model with four-, six-, and eight-atom rings. Physical Review B, 2017, 96, .	1.1	15
261	Synthesis of Antimonene on Germanium. Nano Letters, 2017, 17, 4970-4975.	4.5	200
262	Tunnelling characteristics of Stone–Wales defects in monolayers of Sn and group-V elements. Journal of Physics Condensed Matter, 2017, 29, 395501.	0.7	12
263	GeAs ₂ : A IV–V Group Two-Dimensional Semiconductor with Ultralow Thermal Conductivity and High Thermoelectric Efficiency. Chemistry of Materials, 2017, 29, 6261-6268.	3.2	80
264	Emerging novel electronic structure in hydrogen-Arsenene-halogen nanosheets: A computational study. Scientific Reports, 2017, 7, 4773.	1.6	9
265	Two-dimensional square transition metal dichalcogenides with lateral heterostructures. Nano Research, 2017, 10, 3909-3919.	5.8	17
266	Formation of arsenene p–n junctions via organic molecular adsorption. Journal of Materials Chemistry C, 2017, 5, 7283-7290.	2.7	17
267	Two-dimensional Penta-BP5 Sheets: High-stability, Strain-tunable Electronic Structure and Excellent Mechanical Properties. Scientific Reports, 2017, 7, 2404.	1.6	52
268	Twoâ€Dimensional Boron Crystals: Structural Stability, Tunable Properties, Fabrications and Applications. Advanced Functional Materials, 2017, 27, 1603300.	7.8	130
269	Tunable Rashba spin splitting in quantum-spin Hall-insulator AsF bilayers. Nano Research, 2017, 10, 491-502.	5.8	16
270	Scalable exfoliation and dispersion of two-dimensional materials – an update. Physical Chemistry Chemical Physics, 2017, 19, 921-960.	1.3	261
271	Surface regulated arsenenes as Dirac materials: From density functional calculations. Applied Surface Science, 2017, 394, 625-629.	3.1	17
272	Electronic and Optical Properties of Arsenene Under Uniaxial Strain. IEEE Journal of Selected Topics in Quantum Electronics, 2017, 23, 214-218.	1.9	12

#	Article	IF	CITATIONS
274	Tuning the Schottky barrier in the arsenene/graphene van der Waals heterostructures by electric field. Physica E: Low-Dimensional Systems and Nanostructures, 2017, 88, 6-10.	1.3	37
275	Review of two-dimensional materials for photocatalytic water splitting from a theoretical perspective. Catalysis Science and Technology, 2017, 7, 545-559.	2.1	345
276	First-principles study of stability, electronic structure and magnetic properties of Be 2 C nanoribbons. Applied Surface Science, 2017, 394, 315-322.	3.1	1
277	Modulation of the electric properties of SnSe bi/mono-layer by strain and electrical field. , 2017, , .		0
278	A first-principle study of the adsorption behavior of NO gas molecules on pristine and Al-doped penta-graphene. , 2017, , .		8
279	The electronic structure of ultrathin [111]-oriented tin nanowire with hydrogen passivation. AIP Conference Proceedings, 2017, , .	0.3	0
280	Antimonene: A promising candidate for acetone sensors with high selectivity and sensitivity. , 2017, , .		5
281	Edge-Corrected Mean-Field Hubbard Model: Principle and Applications in 2D Materials. Frontiers in Physics, 2017, 5, .	1.0	5
282	Two-dimensional silicon and carbon monochalcogenides with the structure of phosphorene. Beilstein Journal of Nanotechnology, 2017, 8, 1338-1344.	1.5	8
283	Sc-Decorated Porous Graphene for High-Capacity Hydrogen Storage: First-Principles Calculations. Materials, 2017, 10, 894.	1.3	28
284	Graphene against Other Two-Dimensional Materials: A Comparative Study on the Basis of Photonic Applications. , 0, , .		2
285	Gas sensing and capturing based on twoâ€dimensional layered materials: Overview from theoretical perspective. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2018, 8, e1361.	6.2	101
286	Covalent functionalization of MoS2 nanosheets synthesized by liquid phase exfoliation to construct electrochemical sensors for Cd (II) detection. Talanta, 2018, 182, 38-48.	2.9	58
287	Novel electronic properties of two-dimensional As _x Sb _y alloys studied using DFT. Journal of Materials Chemistry C, 2018, 6, 2854-2861.	2.7	17
288	New two-dimensional V-V binary compounds with a honeycomb-like structure: a first-principles study. Materials Research Express, 2018, 5, 035903.	0.8	34
289	A new flatland buddy as toxic gas scavenger: A first principles study. Journal of Hazardous Materials, 2018, 351, 337-345.	6.5	113
290	Antimonene nanoribbon band-gap expansion: Bond contraction and edge quantum entrapment. Materials Chemistry and Physics, 2018, 211, 414-419.	2.0	7
291	Structural complexity and wide application of two-dimensional S/O type antimonene. Applied Surface Science, 2018, 441, 77-84.	3.1	34

#	Article	IF	CITATIONS
292	New Insights into the Crystal Structures of Plutonium Hydrides from First-Principles Calculations. Journal of Physical Chemistry C, 2018, 122, 10103-10112.	1.5	15
293	Metal-nonmetal oscillations in doped blue phosphorene: a first-principles study. Materials Research Express, 2018, 5, 055007.	0.8	6
294	New two-dimensional allotrope of single layer IV-V semiconductor XBi (X = Si, Ge, Sn). Computational Materials Science, 2018, 150, 314-320.	1.4	8
295	Ultrathin tellurium dioxide: emerging direct bandgap semiconductor with high-mobility transport anisotropy. Nanoscale, 2018, 10, 8397-8403.	2.8	66
296	Tunable electronic and magnetic properties of antimonene system via Fe doping and defect complex: A first-principles perspective. Applied Surface Science, 2018, 448, 281-287.	3.1	24
297	Nonlinear Fewâ€Layer Antimoneneâ€Based Allâ€Optical Signal Processing: Ultrafast Optical Switching and Highâ€Speed Wavelength Conversion. Advanced Optical Materials, 2018, 6, 1701287.	3.6	97
298	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
299	Monolayer–Trilayer Lateral Heterostructure Based Antimonene Field Effect Transistor: Better Contact and High On/Off Ratios. Physica Status Solidi - Rapid Research Letters, 2018, 12, 1800038.	1.2	13
300	2D lateral heterostructures of group-III monochalcogenide: Potential photovoltaic applications. Applied Physics Letters, 2018, 112, .	1.5	66
301	Tunable magnetic coupling in Mn-doped monolayer MoS ₂ under lattice strain. Journal of Physics Condensed Matter, 2018, 30, 215801.	0.7	8
302	Epitaxial Growth of Flat Antimonene Monolayer: A New Honeycomb Analogue of Graphene. Nano Letters, 2018, 18, 2133-2139.	4.5	219
303	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
304	2D Intrinsic Ferromagnets from van der Waals Antiferromagnets. Journal of the American Chemical Society, 2018, 140, 2417-2420.	6.6	312
305	Perfect valley filter based on a topological phase in a disordered Sb monolayer heterostructure. Physical Review B, 2018, 97, .	1.1	17
306	Few-Layer Antimonene: Anisotropic Expansion and Reversible Crystalline-Phase Evolution Enable Large-Capacity and Long-Life Na-Ion Batteries. ACS Nano, 2018, 12, 1887-1893.	7.3	175
307	Photoluminescence Characteristics of Multilayer HfSe ₂ Synthesized on Sapphire Using Ion Implantation. Advanced Materials Interfaces, 2018, 5, 1701619.	1.9	19
308	Exploring Two-Dimensional Materials toward the Next-Generation Circuits: From Monomer Design to Assembly Control. Chemical Reviews, 2018, 118, 6236-6296.	23.0	410
309	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

#	Article	IF	CITATIONS
310	Electronic and magnetic properties of 3D transition-metal atom adsorbed arsenene. Nanotechnology, 2018, 29, 095203.	1.3	17
311	Penta-SiC 5 monolayer: A novel quasi-planar indirect semiconductor with a tunable wide band gap. Physics Letters, Section A: General, Atomic and Solid State Physics, 2018, 382, 710-715.	0.9	46
312	Electron transport in NH 3 /NO 2 sensed buckled antimonene. Solid State Communications, 2018, 272, 1-7.	0.9	10
313	DFT coupled with NECF study of a promising two-dimensional channel material: black phosphorene-type GaTeCl. Nanoscale, 2018, 10, 3350-3355.	2.8	37
314	Ti Impurity Effect on the Optical Coefficients in 2D Cu ₂ Si: A DFT Study. Communications in Theoretical Physics, 2018, 69, 101.	1.1	3
315	Full-Spectrum Solar-to-Heat Conversion Membrane with Interfacial Plasmonic Heating Ability for High-Efficiency Desalination of Seawater. ACS Applied Energy Materials, 2018, 1, 56-61.	2.5	71
316	Strain tuned magnetocrystalline anisotropy in ferromagnetic H-FeCl2 monolayer. Solid State Communications, 2018, 271, 66-70.	0.9	17
317	Recent progress in 2D group-VA semiconductors: from theory to experiment. Chemical Society Reviews, 2018, 47, 982-1021.	18.7	697
318	Tuning electronic and optical properties of arsenene/C ₃ N van der Waals heterostructure by vertical strain and external electric field. Nanotechnology, 2018, 29, 075201.	1.3	89
319	Antimonene: A Novel 2D Nanomaterial for Supercapacitor Applications. Advanced Energy Materials, 2018, 8, 1702606.	10.2	153
320	Ultrathin Semiconducting Bi ₂ Te ₂ S and Bi ₂ Te ₂ Se with High Electron Mobilities. Journal of Physical Chemistry Letters, 2018, 9, 487-490.	2.1	56
321	Coexistence of Co doping and strain on arsenene and antimonene: tunable magnetism and half-metallic behavior. RSC Advances, 2018, 8, 1320-1327.	1.7	24
322	Effects of adatom and gas molecule adsorption on the physical properties of tellurene: a first principles investigation. Physical Chemistry Chemical Physics, 2018, 20, 4058-4066.	1.3	87
323	1D SbSel, SbSl, and SbSBr With High Stability and Novel Properties for Microelectronic, Optoelectronic, and Thermoelectric Applications. Advanced Theory and Simulations, 2018, 1, 1700005.	1.3	65
324	Superconductivity in Li-intercalated bilayer arsenene and hole-doped monolayer arsenene: a first-principles prediction. Journal of Physics Condensed Matter, 2018, 30, 245701.	0.7	6
325	Î ³ -Graphyne analogues based on As and Sb elements. Computational Materials Science, 2018, 150, 325-328.	1.4	0
326	Lattice thermal conductivity of monolayer AsP from first-principles molecular dynamics. Physical Chemistry Chemical Physics, 2018, 20, 14024-14030.	1.3	34
327	Doping-stabilized two-dimensional black phosphorus. Nanoscale, 2018, 10, 7898-7904.	2.8	20

#	Article	IF	CITATIONS
328	Synergic antimony–niobium pentoxide nanomeshes for high-rate sodium storage. Journal of Materials Chemistry A, 2018, 6, 6225-6232.	5.2	22
329	An Innovative Method for the Removal of Toxic SOx Molecules from Environment by TiO2/Stanene Nanocomposites: A First-Principles Study. Journal of Inorganic and Organometallic Polymers and Materials, 2018, 28, 1901-1913.	1.9	8
330	Strain induced anisotropic mechanical and electronic properties of 2D-SiC. Mechanics of Materials, 2018, 120, 43-52.	1.7	25
331	CaP ₃ : A New Two-Dimensional Functional Material with Desirable Band Gap and Ultrahigh Carrier Mobility. Journal of Physical Chemistry Letters, 2018, 9, 1728-1733.	2.1	112
332	Penta-P2X (X=C, Si) monolayers as wide-bandgap semiconductors: A first principles prediction. Frontiers of Physics, 2018, 13, 1.	2.4	60
333	A distinct correlation between the vibrational and thermal transport properties of group VA monolayer crystals. Nanoscale, 2018, 10, 7803-7812.	2.8	35
334	A first-principles study on the adsorption of small molecules on antimonene: oxidation tendency and stability. Journal of Materials Chemistry C, 2018, 6, 4308-4317.	2.7	68
335	Deviatoric stresses promoted metallization in rhenium disulfide. Journal Physics D: Applied Physics, 2018, 51, 165101.	1.3	15
336	Exploring the effect of nanoholes on arsenene: a density functional theory study. Journal of Physics Condensed Matter, 2018, 30, 195305.	0.7	3
337	SiP monolayers: New 2D structures of group IV–V compounds for visible-light photohydrolytic catalysts. Frontiers of Physics, 2018, 13, 1.	2.4	30
338	Arsenic for high-capacity lithium- and sodium-ion batteries. Nanoscale, 2018, 10, 7047-7057.	2.8	37
339	Electric field improved the sensitivity of CO on substitutionally doped antimonene. Applied Surface Science, 2018, 427, 388-395.	3.1	77
340	Recent Progress on Antimonene: A New Bidimensional Material. Advanced Materials, 2018, 30, 1703771.	11.1	245
341	High Selective Gas Detection for small molecules based on Germanium selenide monolayer. Applied Surface Science, 2018, 433, 575-581.	3.1	68
342	Fewâ€layer Bismuthene: Sonochemical Exfoliation, Nonlinear Optics and Applications for Ultrafast Photonics with Enhanced Stability. Laser and Photonics Reviews, 2018, 12, 1700221.	4.4	311
343	Stability enhancement and electronic tunability of two-dimensional SbIV compounds via surface functionalization. Applied Surface Science, 2018, 427, 363-368.	3.1	8
344	Electrically tunable polarizer based on 2D orthorhombic ferrovalley materials. 2D Materials, 2018, 5, 011001.	2.0	46
345	Applications of Raman spectroscopy in grapheneâ€related materials and the development of parameterized PCA for largeâ€scale data analysis. Journal of Raman Spectroscopy, 2018, 49, 54-65.	1.2	28

#	Article	IF	CITATIONS
346	Gas template-assisted spray pyrolysis: A facile strategy to produce porous hollow Co3O4 with tunable porosity for high-performance lithium-ion battery anode materials. Nano Research, 2018, 11, 1490-1499.	5.8	45
347	Structural, electronic and photocatalytic properties of atomic defective Bil3 monolayers. Chemical Physics Letters, 2018, 691, 341-346.	1.2	13
348	Katalyse der Kohlenstoffdioxidâ€Photoreduktion an Nanoschichten: Grundlagen und Herausforderungen. Angewandte Chemie, 2018, 130, 7734-7752.	1.6	27
349	Stability and electronic structure of two-dimensional arsenic phosphide monolayer. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2018, 228, 206-212.	1.7	21
350	Predicting two-dimensional carbon phosphide compouds: C2P4 by the global optimization method. Computational Materials Science, 2018, 144, 70-75.	1.4	21
351	Catalysis of Carbon Dioxide Photoreduction on Nanosheets: Fundamentals and Challenges. Angewandte Chemie - International Edition, 2018, 57, 7610-7627.	7.2	361
352	First-principles investigation on structural and electronic properties of antimonene nanoribbons and nanotubes. Physica E: Low-Dimensional Systems and Nanostructures, 2018, 97, 98-104.	1.3	51
353	Chemical intuition for high thermoelectric performance in monolayer black phosphorus, α-arsenene and aW-antimonene. Journal of Materials Chemistry A, 2018, 6, 2018-2033.	5.2	80
354	Chemical vapor deposition growth of two-dimensional heterojunctions. Science China: Physics, Mechanics and Astronomy, 2018, 61, 1.	2.0	52
355	Novel GaN-based nanocomposites: Effective band structure and optical property tuning by tensile strain or external field. Applied Surface Science, 2018, 427, 554-562.	3.1	9
356	Strain Tunable Bandgap and High Carrier Mobility in SiAs and SiAs2 Monolayers from First-Principles Studies. Nanoscale Research Letters, 2018, 13, 404.	3.1	17
357	Oneâ€Dimensional Arsenic Allotropes: Polymerization of Yellow Arsenic Inside Singleâ€Wall Carbon Nanotubes. Angewandte Chemie, 2018, 130, 11823-11827.	1.6	2
358	Two dimensional allotropes of arsenene with a wide range of high and anisotropic carrier mobility. Physical Chemistry Chemical Physics, 2018, 20, 29939-29950.	1.3	86
359	First-principle study of seven allotropes of arsenene and antimonene: thermodynamic, electronic and optical properties. Physical Chemistry Chemical Physics, 2018, 20, 30257-30266.	1.3	46
360	Two-dimensional β-phase group-VA binary compounds for versatile electronic and optical properties. Journal of Materials Chemistry C, 2018, 6, 11694-11700.	2.7	28
361	High-yield production of stable antimonene quantum sheets for highly efficient organic photovoltaics. Journal of Materials Chemistry A, 2018, 6, 23773-23779.	5.2	26
362	Interlayer self-assembly of 2D antimony/multigrapnene nanocomposites. Journal of Physics: Conference Series, 2018, 1092, 012072.	0.3	0
363	Flexible Plasmonic Pressure Sensor Based on Layered Two-Dimensional Heterostructures. Journal of Lightwave Technology, 2018, 36, 5678-5684.	2.7	14

#	Article	IF	CITATIONS
364	Mechanistic Understanding of Two-Dimensional Phosphorus, Arsenic, and Antimony High-Capacity Anodes for Fast-Charging Lithium/Sodium Ion Batteries. Journal of Physical Chemistry C, 2018, 122, 29559-29566.	1.5	38
365	2D Crystals in Three Dimensions: Electronic Decoupling of Singleâ€Layered Platelets in Colloidal Nanoparticles. Small, 2018, 14, e1803910.	5.2	6
366	Graphene-like Monolayer Yttrium Nitride: A Moderate Semiconductor and Pronounced Electronic Insensitivity to Strain. , 2018, , .		0
367	Atomically Thin 2Dâ€Arsenene by Liquidâ€Phased Exfoliation: Toward Selective Vapor Sensing. Advanced Functional Materials, 2019, 29, 1807004.	7.8	80
368	Two dimensional boron nanosheets: synthesis, properties and applications. Physical Chemistry Chemical Physics, 2018, 20, 28964-28978.	1.3	37
369	Novel bismuthene nanotubes to detect NH3, NO2 and PH3 gas molecules – A first-principles insight. Chemical Physics Letters, 2018, 712, 102-111.	1.2	41
370	Two dimensional XAs (X = Si, Ge, Sn) monolayers as promising photocatalysts for water splitting hydrogen production with high carrier mobility. Applied Materials Today, 2018, 13, 276-284.	2.3	51
371	Computational prediction of two-dimensional monolayer B ₆ C ₂ P ₂ by the global optimization method. Modern Physics Letters B, 2018, 32, 1850370.	1.0	3
372	First-Principles Study on the Stabilities, Electronic and Optical Properties of GexSn1-xSe Alloys. Nanomaterials, 2018, 8, 876.	1.9	1
373	Computational Prediction to Two-Dimensional SnAs. Chinese Physics Letters, 2018, 35, 107101.	1.3	5
374	Stable GaSe-Like Phosphorus Carbide Monolayer with Tunable Electronic and Optical Properties from Ab Initio Calculations. Materials, 2018, 11, 1937.	1.3	13
375	P3Cl2: A Unique Post-Phosphorene 2D Material with Superior Properties against Oxidation. Journal of Physical Chemistry Letters, 2018, 9, 6568-6575.	2.1	16
376	Covalent Functionalization of Exfoliated Arsenic with Chlorocarbene. Angewandte Chemie, 2018, 130, 15053-15056.	1.6	4
377	Tunable bright interlayer excitons in few-layer black phosphorus based van der Waals heterostructures. 2D Materials, 2018, 5, 045031.	2.0	28
378	Tunable electronic and magneto-optical properties of monolayer arsenene: From <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"> <mml:mrow> <mml:mi mathvariant="normal">G <mml:msub> <mml:mi mathvariant="normal">W <mml:msub> </mml:msub> </mml:mi </mml:msub> </mml:mi </mml:mrow> approximation to large scale tight binding propagation simulations. Physical Paviou B, 2018, 98</mml:math 	1.1	9
379	Perspectives on Thermoelectricity in Layered and 2D Materials. Advanced Electronic Materials, 2018, 4, 1800248.	2.6	77
380	Few-layer bismuthene for ultrashort pulse generation in a dissipative system based on an evanescent field. Nanoscale, 2018, 10, 17617-17622.	2.8	189
381	2D-Pnictogens: alloy-based anode battery materials with ultrahigh cycling stability. Chemical Society Reviews, 2018, 47, 6964-6989.	18.7	100

#	Article	IF	CITATIONS
382	Thicknessâ€Dependent Carrier Transport Characteristics of a New 2D Elemental Semiconductor: Black Arsenic. Advanced Functional Materials, 2018, 28, 1802581.	7.8	125
383	Covalent Functionalization of Exfoliated Arsenic with Chlorocarbene. Angewandte Chemie - International Edition, 2018, 57, 14837-14840.	7.2	23
384	Porous hexagonal boron oxide monolayer with robust wide band gap: A computational study. FlatChem, 2018, 9, 27-32.	2.8	29
385	Novel two-dimensional semiconductor SnP ₃ : high stability, tunable bandgaps and high carrier mobility explored using first-principles calculations. Journal of Materials Chemistry A, 2018, 6, 11890-11897.	5.2	146
386	Charge Transfer Doping Modulated Raman Scattering and Enhanced Stability of Black Phosphorus Quantum Dots on a ZnO Nanorod. Advanced Optical Materials, 2018, 6, 1800440.	3.6	34
387	Bandgapâ€Tunable Preparation of Smooth and Large Twoâ€Dimensional Antimonene. Angewandte Chemie - International Edition, 2018, 57, 8668-8673.	7.2	101
388	Bandgapâ€Tunable Preparation of Smooth and Large Twoâ€Dimensional Antimonene. Angewandte Chemie, 2018, 130, 8804-8809.	1.6	51
389	Multifunctional Binary Monolayers Ge _{<i>x</i>} P _{<i>y</i>} : Tunable Band Gap, Ferromagnetism, and Photocatalyst for Water Splitting. ACS Applied Materials & Interfaces, 2018, 10, 19897-19905.	4.0	48
390	Germanene on single-layer ZnSe substrate: novel electronic and optical properties. Physical Chemistry Chemical Physics, 2018, 20, 16067-16076.	1.3	16
391	Sonication-assisted liquid-phase exfoliated α-GeTe: a two-dimensional material with high Fe ³⁺ sensitivity. Nanoscale, 2018, 10, 15989-15997.	2.8	48
392	First principles study of the physical properties of Ti3AC2/Zr (A = Si, Al) van der Waals heterojunctions. Journal of Physics and Chemistry of Solids, 2018, 121, 298-303.	1.9	6
393	Soliton molecules in a fiber laser based on optic evanescent field interaction with WS2. Applied Physics B: Lasers and Optics, 2018, 124, 1.	1.1	13
394	Atomically Thin p–n/p–n Nanodevices by Surface Charge Transfer Doping of Arsenene/Antimonene Heterostructures. ACS Applied Materials & Interfaces, 2018, 10, 23851-23857.	4.0	14
395	Enhanced magnetic properties and tunable Dirac point of graphene/Mn-doped monolayer MoS ₂ heterostructures. Journal of Physics Condensed Matter, 2018, 30, 305304.	0.7	6
396	First-principles study of adsorption of 3d and 4d transition metal atoms on aluminene. Computational Condensed Matter, 2018, 16, e00319.	0.9	6
397	Two-Dimensional Metal Nanomaterials: Synthesis, Properties, and Applications. Chemical Reviews, 2018, 118, 6409-6455.	23.0	711
398	Tuning the ferromagnetism of a single layered titanium dioxide nanosheet with hole doping and uniaxial strain. Journal of Physics Condensed Matter, 2018, 30, 305804.	0.7	6
399	Electro/mechanical mutable properties of black phosphorene by electric field and strain engineering. Materials Research Express, 2018, 5, 066307.	0.8	3

#	Article	IF	CITATIONS
400	Gas sensing properties of two-dimensional penta-BP5: A first-principle study. Chemical Physics Letters, 2018, 706, 355-359.	1.2	16
401	Structure and Properties of Self-Organized 2D and 3D Antimony/Carbon Composites. Technical Physics, 2018, 63, 995-1001.	0.2	1
402	Recent Advances in Growth of Novel 2D Materials: Beyond Graphene and Transition Metal Dichalcogenides. Advanced Materials, 2018, 30, e1800865.	11.1	203
403	Silicene, silicene derivatives, and their device applications. Chemical Society Reviews, 2018, 47, 6370-6387.	18.7	261
404	Passively Q-switched Nd ³⁺ solid-state lasers with antimonene as saturable absorber. Optics Express, 2018, 26, 4085.	1.7	38
405	Intensity-dependent nonlinear refraction of antimonene dispersions in the visible and near-infrared region. Applied Optics, 2018, 57, E147.	0.9	36
406	A first-principles study of 2D antimonene electrodes for Li ion storage. Applied Surface Science, 2018, 462, 270-275.	3.1	39
407	The environmental stability of large-size and single-crystalline antimony flakes grown by chemical vapor deposition on SiO ₂ substrates. Chemical Communications, 2018, 54, 9671-9674.	2.2	24
408	Arsenene nanosheets and nanodots. New Journal of Chemistry, 2018, 42, 14091-14095.	1.4	62
409	Properties of <i>Cmc</i> 2 ₁ -X ₂ As ₂ O (X = Si, Ge, and Sn) by First-Principles Calculations. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2018, 73, 1025-1035.	0.7	6
410	Effects of substrate and environmental adsorbates on the electronic properties and structural stability of antimonene. Journal of Materials Science, 2018, 53, 15559-15568.	1.7	11
411	Density functional theory based prediction of a new two-dimensional TeSe2 semiconductor: A case study on the electronic properties. Chemical Physics Letters, 2018, 707, 160-164.	1.2	12
412	Two-dimensional carbon dioxide with high stability, a negative Poisson's ratio and a huge band gap. Physical Chemistry Chemical Physics, 2018, 20, 20615-20621.	1.3	13
413	Structural, vibrational, and electronic properties of single-layer hexagonal crystals of group IV and V elements. Physical Review B, 2018, 98, .	1.1	102
414	Effects of interstitial dopings of 3d transition metal atoms on antimonene: A first-principles study. Applied Surface Science, 2018, 458, 572-579.	3.1	19
415	New gallium chalcogenides/arsenene van der Waals heterostructures promising for photocatalytic water splitting. International Journal of Hydrogen Energy, 2018, 43, 15995-16004.	3.8	49
416	Twoâ€Dimensional Antimoneneâ€Based Photonic Nanomedicine for Cancer Theranostics. Advanced Materials, 2018, 30, e1802061.	11.1	314
417	Band offsets in new BN/BX (X = P, As, Sb) lateral heterostructures based on bond-orbital theory. Nanoscale, 2018, 10, 15918-15925.	2.8	18

#	Article	IF	CITATIONS
418	2H/1T Phase Transition of Multilayer MoS ₂ by Electrochemical Incorporation of S Vacancies. ACS Applied Energy Materials, 2018, 1, 4754-4765.	2.5	141
419	Exceptional Optical Absorption of Buckled Arsenene Covering a Broad Spectral Range by Molecular Doping. ACS Omega, 2018, 3, 8514-8520.	1.6	107
420	Tunable electronic and magnetic properties of transition metals doped antimonene: a first-principles study. Materials Research Express, 2018, 5, 065059.	0.8	24
421	Optoelectronic Properties of X-Doped (X = O, S, Te) Photovoltaic CSe with Puckered Structure. Materials, 2018, 11, 431.	1.3	11
422	Oneâ€Dimensional Arsenic Allotropes: Polymerization of Yellow Arsenic Inside Singleâ€Wall Carbon Nanotubes. Angewandte Chemie - International Edition, 2018, 57, 11649-11653.	7.2	23
423	Exfoliation, point defects and hydrogen storage properties of monolayer TiS ₃ : an <i>ab initio</i> study. RSC Advances, 2018, 8, 26169-26179.	1.7	11
424	Two-dimensional aluminum monoxide nanosheets: A computational study. Frontiers of Physics, 2018, 13, 1.	2.4	3
425	van der Waals Epitaxy of Antimony Islands, Sheets, and Thin Films on Single-Crystalline Graphene. ACS Nano, 2018, 12, 6100-6108.	7.3	38
426	Superconductivity in electron-doped arsenene. Chinese Physics B, 2018, 27, 046301.	0.7	21
427	Antimonene nanosheet device for detection of explosive vapors – A first-principles inspection. Chemical Physics Letters, 2018, 708, 130-137.	1.2	39
428	Borophene: a promising adsorbent material with strong ability and capacity for SO2 adsorption. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	1.1	36
429	Sub-200 fs soliton mode-locked fiber laser based on bismuthene saturable absorber. Optics Express, 2018, 26, 22750.	1.7	289
430	Twoâ€Dimensional Tellurium Nanosheets Exhibiting an Anomalous Switchable Photoresponse with Thickness Dependence. Angewandte Chemie, 2018, 130, 13721-13725.	1.6	3
431	Exploring Multifunctional Applications of Hexagonal Boron Arsenide Sheet: A DFT Study. ACS Omega, 2018, 3, 9533-9543.	1.6	35
432	Multiferroic and Ferroic Topological Order in Ligand-Functionalized Germanene and Arsenene. Physical Review Applied, 2018, 10, .	1.5	31
433	Two-dimensional group-VA porous crystals: Diverse electronic structures and photocatalytic properties. Computational Materials Science, 2018, 154, 459-463.	1.4	4
434	Twoâ€Dimensional Tellurium Nanosheets Exhibiting an Anomalous Switchable Photoresponse with Thickness Dependence. Angewandte Chemie - International Edition, 2018, 57, 13533-13537.	7.2	67
435	Promoting sensitivity and selectivity of HCHO sensor based on strained InP3 monolayer: A DFT study. Applied Surface Science, 2018, 459, 554-561.	3.1	41

#	Article	IF	CITATIONS
436	An implementation of spin–orbit coupling for band structure calculations with Gaussian basis sets: Two-dimensional topological crystals of Sb and Bi. Beilstein Journal of Nanotechnology, 2018, 9, 1015-1023.		9
437	Semimetal–Semiconductor Transitions for Monolayer Antimonene Nanosheets and Their Application in Perovskite Solar Cells. Advanced Materials, 2018, 30, e1803244.	11.1	64
438	Ideal inert substrates for planar antimonene: h-BN and hydrogenated SiC(0001). Physical Chemistry Chemical Physics, 2018, 20, 23397-23402.	1.3	2
439	Computational Understanding of the Growth of 2D Materials. Advanced Theory and Simulations, 2018, 1, 1800085.	1.3	30
440	Exfoliation of layered materials using electrochemistry. Chemical Society Reviews, 2018, 47, 7213-7224.	18.7	140
441	Electronic properties of blue phosphorene/transition metal dichalcogenides van der Waals heterostructures under in-plane biaxial strains. Journal of Solid State Chemistry, 2018, 265, 257-265.	1.4	20
442	Sub-5 nm Monolayer Arsenene and Antimonene Transistors. ACS Applied Materials & Interfaces, 2018, 10, 22363-22371.	4.0	77
443	Diffusion quantum Monte Carlo and density functional calculations of the structural stability of bilayer arsenene. Journal of Chemical Physics, 2018, 148, 214706.	1.2	23
444	A fast synthetic strategy for high-quality atomically thin antimonene with ultrahigh sonication power. Nano Research, 2018, 11, 5968-5977.	5.8	35
445	Surface Engineering of Twoâ€Dimensional Materials. ChemNanoMat, 2019, 5, 6-23.	1.5	22
446	Antimonene: From Experimental Preparation to Practical Application. Angewandte Chemie - International Edition, 2019, 58, 1574-1584.	7.2	111
447	Antimonen: von der experimentellen Herstellung zur praktischen Anwendung. Angewandte Chemie, 2019, 131, 1588-1599.	1.6	4
448	Theoretical studies on tunable electronic structures and potential applications of twoâ€dimensional arseneneâ€based materials. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2019, 9, e1387.	6.2	33
449	Arsenene monolayer as an outstanding anode material for (Li/Na/Mg)-ion batteries: density functional theory. Physical Chemistry Chemical Physics, 2019, 21, 19951-19962.	1.3	66
450	Interplay between in-plane and flexural phonons in electronic transport of two-dimensional semiconductors. Physical Review B, 2019, 100, .	1.1	11
451	2D Crystal–Based Fibers: Status and Challenges. Small, 2019, 15, e1902691.	5.2	35
452	The good performance of bilayer β-antimoneneas an anode material for the Li-ion battery study. Applied Surface Science, 2019, 495, 143549.	3.1	17
453	Buckling strain effects on electronic and optical aspects of penta-graphene nanostructure. Superlattices and Microstructures, 2019, 133, 106217.	1.4	14

#	ARTICLE	IF	CITATIONS
454	Antimonene on Pb quantum wells. 2D Materials, 2019, 6, 045028.	2.0	18
455	Spin–Orbit Coupling-Dominated Catalytic Activity of Two-Dimensional Bismuth toward CO ₂ Electroreduction: Not the Thinner the Better. Journal of Physical Chemistry Letters, 2019, 10, 4663-4667.	2.1	41
456	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
457	Complex interaction of hydrogen with the monolayer TiS2 decorated with Li and Li2O clusters: an ab initio random structure searching approach. International Journal of Hydrogen Energy, 2019, 44, 21988-21998.	3.8	5
458	Giant anisotropy of thermal expansion and thermomechanical properties of monolayer α-antimonene: A first-principles study. Computational Materials Science, 2019, 169, 109132.	1.4	1
459	Recent progress in black phosphorus and black-phosphorus-analogue materials: properties, synthesis and applications. Nanoscale, 2019, 11, 14491-14527.	2.8	239
460	Properties of spin polarization and spin transport for zigzag antimonene nanoribbons with single vacancies. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 114, 113622.	1.3	1
461	Negative capacitance tunneling field effect transistors based on monolayer arsenene, antimonene, and bismuthene. Semiconductor Science and Technology, 2019, 34, 085006.	1.0	20
462	Ultrahigh carrier mobilities and high thermoelectric performance at room temperature optimized by strain-engineering to two-dimensional aw-antimonene. Nano Energy, 2019, 63, 103870.	8.2	38
463	The Potential Application of BAs for a Gas Sensor for Detecting SO2 Gas Molecule: a DFT Study. Nanoscale Research Letters, 2019, 14, 133.	3.1	24
464	Thermoelectric properties of 1 T monolayer pristine and Janus Pd dichalcogenides. Journal of Physics Condensed Matter, 2019, 31, 455502.	0.7	22
465	Acrylonitrile vapor adsorption studies on armchair arsenene nanoribbon based on DFT study. Applied Surface Science, 2019, 494, 1148-1155.	3.1	23
466	Quantum Phonon Transport in Nanomaterials: Combining Atomistic with Non-Equilibrium Green's Function Techniques. Entropy, 2019, 21, 735.	1.1	12
467	Electronic and magnetic properties of 3d transition-metal atom adsorbed vacancy-defected arsenene: A first-principles study. Journal of Magnetism and Magnetic Materials, 2019, 491, 165613.	1.0	9
468	The structural, electronic and optical properties of novel GaP/ZnS/AlP multilayer heterostructure: first-principles study. Materials Research Express, 2019, 6, 095912.	0.8	5
469	2D Vâ€V Binary Materials: Status and Challenges. Advanced Materials, 2019, 31, e1902352.	11.1	303
470	Mechanical deformation induced charge redistribution to promote the high performance of stretchable magnesium-ion batteries based on two-dimensional C ₂ N anodes. Nanoscale, 2019, 11, 15472-15478.	2.8	14
471	Electronic Structure and Theoretical Aspects on Sensing Application of 2D Materials. , 2019, , 145-203.		7

#	Article	IF	CITATIONS
472	Dynamically Stable Topological Phase of Arsenene. Scientific Reports, 2019, 9, 7966.	1.6	21
473	Effect of strain on the structural and electronic properties of transition metal-doped arsenene nanoribbons: An ab-initio approach. Pramana - Journal of Physics, 2019, 93, 1.	0.9	7
474	Influence of the vacancy-defect and transition-metal doping in arsenene: A first-principles study. Superlattices and Microstructures, 2019, 132, 106163.	1.4	13
475	Adsorption of Common Transition Metal Atoms on Arsenene: A First-Principles Study. Russian Journal of Physical Chemistry A, 2019, 93, 1088-1092.	0.1	3
476	Rapid preparation, thermal stability and electromagnetic interference shielding properties of two-dimensional Ti3C2 MXene. Ceramics International, 2019, 45, 19902-19909.	2.3	69
477	Structural and electronic properties of monolayer group III-VII compounds: A first-principle study. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 114, 113605.	1.3	2
478	Superior Mechanical and Electronic Properties of Novel 2D Allotropes of As and Sb Monolayers. Journal of Physical Chemistry C, 2019, 123, 27214-27221.	1.5	9
479	A Robust 2D Photoâ€Electrochemical Detector Based on NiPS ₃ Flakes. Advanced Electronic Materials, 2019, 5, 1900726.	2.6	36
480	Two-dimensional nanomaterials: fascinating materials in biomedical field. Science Bulletin, 2019, 64, 1707-1727.	4.3	171
481	Adsorption of NO Gas Molecules on Monolayer Arsenene Doped with Al, B, S and Si: A First-Principles Study. Processes, 2019, 7, 538.	1.3	8
482	Antimonene Engineered Highly Deformable Freestanding Electrode with Extraordinarily Improved Energy Storage Performance. Advanced Energy Materials, 2019, 9, 1902462.	10.2	54
483	Stabilities, and electronic and piezoelectric properties of two-dimensional tin dichalcogenide derived Janus monolayers. Journal of Materials Chemistry C, 2019, 7, 13203-13210.	2.7	72
484	Two-dimensional topological materials discovery by symmetry-indicator method. Physical Review B, 2019, 100, .	1.1	29
485	Massless Dirac fermions in stable two-dimensional carbon-arsenic monolayer. Physical Review B, 2019, 100, .	1.1	10
486	Ballistic Quantum Transport of Subâ€10 nm 2D Sb 2 Te 2 Se Transistors. Advanced Electronic Materials, 2019, 5, 1900813.	2.6	14
487	Two novel triangular borophenes B3H and B6O: first-principles prediction. Nanotechnology, 2019, 30, 495201.	1.3	2
488	Firstâ€Principles Study of Interaction of Bismuthene with Small Gas Molecules. ChemistrySelect, 2019, 4, 10928-10933.	0.7	12
489	Photo-absorption properties of van der Waals heterostructure of monolayer InSe with silicene, germanene and antimonene. Applied Surface Science, 2019, 475, 774-780.	3.1	12

	CITATION REPORT		
Article		IF	Citations
Oxygen Evolution Reaction on 2D Ferromagnetic Fe ₃ GeTe ₂ Reactivity by the Selfâ€Reduction of Surface Hydroxyl. Advanced Functional Materials	: Boosting the , 2019, 29, 1904782.	7.8	42
Temperature Driven Phase Transition at the Antimonene/Bi ₂ Se _{3Heterostructure. ACS Nano, 2019, 13, 10481-10489.}	sub> van der Waals	7.3	45
Two-dimensional VDW crystal SnP3 with high carrier mobility and extraordinary sunlig Chinese Journal of Chemical Physics, 2019, 32, 327-332.	ht absorbance.	0.6	1
The sp ² character of new two-dimensional AsB with tunable electronic p predicted by theoretical studies. Physical Chemistry Chemical Physics, 2019, 21, 2098	roperties 1-20987.	1.3	5
Comprehensive understanding of intrinsic mobility in the monolayers of III–VI group Physical Chemistry Chemical Physics, 2019, 21, 21898-21907.	2D materials.	1.3	32
Liquid phase exfoliation of antimonene: systematic optimization, characterization and electrocatalytic properties. Journal of Materials Chemistry A, 2019, 7, 22475-22486.		5.2	54
Strong temperature-strain coupling in the interface of Sb thin film on flexible PDMS su Applied Physics Letters, 2019, 115, .	ıbstrate.	1.5	3
Prediction of 2D Li2X (X=Se, Te) monolayer semiconductors by first principles calculat Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 125992.	ions. Physics	0.9	16
The mechanical flexibility, electronic structure and carrier mobility of monolayer GeP: A principles study. Physics Letters, Section A: General, Atomic and Solid State Physics, 2	A first 019, 383, 125856.	0.9	4
Evidence for Site-Specific Reversible Hydrogen Adsorption on Graphene by Sum-Frequ Spectroscopy and Density Functional Theory. Journal of Physical Chemistry C, 2019, 1	ency Generation 23, 25883-25889.	1.5	6
Assessment of three electrolyte–molecule electrostatic interaction models for 2D m BioFETs. Nanoscale Advances, 2019, 1, 1077-1085.	naterial based	2.2	5
Rh-doped MoSe ₂ as a toxic gas scavenger: a first-principles study. Nanos 2019, 1, 772-780.	cale Advances,	2.2	261
KTIO: a metal shrouded 2D semiconductor with high carrier mobility and tunable mag Nanoscale, 2019, 11, 1131-1139.	netism.	2.8	50
Tailoring natural layered β-phase antimony into few layer antimonene for Li storage w capabilities. Journal of Materials Chemistry A, 2019, 7, 3238-3243.	ith high rate	5.2	54
2D group-VA fluorinated antimonene: synthesis and saturable absorption. Nanoscale,	2019, 11, 1762-1769.	2.8	49
Powder exfoliated MoS ₂ nanosheets with highly monolayer-rich structure high-performance lithium-/sodium-ion-battery electrodes. Nanoscale, 2019, 11, 1887-	es as 1900.	2.8	93

506	Ultrafast diffusive cross-sheet motion of lithium through antimonene with 2 + 1 dimensional kinetics. Journal of Materials Chemistry A, 2019, 7, 2901-2907.	5.2	19
507	Planar penta-transition metal phosphide and arsenide as narrow-gap semiconductors with ultrahigh carrier mobility. Journal of Materials Science, 2019, 54, 7035-7047.	1.7	20

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494

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499

500

502

504

#	Article		CITATIONS
508	Broadband photodetectors based on 2D group IVA metal chalcogenides semiconductors. Applied Materials Today, 2019, 15, 115-138.	2.3	82
509	Robust two-dimensional topological insulators in derivatives of group-VA oxides with large band gap: Tunable quantum spin Hall states. Applied Materials Today, 2019, 15, 163-170.	2.3	13
510	Monitoring the crystal orientation of black-arsenic via vibrational spectra. Journal of Materials Chemistry C, 2019, 7, 1228-1236.	2.7	13
511	Three-dimensional auxetic properties in group V–VI binary monolayer crystals X ₃ M ₂ (X = S, Se; M = N, P, As). Physical Chemistry Chemical Physics, 2019, 21, 5916-5924.	1.3	10
512	Tuning electronic structure of monolayer InP ₃ in contact with graphene or Ni: effect of a buffer layer and intrinsic In and P-vacancy. Physical Chemistry Chemical Physics, 2019, 21, 1285-1293.	1.3	7
513	Silicanes Modified by Conjugated Substituents for Optoelectronic Devices. Advanced Optical Materials, 2019, 7, 1900696.	3.6	8
514	First Principles Study of Gas Molecules Adsorption on Monolayered β-SnSe. Coatings, 2019, 9, 390.	1.2	11
515	β-As Monolayer: Vibrational Properties and Raman Spectra. ACS Omega, 2019, 4, 10171-10175.	1.6	13
516	Unusual Electronic Transitions in Two-dimensional Layered <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:msub><mml:mrow><mml:mi>Sn</mml:mi><mml:mi>Sb</mml:mi><mml: Driven by Electronic State Rehybridization. Physical Review Applied, 2019, 11, .</mml: </mml:mrow></mml:msub></mml:math 	mn>2 <td>ml:mn> </td>	ml:mn>
517	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
518	Effect of Stone–Wales defects and transition-metal dopants on arsenene: a DFT study. RSC Advances, 2019, 9, 19048-19056.	1.7	23
519	Electronic band structures and optical properties of atomically thin AuSe: first-principle calculations. Journal of Semiconductors, 2019, 40, 062004.	2.0	7
520	Interfacial Properties of Monolayer Antimonene Devices. Physical Review Applied, 2019, 11, .	1.5	22
521	Saturable Absorption in 2D Nanomaterials and Related Photonic Devices. Laser and Photonics Reviews, 2019, 13, 1800282.	4.4	111
522	Prediction of novel SiX2(X = S, Se) monolayer semiconductors by density functional theory. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 114, 113581.	1.3	25
523	Modulating Epitaxial Atomic Structure of Antimonene through Interface Design. Advanced Materials, 2019, 31, e1902606.	11.1	84
524	A new phase of monolayer group-V binary compounds with direct bandgap and giant piezoelectric properties. Journal of Applied Physics, 2019, 125, .	1.1	13
525	Dynamics of surface graphene ripplocations on a flat graphite substrate. Physical Review B, 2019, 99, .	1.1	50

#	Article	IF	CITATIONS
526	Perfect planar tetra-coordinated MC ₆ monolayer: superior anode material for Li-ion battery. Physical Chemistry Chemical Physics, 2019, 21, 15187-15194.	1.3	14
527	2DMatPedia, an open computational database of two-dimensional materials from top-down and bottom-up approaches. Scientific Data, 2019, 6, 86.	2.4	201
528	Intercalation of transition metals in aluminene bi-layers: An ab initio study. Journal of Chemical Physics, 2019, 150, 194702.	1.2	3
529	SiAs2/GeP2 heterostructure for solar cell: A first-principles calculation. Chemical Physics Letters, 2019, 729, 65-68.	1.2	5
530	Tunable Electronic and Optical Properties of a Planar Hydrogenated AsSi Hybrid Nanosheet: A Potential Wide Water-Splitting Photocatalyst. Journal of Physical Chemistry C, 2019, 123, 14999-15008.	1.5	8
531	Effect of point defects on electronic and magnetic properties of single-layer SiO. Philosophical Magazine, 2019, 99, 2340-2353.	0.7	3
532	Penta-BeP2 monolayer: A new 2D beryllium phosphate with a narrow band gap. Chemical Physics Letters, 2019, 728, 136-141.	1.2	15
533	Solutionâ€Phase Synthesis of Few‣ayer Hexagonal Antimonene Nanosheets via Anisotropic Growth. Angewandte Chemie - International Edition, 2019, 58, 9891-9896.	7.2	50
534	2D Elemental Nanomaterials Beyond Graphene. ChemNanoMat, 2019, 5, 1062-1091.	1.5	64
535	Critical fracture properties of puckered and buckled arsenenes by molecular dynamics simulations. Physical Chemistry Chemical Physics, 2019, 21, 12372-12379.	1.3	7
536	A novel two-dimensional δ-InP ₃ monolayer with high stability, tunable bandgap, high carrier mobility, and gas sensing of NO ₂ . Journal of Materials Chemistry C, 2019, 7, 7352-7359.	2.7	44
537	Valley-Engineering Mobilities in Two-Dimensional Materials. Nano Letters, 2019, 19, 3723-3729.	4.5	23
538	First-principles investigation of structural and electronic properties of oxygen adsorbing phosphorene. Progress in Natural Science: Materials International, 2019, 29, 316-321.	1.8	12
539	Solutionâ€Phase Synthesis of Few‣ayer Hexagonal Antimonene Nanosheets via Anisotropic Growth. Angewandte Chemie, 2019, 131, 9996-10001.	1.6	5
540	Tuning the liquid-phase exfoliation of arsenic nanosheets by interaction with various solvents. Physical Chemistry Chemical Physics, 2019, 21, 12087-12090.	1.3	25
541	Few-layer bismuthene for robust ultrafast photonics in C-Band optical communications. Nanotechnology, 2019, 30, 354002.	1.3	37
542	Perceptions on the adsorption of COPD biomarker vapors on violet phosphorene nanosheet - A first-principles study. Journal of Molecular Graphics and Modelling, 2019, 91, 22-29.	1.3	27
543	Magnetic structure and magnetic transport properties of armchair arsenene nanoribbons. Solid State Communications, 2019, 297, 27-33.	0.9	9

		PORT	
#	ARTICLE Robust band gap topological insulators of SbS and SbSH. Chemical Physics, 2019, 523, 110-113	IF	Citations
044	Robust band gap topological insulators of 303 and 30311. Chemical Physics, 2019, 523, 110-113.	0.9	4
545	Band engineering realized by chemical combination in 2D group VA–VA materials. Nanoscale Horizons, 2019, 4, 1145-1152.	4.1	15
546	Two-dimensional pnictogens: A review of recent progresses and future research directions. Applied Physics Reviews, 2019, 6, .	5.5	143
547	Prediction of electronic and magnetic properties in 3d-transition-metal X-doped bismuthene (X = V, Cr,) Tj E	TQq1 1 0 3.1	.784314 rgB 21
548	Tunable gap in stable arsenene nanoribbons opens the door to electronic applications. RSC Advances, 2019, 9, 11818-11823.	1.7	3
549	Structural and electronic properties of predicting two-dimensional BC2P and BC3P3 monolayers by the global optimization method. Chemical Physics Letters, 2019, 726, 69-76.	1.2	16
550	Tuning the electronic and magnetic properties of antimonene nanosheets <i>via</i> point defects and external fields: first-principles calculations. Physical Chemistry Chemical Physics, 2019, 21, 10552-10566.	1.3	46
551	B ₃ S monolayer: prediction of a high-performance anode material for lithium-ion batteries. Journal of Materials Chemistry A, 2019, 7, 12706-12712.	5.2	59
552	Structure dependent optoelectronic properties of monolayer antimonene, bismuthene and their binary compound. Physical Chemistry Chemical Physics, 2019, 21, 7907-7917.	1.3	40
553	Electronic structure of two-dimensional In and Bi metal on BN nanosheets. RSC Advances, 2019, 9, 9342-9347.	1.7	4
554	Two-dimensional ferroelastic semiconductors in single-layer indium oxygen halide InOY (Y = Cl/Br). Physical Chemistry Chemical Physics, 2019, 21, 7440-7446.	1.3	26
555	2D Li2S monolayer: A global minimum lithium sulfide sandwich. Chemical Physics Letters, 2019, 722, 58-63.	1.2	12
556	Van der Waals heterostructures of P, BSe, and SiC monolayers. Journal of Applied Physics, 2019, 125, .	1.1	57
557	Physics of Graphene: Basic to FET Application. , 2019, , 29-63.		0
558	Doping-Free Arsenene Heterostructure Metal-Oxide-Semiconductor Field Effect Transistors Enabled by Thickness Modulated Semiconductor to Metal Transition in Arsenene. Scientific Reports, 2019, 9, 3988.	1.6	8
559	The electric field modulation of electronic properties in a type-II phosphorene/PbI ₂ van der Waals heterojunction. Physical Chemistry Chemical Physics, 2019, 21, 7765-7772.	1.3	25
560	Two-Dimensional Anisotropic C ₁₀ Carbon Allotrope with Mechanically Tunable Band Gap. ACS Omega, 2019, 4, 5002-5011.	1.6	6
561	Review of borophene and its potential applications. Frontiers of Physics, 2019, 14, 1.	2.4	201

	Стл	ation Report	
#	ARTICLE	IF	CITATIONS
562	first-principles studies. Computational and Theoretical Chemistry, 2019, 1157, 19-27.	1.1	25
563	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
564	Centimeterâ€scale growth of twoâ€dimensional layered highâ€mobility bismuth films by pulsed laser deposition. InformaĂnĂ-MateriĂ¡ly, 2019, 1, 98-107.	8.5	77
565	Two-dimensional Blue-AsP monolayers with tunable direct band gap and ultrahigh carrier mobility show promising high-performance photovoltaic properties. Nanoscale, 2019, 11, 8260-8269.	2.8	70
566	Tunable electronic properties of an Sb/InSe van der Waals heterostructure by electric field effects. Physical Chemistry Chemical Physics, 2019, 21, 5627-5633.	1.3	56
567	Lateral heterostructures and one-dimensional interfaces in 2D transition metal dichalcogenides. Journal of Physics Condensed Matter, 2019, 31, 213001.	0.7	32
568	Large negative differential resistance behavior in arsenene nanoribbons induced by vacant defects. Physics Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 1629-1635.	0.9	13
569	Tuning the electronic transport anisotropy in borophene via oxidation strategy. Science China Technological Sciences, 2019, 62, 799-810.	2.0	14
570	Electron-phonon properties, structural stability, and superconductivity of doped antimonene. Physical Review B, 2019, 99, .	1.1	27
571	Recent progress in 2D group IV–IV monochalcogenides: synthesis, properties and applications. Nanotechnology, 2019, 30, 252001.	1.3	104
572	Electric field effects on the electronic structures of MoS2/antimonene van der Waals heterostructure. Solid State Communications, 2019, 293, 28-32.	0.9	8
573	Strain and electric field effect on arsenene and antimonene heterobilayers. Materials Research Express, 2019, 6, 125925.	0.8	1
574	Thermal Conductivity of Silicene nanoribbon due to Ge and Sn doping. , 2019, , .		0
575	Blue phosphorene nanoribbon for detection of chloroform vapours – a first-principles study. International Journal of Environmental Analytical Chemistry, 2019, , 1-13.	1.8	13
576	Tellurene based chemical sensor. Journal of Materials Chemistry A, 2019, 7, 26326-26333.	5.2	95
577	The mechanical, electronic and optical properties of two-dimensional transition metal chalcogenides MX ₂ and M ₂ X ₃ (M = Ni, Pd; X = S, Se, Te) with hexagonal and orthorhombic structures. Journal of Materials Chemistry C, 2019, 7, 13518-13525.	2.7	58
578	The novel two-dimensional photocatalyst SnN ₃ with enhanced visible-light absorption for overall water splitting. Nanoscale, 2019, 11, 18628-18639.	2.8	25
579	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

#	Article	IF	CITATIONS
580	Boosting the intrinsic carrier mobility of two-dimensional pnictogen nanosheets by 1000 times <i>via</i> hydrogenation. Journal of Materials Chemistry C, 2019, 7, 13080-13087.	2.7	2
581	Valley-dependent electron retroreflection and anomalous Klein tunneling in an 8- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>P</mml:mi><mml:mi>m</mml:mi> borophene-based <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>n</mml:mi><mml:mtext>â^³<td><mml:mi 1.1 l:mtext><1</mml:mi </td><td>>m21 mml:mi>p</td></mml:mtext></mml:mrow></mml:math </mml:mrow></mml:math 	<mml:mi 1.1 l:mtext><1</mml:mi 	>m21 mml:mi>p
582	Resonance-enhanced all-optical modulation of WSe ₂ -based micro-resonator. Nanophotonics, 2020, 9, 2387-2396.	2.9	17
583	Electronic structure and transport properties of 2D RhTeCl: a NEGF-DFT study. Nanoscale, 2019, 11, 20461-20466.	2.8	8
584	Two-dimensional transition metal diborides: promising Dirac electrocatalysts with large reaction regions toward efficient N ₂ fixation. Journal of Materials Chemistry A, 2019, 7, 25887-25893.	5.2	45
585	Arsenene and antimonene doped by group-VA atoms: First-principles studies of the geometric structures, electronic properties and STM images. Physica B: Condensed Matter, 2019, 553, 195-201.	1.3	16
586	Spatial self-phase modulation and all-optical switching of graphene oxide dispersions. Journal of Alloys and Compounds, 2019, 771, 900-904.	2.8	35
587	2D/2D Graphitic Carbon Nitride/Antimonene Heterostructure: Structural Characterization and Application in Photocatalysis. Advanced Sustainable Systems, 2019, 3, 1800138.	2.7	30
588	A Firstâ€Principles Study on the Adsorption of Small Molecules on Arsenene: Comparison of Oxidation Kinetics in Arsenene, Antimonene, Phosphorene, and InSe. ChemPhysChem, 2019, 20, 575-580.	1.0	42
589	SiP2S monolayer: A two dimensional semiconductor with a moderate band gap. Chemical Physics Letters, 2019, 715, 100-104.	1.2	5
590	A DFT based prediction of a new 2D zirconium disulfide Pmmm-ZrS2 monolayer: A quasi direct band gap semiconductor. Results in Physics, 2019, 12, 903-907.	2.0	10
591	Germanane nanosheet as a novel biosensor for liver cirrhosis based on adsorption of biomarker volatiles – A DFT study. Applied Surface Science, 2019, 475, 990-998.	3.1	56
592	Recent Progress in Two-Dimensional Nanomaterials for Laser Protection. Chemistry, 2019, 1, 17-43.	0.9	22
593	Isoelectronic analogues of graphene: the BCN monolayers with visible-light absorption and high carrier mobility. Journal of Physics Condensed Matter, 2019, 31, 125301.	0.7	22
594	Cytotoxicity of Shear Exfoliated Pnictogen (As, Sb, Bi) Nanosheets. Chemistry - A European Journal, 2019, 25, 2242-2249.	1.7	34
595	Arsenene nanoribbons for sensing NH3 and PH3 gas molecules – A first-principles perspective. Applied Surface Science, 2019, 469, 173-180.	3.1	77
596	First-principles computational design of unknown flat arsenene epitaxially grown on copper substrate. Applied Surface Science, 2019, 467-468, 561-566.	3.1	15
597	Intriguing electronic properties of germanene/ indium selenide and antimonene/ indium selenide heterostructures. Journal of Solid State Chemistry, 2019, 269, 513-520.	1.4	11

		CITATION RE	PORT	
#	ARTICLE Band structure tuning and charge separation of MNX monolayers and MNX/GaS van der Waals		IF	CITATIONS
599	heterostructures. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 108, 44-52. Sustainable and Affordable Composites Built Using Microstructures Performing Better than Nanostructures for Arsenic Removal. ACS Sustainable Chemistry and Engineering, 2019, 7, 3222-3	233.	3.2	26
600	First-principles study of thermal expansion and thermomechanics of group-V monolayers: blue phosphorene, arsenene, and antimonene. Journal of Physics Condensed Matter, 2019, 31, 065302		0.7	11
601	Van der Waals Heteroepitaxial Growth of Monolayer Sb in a Puckered Honeycomb Structure. Advanced Materials, 2019, 31, e1806130.		11.1	75
602	Tuning electronic and magnetic properties of single-layer PN phases by point defects. Journal of Physics and Chemistry of Solids, 2019, 125, 80-89.		1.9	3
603	Phonon-mediated superconductivity in electron-doped monolayer InSe: A first-principles investigat Journal of Physics and Chemistry of Solids, 2019, 125, 23-30.	ion.	1.9	5
604	First-principles Study of Strain-Induced Magnetism in Defective Arsenene. Journal of Superconductivity and Novel Magnetism, 2019, 32, 1735-1740.		0.8	1
605	Recent progress on graphene-analogous 2D nanomaterials: Properties, modeling and applications. Progress in Materials Science, 2019, 100, 99-169.		16.0	235
606	Stabilization of two-dimensional penta-silicene for flexible lithium-ion battery anodes <i>via</i> surface chemistry reconfiguration. Physical Chemistry Chemical Physics, 2019, 21, 1029-1037.		1.3	27
607	Antimonene quantum dot-based solid-state solar cells with enhanced performance and high stabili Solar Energy Materials and Solar Cells, 2019, 189, 11-20.	ty.	3.0	34
608	Basics and Families of Monatomic Layers. , 2019, , 3-22.			5
609	Confined Synthesis of 2D Nanostructured Materials toward Electrocatalysis. Advanced Energy Materials, 2020, 10, 1900486.		10.2	123
610	Band structure and optical properties of MoS2/SnO2 hetero-bilayer from hybrid functional calculations. Materials Chemistry and Physics, 2020, 239, 122071.		2.0	11
611	Nb2SiTe4 and Nb2GeTe4: Unexplored 2D Ternary Layered Tellurides with High Stability, Narrow Ba Gap and High Electron Mobility. Journal of Electronic Materials, 2020, 49, 959-968.	nd	1.0	39
612	1902253.		10.2	79
613	Antimonene-based flexible photodetector. Nanoscale Horizons, 2020, 5, 124-130. Unraveling the stacking effect and stability in nanocrystalline antimony through DFT. Journal of		4.1	51
615	Emerging Applications of Elemental 2D Materials. Advanced Materials, 2020, 32, e1904302.		11.1	336

#	Article	IF	CITATIONS
616	Tunable electronic properties in bismuthene/2D silicon carbide van der Waals heterobilayer. Japanese Journal of Applied Physics, 2020, 59, SCCC03.	0.8	18
618	Introduction to Carbon-Based Nanostructures. , 2020, , 1-10.		0
619	The New Family of Two-Dimensional Materials and van der Waals Heterostructures. , 2020, , 70-91.		0
620	Quantum Transport: General Concepts. , 2020, , 92-119.		0
621	Klein Tunneling and Ballistic Transport in Graphene and Related Materials. , 2020, , 120-144.		0
622	Quantum Transport in Disordered Graphene-Based Materials. , 2020, , 145-209.		0
623	Electronic and magnetic properties of 5d transition metal substitution doping monolayer antimonene: within GGA and GGAÂ+ÂU framework. Applied Surface Science, 2020, 508, 145197.	3.1	21
626	Electronic Properties of Carbon-Based Nanostructures. , 2020, , 11-69.		0
627	Quantum Hall Effects in Graphene. , 2020, , 210-236.		0
628	Spin-Related Phenomena. , 2020, , 237-277.		0
629	Ab Initio and Multiscale Quantum Transport in Graphene-Based Materials. , 2020, , 293-353.		0
633	Thickness of elemental and binary single atomic monolayers. Nanoscale Horizons, 2020, 5, 385-399.	4.1	21
634	Insights into the vacancy behaviour at the interface of As–Sb lateral heterostructures. Journal of Materials Chemistry C, 2020, 8, 650-662.	2.7	4
635	Electronic properties of arsenene nanoribbons for FET application. Optical and Quantum Electronics, 2020, 52, 1.	1.5	3
636	Antimonene/bismuthene vertical Van-der Waals heterostructure: A computational study. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 118, 113914.	1.3	20
637	Selective Preparation of 1T- and 2H-Phase MoS ₂ Nanosheets with Abundant Monolayer Structure and Their Applications in Energy Storage Devices. ACS Applied Energy Materials, 2020, 3, 998-1009.	2.5	50
638	Hybrid excitation mechanism of upconversion fluorescence in hollow La2Ti2O7: Tm3+/Yb3+ submicron fibers. Journal of Materials Science, 2020, 55, 4633-4645.	1.7	7
639	Semi-hydrogenated polyaniline sheet: A half-metal with exotic properties. Journal of Magnetism and Magnetic Materials, 2020, 497, 166027.	1.0	3

#	Article	IF	Citations
640	Molecular beam epitaxy fabrication of two-dimensional materials. , 2020, , 103-134.		4
641	Black arsenic: a new synthetic method by catalytic crystallization of arsenic glass. Nanoscale, 2020, 12, 5397-5401.	2.8	12
642	Enhanced anisotropic electrical conductivity of perturbed monolayer β ₁₂ -borophene. Physical Chemistry Chemical Physics, 2020, 22, 286-294.	1.3	9
643	Kagome-like group-VA monolayers with indirect–direct band gap transition and anisotropic mobility. Journal of Materials Chemistry C, 2020, 8, 2732-2740.	2.7	14
644	Electronic, elastic, optical and thermal transport properties of penta-PdAs2 monolayer: First-principles study. Solid State Communications, 2020, 307, 113802.	0.9	8
645	Largeâ€Scale Synthesis of Strainâ€Tunable Semiconducting Antimonene on Copper Oxide. Advanced Materials, 2020, 32, e1906873.	11.1	46
646	Surface-dominated conductivity of few-layered antimonene. 2D Materials, 2020, 7, 021001.	2.0	1
647	Influence of defects and dopants on the sensitivity of arsenene towards HCN. Applied Surface Science, 2020, 506, 144936.	3.1	61
648	Free-standing and supported phosphorene nanoflakes: Shape- and size-dependent properties. Applied Surface Science, 2020, 506, 144756.	3.1	8
649	Theoretical prediction of 2D XI2 (X=Si, Ge, Sn, Pb) monolayers by density functional theory. Journal of Molecular Graphics and Modelling, 2020, 95, 107501.	1.3	19
650	Ultrahigh-strain ferroelasticity in two-dimensional honeycomb monolayers: from covalent to metallic bonding. Science Bulletin, 2020, 65, 147-152.	4.3	21
651	Exploring the effect of dopant (Si, P, S, Ge, Se, and Sb) in arsenene: A DFT study. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126146.	0.9	8
652	Structural, mechanical, and electronic properties of nanotubes based on buckled arsenene: A first-principles study. Materials Today Communications, 2020, 22, 100791.	0.9	8
653	Two-dimensional MoS ₂ /GaN van der Waals heterostructures: tunable direct band alignments and excitonic optical properties for photovoltaic applications. Journal Physics D: Applied Physics, 2020, 53, 095107.	1.3	6
655	Oxidation-driven formation of precisely ordered antimonene nanoribbons. Journal of Physics Condensed Matter, 2020, 32, 165302.	0.7	1
656	Theoretical Analysis of Ballistic Current Transport in Monolayer Black Arsenic MOSFETs. IEEE Transactions on Electron Devices, 2020, 67, 622-626.	1.6	0
657	Pnictogens Allotropy and Phase Transformation during van der Waals Growth. Nano Letters, 2020, 20, 8258-8266.	4.5	7
658	Realization of a Buckled Antimonene Monolayer on Ag(111) via Surface Engineering. Journal of Physical Chemistry Letters, 2020, 11, 8976-8982.	2.1	23

#	Article	IF	CITATIONS
659	Geometry, induced magnetism and modified electronic behaviors for magnetic atom adsorption on antimonene nanotubes. Physical Chemistry Chemical Physics, 2020, 22, 23665-23677.	1.3	3
660	Application and prospect of antimonene: A new two-dimensional nanomaterial in cancer theranostics. Journal of Inorganic Biochemistry, 2020, 212, 111232.	1.5	20
661	The effect of dopants on electronic and magnetic properties of symmetric washboard phase bismuthene: A DFT study. Journal of Magnetism and Magnetic Materials, 2020, 516, 167325.	1.0	0
662	Improving electrocatalytic activity of 2H-MoS2 nanosheets obtained by liquid phase exfoliation: Covalent surface modification versus interlayer interaction. Journal of Catalysis, 2020, 391, 424-434.	3.1	25
663	Dimethyl and ethyl methyl ether adsorption studies on β-antimonene nanosheets – a first-principles study. Molecular Simulation, 2020, 46, 1354-1361.	0.9	17
664	Antimonene Quantum Dots as an Emerging Fluorescent Nanoprobe for the pHâ€Mediated Dualâ€Channel Detection of Tetracyclines. Small, 2020, 16, e2003429.	5.2	15
665	First-principles study for exploring the adsorption behavior of G-series nerve agents on graphdyine surface. Computational and Theoretical Chemistry, 2020, 1191, 113043.	1.1	43
666	DFT coupled with NEGF study of structural, electronic and transport properties of two-dimensional InOBr. Vacuum, 2020, 182, 109745.	1.6	1
667	Recent development and advances in Photodetectors based on two-dimensional topological insulators. Journal of Materials Chemistry C, 2020, 8, 15526-15574.	2.7	35
668	Electronic and optical properties of borophene and graphene with an adsorbed ionic liquid: A density functional theory study. Journal of Molecular Liquids, 2020, 316, 113803.	2.3	11
669	Antimonene nanosheets fabricated by laser irradiation technique with outstanding nonlinear absorption responses. Applied Physics Letters, 2020, 116, .	1.5	12
670	Structural and mechanical properties characterization of arsenene nanosheets under doping effect of transition metals: A DFT study. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 124, 114349.	1.3	28
671	2D BeP ₂ monolayer: investigation of electronic and optical properties by driven modulated strain. RSC Advances, 2020, 10, 26804-26812.	1.7	13
672	Predicting the structures and properties of few-layer two-dimensional (1Â1Â0)-oriented BN nanosheets: First-principles calculations. Chemical Physics, 2020, 534, 110765.	0.9	1
673	Kinetics-Limited Two-Step Growth of van der Waals Puckered Honeycomb Sb Monolayer. ACS Nano, 2020, 14, 16755-16760.	7.3	20
674	Dynamical stability of two-dimensional metals in the periodic table. Physical Review B, 2020, 102, .	1.1	26
675	Optoelectronic properties of pristine antimonene, phosphorene and their binary compound. Computational Condensed Matter, 2020, 24, e00488.	0.9	5
676	Stacking-dependent electronic properties of aluminene based multilayer van der Waals heterostructures. Computational Materials Science, 2020, 185, 109952.	1.4	3

#	Article	IF	CITATIONS
677	A first-principles study of electronic structure and photocatalytic performance of two-dimensional van der Waals MTe2–As (MÂ=ÂMo, W) heterostructures. International Journal of Hydrogen Energy, 2020, 45, 27089-27097.	3.8	35
678	Nanometer-thick films of antimony oxide nanoparticles grafted on defective graphenes as heterogeneous base catalysts for coupling reactions. Journal of Catalysis, 2020, 390, 135-149.	3.1	5
679	Tunable nonlinear optical responses and carrier dynamics of two-dimensional antimonene nanosheets. Nanoscale Horizons, 2020, 5, 1420-1429.	4.1	15
680	Antimonene dendritic nanostructures: Dual-functional material for high-performance energy storage and harvesting devices. Nano Energy, 2020, 77, 105248.	8.2	86
681	Tunable SO2-sensing performance of arsenene induced by Stone-Wales defects and external electric field. Applied Surface Science, 2020, 523, 146403.	3.1	29
682	Antimonene: A Promising Candidate for SFâ,† Decomposition Gas Sensors With High Sensitivity and High Stability. IEEE Electron Device Letters, 2020, 41, 1408-1411.	2.2	20
683	Optical properties enhancement of buckled Bismuthene in mid-infrared region: a theoretical first-principle study. Molecular Simulation, 2020, 46, 1004-1010.	0.9	4
684	SnxPy Monolayers: a New Type of Two-Dimensional Materials with High Stability, Carrier Mobility, and Magnetic Properties. Nanoscale Research Letters, 2020, 15, 155.	3.1	3
685	qvasp: A flexible toolkit for VASP users in materials simulations. Computer Physics Communications, 2020, 257, 107535.	3.0	88
686	Electronic and photocatalytic properties of Antimonene nanosheets. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 124, 114336.	1.3	17
687	First-principles insight on interaction behavior of diethylbenzene and ethyltoluene on α-arsenene nanoring. Materials Today Communications, 2020, 25, 101476.	0.9	3
688	First-principle insights of CO and NO detection via antimonene nanoribbons. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	1.1	8
689	First-principle study of puckered arsenene MOSFET. Journal of Semiconductors, 2020, 41, 082006.	2.0	4
690	Single atom-doped arsenene as electrocatalyst for reducing nitrogen to ammonia: a DFT study. Physical Chemistry Chemical Physics, 2020, 22, 26223-26230.	1.3	36
691	Tunable phase transitions and high photovoltaic performance of two-dimensional In ₂ Ge ₂ Te ₆ semiconductors. Nanoscale Horizons, 2020, 5, 1566-1573.	4.1	17
692	Recent progress in 2D group-V elemental monolayers: fabrications and properties. Journal of Semiconductors, 2020, 41, 081003.	2.0	11
693	Theoretical investigation of the interaction of gas molecules with Pt-adsorbed arsenene monolayers. Computational and Theoretical Chemistry, 2020, 1190, 112977.	1.1	7
694	Research Progress and Prospects of Single-Layer 2D Materials Xenes. Journal of Physics: Conference Series, 2020, 1634, 012041.	0.3	0

#	Article	IF	CITATIONS
695	Symmetry breaking, strain solitons, and mechanical edge modes in monolayer antimony. Physical Review B, 2020, 102, .	1.1	2
696	Continuous preparation of antimony nanocrystals with near infrared photothermal property by pulsed laser ablation in liquids. Scientific Reports, 2020, 10, 15095.	1.6	9
697	Ultrascaled Double-Gate Monolayer <mml:math <br="" xmlns:mml="http://www.w3.org/1998/Math/MathML">display="inline" overflow="scroll"><mml:msub><mml:mrow><mml:mi>Sn</mml:mi><mml:mi mathvariant="normal">S</mml:mi </mml:mrow><mml:mn>2</mml:mn></mml:msub></mml:math> MOSFETs for High-Performance and Low-Power Aprilications, Physical Review Applied, 2020, 14, .	1,5	21
698	mathvariant="normal">C <mml:mn>2<mml:mi mathvariant="normal">Nxmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>t</mml:mi>tg</mml:mrow></mml:mi </mml:mn>	1.1 < mml:mte	11 xt>â^'
699	Physical vapor deposited 2D bismuth for CMOS technology. Journal of Semiconductors, 2020, 41, 081001.	2.0	7
700	Tellurene: An elemental 2D monolayer material beyond its bulk phases without van der Waals layered structures. Journal of Semiconductors, 2020, 41, 081002.	2.0	33
701	Design, characterization, and application of elemental 2D materials for electrochemical energy storage, sensing, and catalysis. Materials Advances, 2020, 1, 2562-2591.	2.6	21
702	Strain-induced band modulation and excellent stability, transport and optical properties of penta-MP ₂ (M = Ni, Pd, and Pt) monolayers. Nanoscale Advances, 2020, 2, 4566-4580.	2.2	10
703	Substitutional doped GeSe: tunable oxidative states with strain engineering. Journal of Materials Chemistry C, 2020, 8, 13655-13667.	2.7	16
704	Soft-template assisted synthesis of hexagonal antimonene and bismuthene in colloidal solutions. Nanoscale, 2020, 12, 20945-20951.	2.8	22
705	Topologization of \hat{I}^2 -antimonene on Bi2Se3 via proximity effects. Scientific Reports, 2020, 10, 14619.	1.6	17
706	High-performance monolayer Na ₃ Sb shrinking transistors: a DFT-NEGF study. Nanoscale, 2020, 12, 18931-18937.	2.8	11
707	Nanolayered Black Arsenic–Silicon Lateral Heterojunction Photodetector for Visible to Mid-Infrared Wavelengths. ACS Applied Nano Materials, 2020, 3, 9401-9409.	2.4	14
708	The Applications of 2D Nanomaterials in Energy-Related Process. ACS Symposium Series, 2020, , 219-251.	0.5	1
709	A new single-element layered two-dimensional semiconductor: black arsenic. Journal of Semiconductors, 2020, 41, 080402.	2.0	3
710	Preparation of antimonene by laser irradiation in different solvents for optical limiting. Optical Materials, 2020, 109, 110132.	1.7	2
711	Benchmark Investigation of Band-Gap Tunability of Monolayer Semiconductors under Hydrostatic Pressure with Focus-On Antimony. Nanomaterials, 2020, 10, 2154.	1.9	5
712	Recent Advances in Strain-Induced Piezoelectric and Piezoresistive Effect-Engineered 2D Semiconductors for Adaptive Electronics and Optoelectronics. Nano-Micro Letters, 2020, 12, 106.	14.4	89

#	Article	IF	CITATIONS
713	Semiconducting two-dimensional group VA–VA haeckelite compounds with superior carrier mobility. Physical Chemistry Chemical Physics, 2020, 22, 12260-12266.	1.3	7
714	Topological phase transition and tunable electronic properties of hydrogenated bismuthene: from single-layer to double-layer. Journal of Physics Condensed Matter, 2020, 32, 035501.	0.7	1
715	Ultrathin high-Î $^{\circ}$ antimony oxide single crystals. Nature Communications, 2020, 11, 2502.	5.8	29
716	Anisotropic High Carrier Mobilities of One-Third-Hydrogenated Group-V Elemental Monolayers. Journal of Physical Chemistry C, 2020, 124, 12628-12635.	1.5	1
717	Surface Energy of Black Phosphorus Alloys with Arsenic. ChemNanoMat, 2020, 6, 821-826.	1.5	6
718	Formation of antimonene nanoribbons by molecular beam epitaxy. 2D Materials, 2020, 7, 045003.	2.0	5
719	Topological band structure transitions and goniopolar transport in honeycomb antimonene as a function of buckling. Physical Review B, 2020, 101, .	1.1	16
720	Ultrasensitive detection of microRNA using a bismuthene-enabled fluorescence quenching biosensor. Chemical Communications, 2020, 56, 7041-7044.	2.2	49
721	Strain tunable electrical and optical properties of two dimensional tetragonal MgX (X=S, Se) monolayer semiconductors. Superlattices and Microstructures, 2020, 144, 106570.	1.4	7
723	Two-dimensional hexaphosphate BiMP6 (MÂ=ÂAl, Ga, In) with desirable band gaps and ultrahigh carrier mobility for photocatalytic hydrogen evolution. Applied Surface Science, 2020, 517, 146166.	3.1	34
724	Two dimensional ruthenium carbide: structural and electronic features. Physical Chemistry Chemical Physics, 2020, 22, 15488-15495.	1.3	2
725	Transition of wide-band gap semiconductor h-BN(BN)/P heterostructure via single-atom-embedding. Journal of Materials Chemistry C, 2020, 8, 9755-9762.	2.7	7
726	Prospects for Functionalizing Elemental 2D Pnictogens: A Study of Molecular Models. ACS Nano, 2020, 14, 7722-7733.	7.3	13
727	Surface-regulated triangular borophene as Dirac-like materials from density functional calculation investigation*. Chinese Physics B, 2020, 29, 096301.	0.7	5
728	Electrochemical synthesis of 2D antimony, bismuth and their compounds. Journal of Materials Chemistry C, 2020, 8, 9464-9475.	2.7	16
729	Stable halogen 2D materials: the case of iodine and astatine. Journal of Physics Condensed Matter, 2020, 32, 335301.	0.7	1
730	Surface assimilation studies of ethyl methyl sulfide on gamma phosphorene sheets – a DFT outlook. Molecular Physics, 2020, 118, e1774089.	0.8	12
731	Band Structure, Band Offsets, and Intrinsic Defect Properties of Few-Layer Arsenic and Antimony. Journal of Physical Chemistry C, 2020, 124, 7441-7448.	1.5	9

#	Article	IF	CITATIONS
732	Two-dimensional graphene-like Xenes as potential topological materials. APL Materials, 2020, 8, .	2.2	46
733	Semiconducting few-layer PdSe ₂ and Pd ₂ Se ₃ : native point defects and contacts with native metallic Pd ₁₇ Se ₁₅ . Physical Chemistry Chemical Physics, 2020, 22, 7365-7373.	1.3	8
734	Novel porous aluminum nitride monolayer: a first-principles study. Journal of Physics Condensed Matter, 2020, 32, 225301.	0.7	2
735	Acetonitrile-assisted exfoliation of layered grey and black arsenic: contrasting properties. Nanoscale Advances, 2020, 2, 1282-1289.	2.2	21
736	Novel two-dimensional monoelemental and ternary materials: growth, physics and application. Nanophotonics, 2020, 9, 2147-2168.	2.9	29
737	First-principle investigation of the elastic and plastic properties of the bismuthene: Effect of the external electric field. Superlattices and Microstructures, 2020, 140, 106476.	1.4	7
738	Stabilities of group-III phosphide (MP, M = B, Al, Ga and In) monolayers in oxygen and water environments. Physical Chemistry Chemical Physics, 2020, 22, 7633-7642.	1.3	46
739	Electronic properties of bare and functionalized two-dimensional (2D) tellurene structures. Physical Chemistry Chemical Physics, 2020, 22, 6727-6737.	1.3	28
740	"Top-down―Arsenene Production by Low-Potential Electrochemical Exfoliation. Inorganic Chemistry, 2020, 59, 11259-11265.	1.9	23
741	Tuning the thermoelectric efficiency of a polyaniline sheet using strain engineering. Journal Physics D: Applied Physics, 2020, 53, 255302.	1.3	6
742	Electronic structures and strain responses of group VA/VA two-dimensional van der waals heterostructures. Vacuum, 2020, 176, 109296.	1.6	12
743	Ultrafast Pulse Generation for Er- and Tm- Doped Fiber Lasers With Sb Thin Film Saturable Absorber. Journal of Lightwave Technology, 2020, 38, 3710-3716.	2.7	8
744	Review of 2D group VA material-based heterostructures. Journal Physics D: Applied Physics, 2020, 53, 293002.	1.3	29
745	Tuning electronic structure and magnetic properties of Mn- and Fe-doped arsenene with biaxial strain. Journal of Physics Condensed Matter, 2020, 32, 085802.	0.7	3
746	Present advances and perspectives of broadband photo-detectors based on emerging 2D-Xenes beyond graphene. Nano Research, 2020, 13, 891-918.	5.8	36
747	Two-Dimensional Antimony Oxide. Physical Review Letters, 2020, 124, 126101.	2.9	22
748	Recent progress in high-performance photo-detectors enabled by the pulsed laser deposition technology. Journal of Materials Chemistry C, 2020, 8, 4988-5014.	2.7	18
749	Two-Dimensional Square-A ₂ B (A = Cu, Ag, Au, and B = S, Se): Auxetic Semiconductors with High Carrier Mobilities and Unusually Low Lattice Thermal Conductivities. Journal of Physical Chemistry Letters, 2020, 11, 2925-2933.	2.1	40

#	Article	IF	Citations
750	Computational study of spin caloritronics in a pristine and defective antimonene nanoribbon. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 120, 114083.	1.3	6
751	Two-dimensional Xenes and their device concepts for future micro- and nanoelectronics and energy applications. , 2020, , 181-219.		1
752	Tuning the structural, electronic and adsorption properties of Au-embedded 2D WSe2 and Arsenene nanosheets: A DFT study. Computational and Theoretical Chemistry, 2020, 1186, 112913.	1.1	13
753	Self-Assembled Hydrophobic Molecule-Based Surface Modification: A Strategy to Improve Efficiency and Stability of Perovskite Solar Cells. ACS Sustainable Chemistry and Engineering, 0, , .	3.2	2
754	Xenes as an Emerging 2D Monoelemental Family: Fundamental Electrochemistry and Energy Applications. Advanced Functional Materials, 2020, 30, 2002885.	7.8	66
755	Advances in ultrathin borophene materials. Chemical Engineering Journal, 2020, 401, 126109.	6.6	42
756	Stability and synthesis of 2D metals and alloys: a review. Materials Today Advances, 2020, 8, 100092.	2.5	43
757	Harnessing biological applications of quantum materials: opportunities and precautions. Journal of Materials Chemistry C, 2020, 8, 10498-10525.	2.7	4
758	High exothermic dissociation in van der Waals like hexagonal two dimensional nitrogene from first–principles molecular dynamics. Applied Surface Science, 2020, 529, 146552.	3.1	11
759	Tuning electronic transport properties of wide antimonene nanoribbon via edge hydrogenation and oxidation. Chemical Physics, 2020, 538, 110909.	0.9	1
760	Two-dimensional aluminum phosphide semiconductor with tunable direct band gap for nanoelectric applications. RSC Advances, 2020, 10, 25170-25176.	1.7	9
761	Comparative investigation of the thermal transport properties of Janus SnSSe and SnS ₂ monolayers. Physical Chemistry Chemical Physics, 2020, 22, 16796-16803.	1.3	19
762	Unveiling the oxidation behavior of liquid-phase exfoliated antimony nanosheets. 2D Materials, 2020, 7, 025039.	2.0	33
763	Stability, electronic and mechanical properties of chalcogen (Se and Te) monolayers. Physical Chemistry Chemical Physics, 2020, 22, 5749-5755.	1.3	23
764	Bond relaxation and electronic properties of two-dimensional Sb/MoSe2 and Sb/MoTe2 van der Waals heterostructures. AIP Advances, 2020, 10, .	0.6	8
765	Spin-dependent Seebeck effect, and spin-filtering and diode effects in magnetic boron–nitrogen nanotube heterojunctions. Journal of Materials Chemistry C, 2020, 8, 4486-4492.	2.7	10
766	Broadband Passive Photonic Diodes With the Saturable Absorption in Antimony Thin Film. IEEE Photonics Journal, 2020, 12, 1-7.	1.0	1
767	The enhanced hydrogen-sensing performance of the Fe-doped MoO3 monolayer: A DFT study. International Journal of Hydrogen Energy, 2020, 45, 10257-10267.	3.8	12

#	Article	IF	CITATIONS
768	On the in-plane electronic thermal conductivity of biased nanosheet β ₁₂ -borophene. Physical Chemistry Chemical Physics, 2020, 22, 6318-6325.	1.3	3
769	InTel: a novel wide-bandgap 2D material with desirable stability and highly anisotropic carrier mobility. Nanoscale, 2020, 12, 5888-5897.	2.8	39
770	First-principles study of structural and electronic properties of substitutionally doped arsenene. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 119, 114018.	1.3	11
771	The influence of dopants on aW-phase antimonene: theoretical investigations. RSC Advances, 2020, 10, 6973-6978.	1.7	34
772	The strain effect on the electronic properties of the MoSSe/WSSe van der Waals heterostructure: a first-principles study. Physical Chemistry Chemical Physics, 2020, 22, 4946-4956.	1.3	54
773	2D Hexagonal SnTe monolayer: a quasi direct band gap semiconductor with strain sensitive electronic and optical properties. European Physical Journal B, 2020, 93, 1.	0.6	12
774	Anisotropic Inâ€Plane Ballistic Transport in Monolayer Black Arsenicâ€Phosphorus FETs. Advanced Electronic Materials, 2020, 6, 1901281.	2.6	59
775	The Rise of 2D Photothermal Materials beyond Graphene for Clean Water Production. Advanced Science, 2020, 7, 1902236.	5.6	206
776	Quantum Transport beyond DC. , 2020, , 278-292.		0
778	Structural and mechanical properties of pristine and adsorbed puckered arsenene nanostructures: A DFT study. Superlattices and Microstructures, 2020, 139, 106414.	1.4	26
779	Be3BN3 monolayer with ultrawide band gap and promising stability for deep ultraviolet applications. Computational Materials Science, 2020, 177, 109552.	1.4	1
780	Designing sub-10-nm Metal-Oxide-Semiconductor Field-Effect Transistors via Ballistic Transport and Disparate Effective Mass: The Case of Two-Dimensional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll">< mml:mrow> <mml:mi>Bi</mml:mi> <mml:mi< td=""><td>1.5</td><td>69</td></mml:mi<></mml:math 	1.5	69
781	mathvariant="normal">Nc/numbrai>c/numbraiow>c/numbraith>. Physical Review Applied, 2020, 13, . Adsorption and Gas Sensing Properties of the Pt ₃ -MoSe ₂ Monolayer to SOF ₂ and SO ₂ F ₂ . ACS Omega, 2020, 5, 7722-7728.	1.6	24
782	Permeability and mechanical properties of arsenene and arsenene/graphene heterostructure: First-principles calculation. Computational Condensed Matter, 2020, 23, e00473.	0.9	4
783	Electrical transport properties in group-V elemental ultrathin 2D layers. Npj 2D Materials and Applications, 2020, 4, .	3.9	35
784	Multifunctional VI–VI binary heterostructure-based self-powered pH-sensitive photo-detector. Journal of Materials Chemistry C, 2020, 8, 5991-6000.	2.7	8
785	Emerging pnictogen-based 2D semiconductors: sensing and electronic devices. Nanoscale, 2020, 12, 10430-10446.	2.8	22
786	Tuning the structural and electronic properties of arsenene monolayers by germanene, silicene, and stanene domain doping. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 122, 114152.	1.3	4

#	Article	IF	CITATIONS
787	DFT coupled with NEGF study of the electronic properties and ballistic transport performances of 2D SbSiTe ₃ . Nanoscale, 2020, 12, 9958-9963.	2.8	11
788	Noncovalent Functionalization of Few‣ayered Antimonene with Fullerene Clusters and Photoinduced Charge Separation in the Composite. Chemistry - A European Journal, 2020, 26, 6726-6735.	1.7	7
789	Anisotropic Transport Property of Antimonene MOSFETs. ACS Applied Materials & Interfaces, 2020, 12, 22378-22386.	4.0	30
790	Two-Dimensional Black Phosphorus Carbide: Rippling and Formation of Nanotubes. Journal of Physical Chemistry C, 2020, 124, 10235-10243.	1.5	32
791	The effect of edge functionalization on the device performance of monolayer Si0.5Ge0.5 nanoribbon transistors. Journal of Computational Electronics, 2021, 20, 95-106.	1.3	2
792	Epitaxial Growth of Main Group Monoelemental 2D Materials. Advanced Functional Materials, 2021, 31, 2006997.	7.8	37
793	Computational study of 4d transition metals doped bismuthene for spintronics. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 126, 114464.	1.3	14
794	Indium selenide nanosheets for photoelectrical NO2 sensor with ultra sensitivity and full recovery at room temperature. Sensors and Actuators B: Chemical, 2021, 329, 129127.	4.0	20
795	Prediction of a new 2D B2CO monolayer from density functional theory. Computational Materials Science, 2021, 186, 109975.	1.4	4
796	Doubleâ€sided surface functionalization: An effective approach to stabilize and modulate the electronic structure of grapheneâ€like borophene. InformaÄnÃ-Materiály, 2021, 3, 327-336.	8.5	18
797	The degradation of tetracycline by modified BiOCl nanosheets with carbon dots from the chlorella. Journal of Alloys and Compounds, 2021, 855, 157454.	2.8	32
798	Tunable Electronic and Optical Properties of 2D Monoelemental Materials Beyond Graphene for Promising Applications. Energy and Environmental Materials, 2021, 4, 522-543.	7.3	48
799	Van der Waals heterostructures of Janus XSeTe (X = Mo, W) and arsenene monolayers: A first principles study. Materials Science in Semiconductor Processing, 2021, 123, 105588.	1.9	11
800	Adsorption of greenhouse gases (methane and carbon dioxide) on the pure and Pd-adsorbed stanene nanosheets: A theoretical study. Surfaces and Interfaces, 2021, 22, 100878.	1.5	6
801	Interplay between stacking order and in-plane strain on the electrical properties of bilayer antimonene. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 126, 114407.	1.3	11
802	Type II GaS/AlN van der Waals heterostructure: Vertical strain, in-plane biaxial strain and electric field effect. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 126, 114481.	1.3	9
803	In-Plane Optical and Electrical Anisotropy of 2D Black Arsenic. ACS Nano, 2021, 15, 1701-1709.	7.3	41
804	Prediction of semiconducting SiP2 monolayer with negative Possion's ratio, ultrahigh carrier mobility and CO2 capture ability. Chinese Chemical Letters, 2021, 32, 1089-1094.	4.8	42

#	Article	IF	CITATIONS
805	Engineering 2D Multifunctional Ultrathin Bismuthene for Multiple Photonic Nanomedicine. Advanced Functional Materials, 2021, 31, 2005093.	7.8	40
806	Ab initio identification of two-dimensional square-octagonal bismuthene doped with 3d transition metals as potential spin gapless semiconductor, bipolar magnetic semiconductor, and quantum anomalous Hall insulator. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 126, 114390.	1.3	4
807	Single- and multi-layer arsenene as an anode material for Li, Na, and K-ion battery applications. Computational Materials Science, 2021, 186, 110000.	1.4	11
808	Recent Advances in Hybridization, Doping, and Functionalization of 2D Xenes. Advanced Functional Materials, 2021, 31, .	7.8	33
809	Two-dimensional semiconducting antimonene in nanophotonic applications – A review. Chemical Engineering Journal, 2021, 406, 126876.	6.6	38
810	Phase-dependent electrocatalytic activity of colloidally synthesized WP and α-WP ₂ electrocatalysts for hydrogen evolution reaction. New Journal of Chemistry, 2021, 45, 15594-15606.	1.4	10
811	Nanomechanics of antimonene allotropes under tensile loading. Physical Chemistry Chemical Physics, 2021, 23, 6241-6251.	1.3	6
812	Two-dimensional biomaterials: material science, biological effect and biomedical engineering applications. Chemical Society Reviews, 2021, 50, 11381-11485.	18.7	129
813	Quasiparticle energies and significant exciton effects of monolayered blue arsenic phosphorus conformers. Physical Chemistry Chemical Physics, 2021, 23, 23808-23817.	1.3	11
814	Broadband Nonlinear Photonics in Fewâ€Layer Borophene. Small, 2021, 17, e2006891.	5.2	42
815	Emerging beyond-graphene elemental 2D materials for energy and catalysis applications. Chemical Society Reviews, 2021, 50, 10983-11031.	18.7	170
816	Going beyond the equilibrium crystal shape: re-tracing the morphological evolution in group 5 tetradymite nanocrystals. Nanoscale, 2021, 13, 15721-15730.	2.8	0
817	Thermoelectric effect and devices on <scp>IVA</scp> and <scp>VA</scp> Xenes. InformaÄnÃ-Materiály, 2021, 3, 271-292.	8.5	17
818	A theoretical design of photodetectors based on two-dimensional Sb/AlAs type-II heterostructures. CrystEngComm, 2021, 23, 1033-1042.	1.3	18
819	Research progress of puckered honeycomb monolayers. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 148101.	0.2	7
820	Colloidal semiconductor nanocrystals: synthesis, optical nonlinearity, and related device applications. Journal of Materials Chemistry C, 2021, 9, 6686-6721.	2.7	8
821	Emerging elemental two-dimensional materials for energy applications. Journal of Materials Chemistry A, 2021, 9, 18793-18817.	5.2	30
822	First principles calculation of two-dimensional materials at an atomic scale. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 027301.	0.2	3

#	Article	IF	Citations
823	Out-of-plane ferroelectricity and multiferroicity in elemental bilayer phosphorene, arsenene, and antimonene. Applied Physics Letters, 2021, 118, .	1.5	15
824	Magneto-electronic and spin transport properties of transition metal doped antimonene nanoribbons. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 126, 114408.	1.3	11
825	Anisotropic correlation between the piezoelectricity and anion-polarizability difference in 2D phosphorene-type ternary GaXY (X = Se, Te; Y = F, Cl, Br, I) monolayers. Journal of Materials Sc 56, 8024-8036.	ien ce , 202	21,9
826	Direct band gap and strong Rashba effect in van der Waals heterostructures of InSe and Sb single layers. Journal of Physics Condensed Matter, 2021, 33, 155001.	0.7	4
827	The Unusual Tribological Properties of Graphene/Antimonene Heterojunctions: A First-Principles Investigation. Materials, 2021, 14, 1201.	1.3	7
828	Nonlinear saturable absorption in antimonene quantum dots for passively Qâ€switching Pr:YLF laser. Nano Select, 2021, 2, 1741-1749.	1.9	4
829	New two-dimensional arsenene polymorph predicted by first-principles calculation: robust direct bandgap and enhanced optical adsorption. Nanotechnology, 2021, 32, 245702.	1.3	4
830	Tuning electronic properties of pentagonal PdSe2 monolayer by applying external strain. Indian Journal of Physics, 2022, 96, 1037-1043.	0.9	1
831	Liquidâ€Exfoliated 2D Materials for Optoelectronic Applications. Advanced Science, 2021, 8, e2003864.	5.6	77
832	Pushing Optical Switch into Deep Mid-Infrared Region: Band Theory, Characterization, and Performance of Topological Semimetal Antimonene. ACS Nano, 2021, 15, 7430-7438.	7.3	13
833	Theoretical Study on P-coordinated Metal Atoms Embedded in Arsenene for the Conversion of Nitrogen to Ammonia. ACS Omega, 2021, 6, 8662-8671.	1.6	16
834	First-principles study of strain effect on elastic and optical properties and lattice thermal conductivity of Janus ZrBrCl monolayer. Materials Today Communications, 2021, 26, 101995.	0.9	7
835	Quantum Transport in Monolayer α S Fieldâ€Effect Transistors. Advanced Electronic Materials, 2021, 7, 2001169.	2.6	6
836	Biomedical applications of 2D monoelemental materials formed by group VA and VIA: a concise review. Journal of Nanobiotechnology, 2021, 19, 96.	4.2	30
837	Theoretical Prediction of Two-Dimensional Materials, Behavior, and Properties. ACS Nano, 2021, 15, 5959-5976.	7.3	30
838	Two-dimensional nanomaterials with engineered bandgap: Synthesis, properties, applications. Nano Today, 2021, 37, 101059.	6.2	82
839	Activated edge of single layered TiO2 nanoribbons through transition metal doping and strain approaches for hydrogen production. Applied Surface Science, 2021, 545, 148947.	3.1	10
840	Linear regulation of electrical characteristics of InSe/Antimonene heterojunction via external electric field and strain. Surfaces and Interfaces, 2021, 23, 101014.	1.5	6

#	Article	IF	CITATIONS
841	Adsorption of [<scp>BF₄</scp>] ^{â^`} anionâ€based ionic liquids on phosphorene, arsenene, and antimonene: A density functional theory study. International Journal of Quantum Chemistry, 2021, 121, e26668.	1.0	3
842	Schottky barrier heights in two-dimensional field-effect transistors: from theory to experiment. Reports on Progress in Physics, 2021, 84, 056501.	8.1	97
843	Strain engineering in novel α-SbP binary material with tensile-robust and compress-sensitive band structures. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 128, 114623.	1.3	4
844	Synthesis and Characterization of a Pure 2D Antimony Film on Au(111). Journal of Physical Chemistry C, 2021, 125, 9273-9280.	1.5	9
845	A computational prediction of a novel quasi hexagonal Al2SSi semiconductor monolayer. Chemical Physics, 2021, 545, 111148.	0.9	0
846	Recent progress on antimonene: from theoretical calculation to epitaxial growth. Japanese Journal of Applied Physics, 2021, 60, SE0805.	0.8	13
847	Electronic and transport properties of GaAs/InSe van der Waals heterostructure. Applied Surface Science, 2021, 547, 149174.	3.1	23
848	Effects of different edge contacts on the photocatalytic and optical properties of blue phosphorene/arsenene lateral heterostructures. Semiconductor Science and Technology, 0, , .	1.0	0
849	Strainâ€Ðependent Band Structures and Electronic Properties in Sb/Bi Lateral Heterostructures Calculated by First Principles. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100148.	1.2	9
850	Tuning the Electrocatalytic Properties of Black and Gray Arsenene by Introducing Heteroatoms. ACS Omega, 2021, 6, 13124-13133.	1.6	7
851	The large photoresponse and high polarization sensitivity of Te-based optoelectronic devices with the adsorbed hydroxide ions. Applied Physics Letters, 2021, 118, 221109.	1.5	5
852	Effects of gallium and arsenic substitution on the electronic and magnetic properties of monolayer SnS. Physica Scripta, 2021, 96, 095803.	1.2	2
853	Electrochemical exfoliation of porous antimonene as anode materials for sodium-ion batteries. Electrochemistry Communications, 2021, 126, 107025.	2.3	16
854	Anomalous layer-dependent electronic and piezoelectric properties of 2D GaInS3 nanosheets. Applied Physics Letters, 2021, 118, .	1.5	29
855	Database Construction for Two-Dimensional Material-Substrate Interfaces. Chinese Physics Letters, 2021, 38, 066801.	1.3	5
856	High solar-to-hydrogen efficiency in Arsenene/GaX (XÂ=ÂS, Se) van der Waals heterostructure for photocatalytic water splitting. Journal of Alloys and Compounds, 2021, 866, 158774.	2.8	56
857	Stability of Stone–Wales defect in two-dimensional honeycomb crystals. Journal of Physics Condensed Matter, 2021, 33, 335001.	0.7	0
858	Fracture of 28 buckled two-dimensional hexagonal sheets. Mechanics of Advanced Materials and Structures, 2022, 29, 4993-5005.	1.5	5

- ARTICLE Layer-Dependent Photoabsorption and Photovoltaic Effects in Two-Dimensional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:msub><mml:mi>Bi</mml:mi><mml:mn>2</mml:msub><mml:msub><mml:mrow><mml:mrow><mml:mrow><mml:mrow><mml:mrow><mml:mrow><mml:mi>X</mml:mi></mml:math IF # CITATIONS
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#	Article	IF	CITATIONS
877	Preparation Engineering of Two-Dimensional Heterostructures <i>via</i> Bottom-Up Growth for Device Applications. ACS Nano, 2021, 15, 11040-11065.	7.3	22
878	Borophene and Boronâ€Based Nanosheets: Recent Advances in Synthesis Strategies and Applications in the Field of Environment and Energy. Advanced Materials Interfaces, 2021, 8, 2100045.	1.9	35
879	Electronic and optical properties of antimonene/palladium ditelluride (Sb/PdTe2) heterostructure with the effect of strain and external electric field: A computational study. Physica B: Condensed Matter, 2021, 612, 412977.	1.3	3
880	A novel two-dimensional SiO sheet with high-stability, strain tunable electronic structure, and excellent mechanical properties*. Chinese Physics B, 2021, 30, 076104.	0.7	2
881	Nanodots Derived from Layered Materials: Synthesis and Applications. Advanced Materials, 2021, 33, e2006661.	11.1	29
882	Defect Regulating of Few-Layer Antimonene from Acid-Assisted Exfoliation for Enhanced Electrocatalytic Nitrogen Fixation. ACS Applied Materials & Interfaces, 2021, 13, 40618-40628.	4.0	14
883	Structural, electronic and optical properties of GeX (X = N, P and As) monolayer: under stress and strain conditions. Optical and Quantum Electronics, 2021, 53, 1.	1.5	8
884	Ultrahigh Carrier Mobility in the Two-Dimensional Semiconductors B ₈ Si ₄ , B ₈ Ge ₄ , and B ₈ Sn ₄ . Chemistry of Materials, 2021, 33, 6475-6483.	3.2	104
885	Single-atom catalysts with anionic metal centers: Promising electrocatalysts for the oxygen reduction reaction and beyond. Journal of Energy Chemistry, 2021, 63, 285-293.	7.1	15
886	Emerging twoâ€dimensional monoelemental materials (Xenes): Fabrication, modification, and applications thereof in the field of bioimaging as nanocarriers. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2022, 14, e1750.	3.3	5
887	Arsenene-mediated multiple independently targeted reactive oxygen species burst for cancer therapy. Nature Communications, 2021, 12, 4777.	5.8	144
888	Electronic and Optical Properties of Atomic-Scale Heterostructure Based on MXene and MN (M = Al,) Tj ETQq1 1	0.784314	rggT /Over
889	Strain-induced electronic, stability and enhancement of thermoelectric performance of 2D Si2C3 monolayer: An emerging material for renewable energy. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 132, 114769.	1.3	3
890	Toward Planar Iodine 2D Crystal Materials. ACS Omega, 2021, 6, 21235-21240.	1.6	0
891	Gas sensing properties of defective tellurene on the nitrogen oxides: A first-principles study. Sensors and Actuators A: Physical, 2021, 328, 112766.	2.0	16
892	Sub-10Ânm two-dimensional transistors: Theory and experiment. Physics Reports, 2021, 938, 1-72.	10.3	80
893	Electronic structures and topological properties of TeSe ₂ monolayers*. Chinese Physics B, 2021, 30, 117304.	0.7	0
894	Raman Spectroscopy and Mapping Analysis of Low-Dimensional Nanostructured Materials and Systems. , 0, , .		0

#	Article	IF	Citations
895	Chemisorption of sulfaguanidine and sulfanilamide drugs on bismuthene nanosheet based on first-principles studies. Applied Surface Science, 2021, 561, 149990.	3.1	13
896	From regular arrays of liquid metal nano-islands to single crystalline biatomic-layer gallium film: Molecular dynamics and first principle study. Journal of Applied Physics, 2021, 130, 124304.	1.1	Ο
897	Tensile strength and fracture mechanics of two-dimensional nanocrystalline silicon carbide. Computational Materials Science, 2021, 197, 110580.	1.4	6
898	Strong electron–phonon coupling influences carrier transport and thermoelectric performances in group-IV/V elemental monolayers. Npj Computational Materials, 2021, 7, .	3.5	19
899	The 3d transition-metals doping tunes the electronic and magnetic properties of 2D monolayer InP3. Journal of Magnetism and Magnetic Materials, 2021, 533, 168026.	1.0	11
900	Few-layer antimonene electrical properties. Applied Materials Today, 2021, 24, 101132.	2.3	6
901	Surface step edge-assisted monolayer epitaxy of α-antimonene on SnSe2 substrate. AIP Advances, 2021, 11, 095014.	0.6	0
902	Halogen Edge-Passivated Antimonene Nanoribbons for Photocatalytic Hydrogen Evolution Reaction with High Solar-to-Hydrogen Conversion. Journal of Physical Chemistry C, 2021, 125, 21341-21351.	1.5	12
903	Investigation of elastic properties, buckling and vibration of antimonene nanosheets through DFT-based finite element modeling. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 271, 115219.	1.7	11
904	Synthesis of hexagonal boron nitrides by chemical vapor deposition and their use as single photon emitters. Nano Materials Science, 2021, 3, 291-312.	3.9	29
905	Wet Chemistry Vitrification and Metalâ€toâ€5emiconductor Transition of 2D Gray Arsenene Nanoflakes. Advanced Functional Materials, 2021, 31, 2106529.	7.8	11
906	First-principles study of structural and electronic properties of antimonene doped with Ge, Sn, Se, Te. Journal of Solid State Chemistry, 2021, 302, 122355.	1.4	8
907	On the microscopic view of the low thermal conductivity of buckling two-dimensional materials from molecular dynamics. Chemical Physics Letters, 2021, 780, 138954.	1.2	0
908	A density functional theory study of the adsorption of Cl2, NH3, and NO2 on Ag3-doped WSe2 monolayers. Applied Surface Science, 2021, 563, 150329.	3.1	41
909	Ab initio investigation of physical properties of the graphene/As-F hetero-bilayer. Applied Surface Science, 2021, 563, 150339.	3.1	6
910	Band and optical properties of arsenene and antimonene lateral heterostructure by first-principles calculations. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 134, 114933.	1.3	17
911	Two-dimensional phosphorus polymorph possessing both wide band gap and strong anisotropy. Solid State Communications, 2021, , 114540.	0.9	1
912	Layer effect on thermal expansion in blue phosphorene monolayer and few-layer. Physics Letters, Section A: General, Atomic and Solid State Physics, 2021, 419, 127726.	0.9	2

#	Article	IF	CITATIONS
913	Sorption studies of sulfadimethoxine and tetracycline molecules on β-antimonene nanotube - A first-principles insight. Journal of Molecular Graphics and Modelling, 2021, 108, 107988.	1.3	14
914	g-C6N6 monolayer: A highly sensitive molecule sensor for biomarker volatiles of liver cirrhosis. Applied Surface Science, 2021, 566, 150716.	3.1	15
915	2D ternary nitrides XNY (X=Ti, Zr, Hf; Y F, Cl, Br) with applications as photoelectric and photocatalytic materials featuring mechanical and optical anisotropy: A DFT study. Journal of Solid State Chemistry, 2021, 303, 122517.	1.4	12
916	Ultrasensitive detection of microRNA-21 by using specific interaction of antimonene with RNA as electrochemical biosensor. Bioelectrochemistry, 2021, 142, 107890.	2.4	10
917	Electrically-tuned transition of band alignment in arsenene/MoTe2 van der Waals heterostructures. Vacuum, 2021, 194, 110612.	1.6	3
918	Thickness-dependent layered BiOIO3 modified with carbon quantum dots for photodegradation of bisphenol A: Mechanism, pathways and DFT calculation. Applied Catalysis B: Environmental, 2021, 298, 120622.	10.8	74
919	Tuning electronic and optical properties of two–dimensional vertical van der waals arsenene/SnS2 heterostructure by strain and electric field. Applied Surface Science, 2022, 572, 151209.	3.1	19
920	History and development of nanomaterials. , 2021, , 1-14.		3
921	Band alignment engineering, electronic and optical properties of Sb/PtTe2 van der Waals heterostructure: effects of electric field and biaxial strain. Journal of Materials Science, 2021, 56, 5658-5669.	1.7	11
922	Band engineering of Dirac materials in Sb _m Bi _n lateral heterostructures. RSC Advances, 2021, 11, 17445-17455.	1.7	2
923	Potential SiX (X = N, P, As, Sb, Bi) homo-bilayers for visible-light photocatalyst applications. Catalysis Science and Technology, 2021, 11, 4996-5013.	2.1	18
924	Typeâ€II AsP/As van der Waals Heterostructures: Tunable Anisotropic Electronic Structures and Optical Properties. Advanced Materials Interfaces, 2021, 8, 2001555.	1.9	11
925	Pnictogen Semimetal (Sb, Bi)-Based Nanomaterials for Cancer Imaging and Therapy: A Materials Perspective. ACS Nano, 2021, 15, 2038-2067.	7.3	28
926	Tunable electronic and magnetic properties of transition-metal atoms doped CrBr ₃ monolayer. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 247401.	0.2	2
928	Broadband Nonlinear Optical Response in Few‣ayer Antimonene and Antimonene Quantum Dots: A Promising Optical Kerr Media with Enhanced Stability. Advanced Optical Materials, 2017, 5, 1700301.	3.6	269
929	Prediction of intrinsic electrocatalytic activity for hydrogen evolution reaction in Ti4X3 (X = C, N). Journal of Catalysis, 2020, 387, 12-16.	3.1	27
930	A theoretical study of Ti–MoSe2 as a noninvasive type-1 diabetes diagnosis material for detecting acetone from exhaled breath. Vacuum, 2020, 182, 109729.	1.6	13
932	Nitrophosphorene: A 2D Semiconductor with Both Large Direct Gap and Superior Mobility. Journal of Physical Chemistry C, 2017, 121, 28520-28526.	1.5	34

#	Article	IF	CITATIONS
933	Heterobilayer with Ferroelectric Switching of Topological State. Nano Letters, 2021, 21, 785-790.	4.5	38
934	Thermoelectric properties of antimony films: roles of oxidation and topological quantum state. Nanotechnology, 2020, 31, 485704.	1.3	4
935	Tunable electronic structures of germanane/antimonene van der Waals heterostructures using an external electric field and normal strain. Chinese Physics B, 2020, 29, 076102.	0.7	8
936	Two ultra-stable novel allotropes of tellurium few-layers*. Chinese Physics B, 2020, 29, 097103.	0.7	5
937	Phonon properties and photo-thermal oxidation of micromechanically exfoliated antimonene nanosheets. 2D Materials, 2021, 8, 015018.	2.0	17
938	Two-dimensional heterostructures for photocatalytic water splitting: a review of recent progress. Nano Futures, 2020, 4, 032006.	1.0	31
939	Stable carbon monosulfide nanostructures: Chain arrays and monolayers. Physical Review Materials, 2017, 1, .	0.9	7
940	Large phosphorene in-plane contraction induced by interlayer interactions in graphene-phosphorene heterostructures. Physical Review Materials, 2018, 2, .	0.9	11
941	Protective layer enhanced the stability and superconductivity of tailored antimonene bilayer. Physical Review Materials, 2018, 2, .	0.9	13
942	Fractional corner charges in spin-orbit coupled crystals. Physical Review Research, 2019, 1, .	1.3	78
943	Few-layer antimonene decorated microfiber as an all optical thresholder and wavelength converter for optical signal processing. , 2017, , .		2
944	Passively Q-switched erbium-doped fiber laser based on antimonene as saturable absorber. Applied Optics, 2019, 58, 7845.	0.9	18
945	All-optical signal processing in few-layer bismuthene coated microfiber: towards applications in optical fiber systems. Optics Express, 2019, 27, 16798.	1.7	24
946	Advances in photonics of recently developed Xenes. Nanophotonics, 2020, 9, 1621-1649.	2.9	11
947	Recent progress of pulsed fiber lasers based on transition-metal dichalcogenides and black phosphorus saturable absorbers. Nanophotonics, 2020, 9, 2215-2231.	2.9	58
948	Unexpected Broadband Optical Limiting Properties of Antimonene Quantum Dots. Journal of Advanced Optics and Photonics, 2018, 1, 203-215.	0.1	1
949	Two-Dimensional Pnictogen for Field-Effect Transistors. Research, 2019, 2019, 1046329.	2.8	34
950	Structure stability, magneto-electronic properties, and modulation effects of Fe ₃ GeTe ₂ nanoribbons. Wuli Xuebao/Acta Physica Sinica, 2019, 68, 208502.	0.2	3

#	Article	IF	CITATIONS
951	Electronic structure and photocatalytic properties of H, F modified two-dimensional GeTe. Wuli Xuebao/Acta Physica Sinica, 2020, 69, 056301.	0.2	3
952	Generation of ultra-fast pulse based on bismuth saturable absorber. Wuli Xuebao/Acta Physica Sinica, 2020, 69, 094203.	0.2	2
953	High Anisotropic Optoelectronics in Two Dimensional Layered PbSnX ₂ (X = S/Se). Journal of Physical Chemistry Letters, 2021, 12, 10574-10580.	2.1	5
954	Direct Z-scheme arsenene/HfS2 van der Waals heterojunction for overall photocatalytic water splitting: First-principles study. Applied Surface Science, 2022, 574, 151650.	3.1	25
955	Preparation of antimonene nanosheets and their thermoelectric nanocomposites. Composites Communications, 2021, 28, 100968.	3.3	7
956	Experimental Realization and Phase Engineering of a Two-Dimensional SnSb Binary Honeycomb Lattice. ACS Nano, 2021, 15, 16335-16343.	7.3	5
957	Elemental 2D Materials: Solutionâ€Processed Synthesis and Applications in Electrochemical Ammonia Production. Advanced Functional Materials, 2022, 32, 2107280.	7.8	20
958	Effects of surface regulation on monolayers SbAs and BiSb. Wuli Xuebao/Acta Physica Sinica, 2016, 65, 217101.	0.2	2
959	Preparation, structure configuration, physical properties and applications of borophene and two-dimensional alkaline-earth metal boride nanomaterials. Wuli Xuebao/Acta Physica Sinica, 2017, 66, 217702.	0.2	4
960	Ab Initio Study of Magnetism in Nonmetal Adsorption on Arsenene Monolayer. Journal of Superconductivity and Novel Magnetism, 2018, 31, 2221-2225.	0.8	1
961	Density functional study of metal lithium atom adsorption on antimonene. Wuli Xuebao/Acta Physica Sinica, 2019, 68, 026802.	0.2	3
962	Strain-Induced Changes in Vibrational Properties of Arsenene and Antimonene. Springer Proceedings in Physics, 2019, , 379-387.	0.1	1
963	Dimensionally driven crossover from semimetal to direct semiconductor in layered SbAs. Physical Review Materials, 2019, 3, .	0.9	1
964	Predicting two-dimensional diphosphorus silicide monolayer by the global optimization method. Chemical Physics Letters, 2020, 752, 137514.	1.2	0
965	Review of Anisotropic 2D Materials: Controlled Growth, Optical Anisotropy Modulation, and Photonic Applications. Laser and Photonics Reviews, 2021, 15, .	4.4	42
966	Effects of hydrogen/halogen –edge termination on structural, electronic, and optical properties of planar silicene nanoribbons SiNRs. Physica E: Low-Dimensional Systems and Nanostructures, 2022, 136, 115046.	1.3	5
967	Research progress of monolayer two-dimensional atomic crystal materials grown by molecular beam epitaxy in ultra-high vacuum conditions. Wuli Xuebao/Acta Physica Sinica, 2020, 69, 118101.	0.2	5
968	Fracture and strength of single-atom-thick hexagonal materials. Computational Materials Science, 2022, 201, 110854.	1.4	5

#	Article	IF	Citations
969	The Family of Two-dimensional Transition Metal Chalcogenides Materials. RSC Smart Materials, 2020, , 226-240.	0.1	0
970	Research progress of low-dimensional semiconductor materials in field of nonlinear optics. Wuli Xuebao/Acta Physica Sinica, 2020, 69, 184211.	0.2	7
971	Study on the electronic structure and photocatalytic properties of a novel monolayer TiO ₂ . Wuli Xuebao/Acta Physica Sinica, 2020, 69, 166301.	0.2	2
972	Direct Growth of Graphene Nanowalls on Silicon Using Plasma-Enhanced Atomic Layer Deposition for High-Performance Si-Based Infrared Photodetectors. ACS Applied Electronic Materials, 2021, 3, 5048-5058.	2.0	19
973	Strain engineering and stacking pattern tune the electrical conductivity of two-dimensional SiPS. Semiconductor Science and Technology, 2020, 35, 095012.	1.0	0
974	Quantum transport: general concepts. , 0, , 91-117.		1
975	Tunable spin-valley splitting and magnetic anisotropy of two-dimensional 2H-VS2/h-VN heterostructure. Journal of Magnetism and Magnetic Materials, 2022, 546, 168867.	1.0	3
976	Higher-order topological insulators on porous network models. Physical Review B, 2021, 104, .	1.1	4
977	Two-dimensional materials toward Terahertz optoelectronic device applications. Journal of Photochemistry and Photobiology C: Photochemistry Reviews, 2022, 51, 100473.	5.6	36
978	Chemistry, Functionalization, and Applications of Recent Monoelemental Two-Dimensional Materials and Their Heterostructures. Chemical Reviews, 2022, 122, 1127-1207.	23.0	103
979	Pressureâ€Tailored Band Engineering for Significant Enhancements in the Photoelectric Performance of Csl ₃ in the Optical Communication Waveband. Advanced Functional Materials, 2022, 32, 2108636.	7.8	18
980	2D Arsenene and Arsenic Materials: Fundamental Properties, Preparation, and Applications. Small, 2022, 18, e2104556.	5.2	27
981	Preparation of arsenene and its applications in sensors. Journal Physics D: Applied Physics, 2022, 55, 163002.	1.3	10
982	CuS Hollow Nanospheres/Cellulose Composite Film as a Recyclable Interfacial Photothermal Evaporator for Solar Steam Generation. Energy Technology, 2022, 10, 2100805.	1.8	9
983	Unraveling the Highly Complex Nature of Antimony on Pt(111). Advanced Materials Interfaces, 2022, 9, 2101272.	1.9	5
984	Extending Channel Scaling Limit of p-MOSFETs Through Antimonene With Heavy Effective Mass and High Density of State. IEEE Transactions on Electron Devices, 2022, 69, 857-862.	1.6	17
985	Recent advances in arsenene nanostructures towards prediction, properties, synthesis and applications. Surfaces and Interfaces, 2022, 28, 101610.	1.5	8
986	Electronic and optical properties and device applications for antimonene/WS2 van der Waals heterostructure. Applied Surface Science, 2022, 578, 151844.	3.1	23

#	Article	IF	CITATIONS
987	Adsorption of toxic H2S, CO and NO molecules on pristine and transition metal doped α-AsP monolayer by first-principles calculations. Physica E: Low-Dimensional Systems and Nanostructures, 2022, 138, 115109.	1.3	8
988	Development of transition metal dichalcogenides for modern photodetector devices. , 2021, , .		Ο
989	Biaxial stress and strain effects on optical and electronic aspects of B2C nanostructure: a first-principles calculation. Indian Journal of Physics, 0, , 1.	0.9	1
990	Highly stable electronic properties of rippled antimonene under compressive deformation. Physical Review B, 2022, 105, .	1.1	5
991	Structure of Strained Lowâ€Dimensional Sb by In Situ Surface Xâ€Ray Diffraction. Physica Status Solidi (B): Basic Research, 0, , 2100432.	0.7	0
992	Sensitivity Improvement of Surface Plasmon Resonance Biosensors with GeS-Metal Layers. Electronics (Switzerland), 2022, 11, 332.	1.8	9
993	Phosphorene, antimonene, silicene and siloxene based novel 2D electrode materials for supercapacitors-A brief review. Journal of Energy Storage, 2022, 48, 104027.	3.9	35
994	Chapter 1. Recent Developments and Perspectives on Solar-driven Fine Chemicals Synthesis: From the Reaction System to 2D Photocatalysts. Inorganic Materials Series, 2022, , 1-64.	0.5	1
995	Fabrication of Highly Photosensitive MoS ₂ Photodetector Films Using Rapid Electrohydrodynamicâ€Jet Printing Process. Advanced Electronic Materials, 2022, 8, .	2.6	9
996	Band structure of free Sb layers and spin-orbit splitting of surface bands. Physics Letters, Section A: General, Atomic and Solid State Physics, 2022, 430, 127987.	0.9	3
997	Interlayer Quasi-Bonding Interactions in 2D Layered Materials: A Classification According to the Occupancy of Involved Energy Bands. Journal of Physical Chemistry Letters, 2021, 12, 11998-12004.	2.1	10
998	Structural and Electronic Properties of Single- and Double-Walled Ben4 Nanotubes: First-Principles Calculations. SSRN Electronic Journal, 0, , .	0.4	0
999	A DFT study of transition metal doped two-dimensional Bismuth (Bismuthene) for spintronics applications. Advances in Natural Sciences: Nanoscience and Nanotechnology, 2022, 13, 015005.	0.7	6
1000	Spin–orbit coupling in buckled monolayer nitrogene. Scientific Reports, 2022, 12, 3201.	1.6	3
1001	Bandgap Modulation of the C ₂ N-h2D Nanomaterials under Elastic Strains. Nano Hybrids and Composites, 0, 34, 71-76.	0.8	0
1002	Enhanced interband tunneling in two-dimensional tunneling transistors through anisotropic energy dispersion. Physical Review B, 2022, 105, .	1.1	16
1003	Temperature-Dependent Growth and Evolution of Silicene on Au Ultrathin Films—LEEM and LEED Studies. Materials, 2022, 15, 1610.	1.3	6
1004	2D arsenenes. Journal of Semiconductors, 2022, 43, 030201.	2.0	2

#		IE	CITATIONS
# 1005	Stability and passivation of 2D group VA elemental materials: black phosphorus and beyond. Journal of	0.7	4
	Physics Condensed Matter, 2022, 34, 224004.		
1006	Controllable Growth of α- and β-Antimonene by Interfacial Strain. Journal of Physical Chemistry C, 2022, 126, 5022-5027.	1.5	5
1008	Low-Power Magnetron Sputtering Deposition of Antimonene Nanofilms for Water Splitting Reaction. Micromachines, 2022, 13, 489.	1.4	1
1009	Synthesis and Characterization of Ternary Clusters Containing the [As ₁₆] ^{10–} Anion, [MM′As ₁₆] ^{4–} (M = Nb or Ta; M′ = Cu or Ag). Inorganic Chemistry, 2022, 4421-4427.	6.b,	8
1010	Electronic Structures of Polymorphic Layers of Borophane. Molecules, 2022, 27, 1808.	1.7	8
1011	Improved thermal stability and direct hexagonal transition accompanied by metal-insulator transition in Arsenic substituted Ge2Sb2Te5. Journal of Alloys and Compounds, 2022, 910, 164897.	2.8	4
1012	Theoretical study of M ₆ X ₂ and M ₆ XXâ€ ² structure (M = Au, Ag;) Tj ETQ properties under biaxial strain. Chinese Physics B, 2022, 31, 097101.	q0 0 0 rgE 0.7	3T /Overlock 2
1013	Exfoliated 2D Antimoneneâ€Based Structures for Lightâ€Harvesting Photoactive Layer of Highly Stable Solar Cells. Small Structures, 0, , 2200038.	6.9	2
1014	Structural and electronic properties of single- and double-walled BeN4 nanotubes: First-principles calculations. Physics Letters, Section A: General, Atomic and Solid State Physics, 2022, 438, 128108.	0.9	6
1015	Electric field tunable electronic properties of antimonene/graphyne van der Waals heterostructure. Journal of Alloys and Compounds, 2022, 909, 164653.	2.8	7
1016	Rhenium disulfide nanosheets as a promising probe for intracellular two-photon luminescence imaging. Sensors and Actuators B: Chemical, 2022, 362, 131781.	4.0	5
1017	Structural stabilities, electronic structures, photocatalysis and optical properties of γ-GeN and α-SnP monolayers: a first-principles study. Materials Research Express, 2021, 8, 125010.	0.8	1
1018	2D Materialâ€Based Optical Biosensor: Status and Prospect. Advanced Science, 2022, 9, e2102924.	5.6	82
1019	Perspectives of 2D Materials for Optoelectronic Integration. Advanced Functional Materials, 2022, 32,	7.8	62
1020	Monoelemental two-dimensional iodinene nanosheets: a first-principles study of the electronic and optical properties. Journal Physics D: Applied Physics, 2022, 55, 135104.	1.3	5
1021	2D layered black arsenic-phosphorus materials: Synthesis, properties, and device applications. Nano Research, 2022, 15, 3737-3752.	5.8	36
1022	The Influence of Ionic Liquids Adsorption on the Electronic and Optical Properties of Phosphorene and Arsenene with Different Phases: A Computational Study. Molecules, 2022, 27, 2518.	1.7	3
1023	Photoelectronic properties and devices of 2D Xenes. Journal of Materials Science and Technology, 2022, 126, 44-59.	5.6	7

#	Article	IF	Citations
1024	Klein tunneling and ballistic transport in graphene and related materials. , 0, , 118-142.		0
1025	Quantum transport in disordered graphene-based materials. , 0, , 143-218.		0
1026	Ab initio and multiscale quantum transport in graphene-based materials. , 0, , 232-299.		0
1027	Electronic structure calculations: the density functional theory (DFT). , 0, , 314-331.		0
1028	Electronic structure calculations: the many-body perturbation theory (MBPT). , 0, , 332-337.		0
1029	Green's functions and ab initio quantum transport in the Landauer–Büttiker formalism. , 0, , 338-357.		0
1030	FIRST-PRINCIPLE STUDY OF THE BUCKLING COMPRESSIVE STRAIN INDUCED ON OPTOELECTRONIC ASPECTS OF TWO-DIMENSIONAL B ₂ C NANOSTRUCTURE. Surface Review and Letters, 2022, 29, .	0.5	3
1031	Tunable Electronic Properties of MoS2/SiC Heterostructures: A First-Principles Study. Journal of Electronic Materials, 2022, 51, 3714-3726.	1.0	3
1032	A first-principles study of structural, electronic and optical properties of α-Te tubular nanostructures modulated by uniaxial strain. New Journal of Physics, 2022, 24, 053037.	1.2	2
1033	Computational Design of α-AsP/γ-AsP Vertical Two-Dimensional Homojunction for Photovoltaic Applications. Nanomaterials, 2022, 12, 1662.	1.9	1
1034	Theoretical Prediction of Graphene-like 2D Uranyl Material with p-Orbital Antiferromagnetism. Chemical Science, 0, , .	3.7	3
1035	A two-dimensional α-As/α-AsP van der Waals heterostructure for photovoltaic applications. Physical Chemistry Chemical Physics, 2022, 24, 16058-16064.	1.3	3
1036	Impact of the Channel Thickness on the Photoresponse of Black Arsenic Mid-Infrared Photodetectors. ACS Applied Materials & amp; Interfaces, 2022, 14, 27444-27455.	4.0	4
1037	Effective High-throughput Screening of Two-Dimensional Layered Materials for Potential Lithium-ion battery Anodes. Dalton Transactions, 0, , .	1.6	0
1038	Phase-Dependent Epitaxy for Antimonene Growth on Silver Substrate. Frontiers in Physics, 0, 10, .	1.0	4
1039	Designing doping strategy in arsenene monolayer for spintronic and optoelectronic applications: a case study of germanium and nitrogen as dopants. Journal of Physics Condensed Matter, 2022, 34,	0.7	2
1040	First-principles study of strain on BN-doped arsenene. Journal of Molecular Modeling, 2022, 28, .	0.8	1
1041	Electrocatalytic activity of a $\hat{1}^2$ -Sb two-dimensional surface for the hydrogen evolution reaction.	1.3	2 _

ARTICLE IF CITATIONS Topological physics of Xenes., 2022, , 295-318. 0 1042 High-Performance Monolayer BeN₂ Transistors With Ultrahigh On-State Current: A DFT 1043 1.6 Coupled With NEGF Study. IEEE Transactions on Electron Devices, 2022, 69, 4501-4506. Computational discovery of In₂XY₂ (X, Y = S, Se, and Te; X ≠Y) monolayers as 1044 2.7 4 multifunctional energy conversion materials. Journal of Materials Chemistry C, O, , . Arsenene and Antimonene., 2022, , 149-172. 1045 Dependence of Tunneling Mechanism on Two-Dimensional Material Parameters: A High-Throughput 1046 1.5 13 Study. Physical Review Applied, 2022, 17, . Highâ€Performance <i>p</i>â€type 2D FET Based on Monolayer GeC with High Hole Mobility: A DFTâ€NEGF 2.6 Study. Advanced Electronic Materials, 2022, 8, . Review on 2D Arsenene and Antimonene: Emerging Materials for Energy, Electronic and Biological 1048 1.9 14 Applications. Advanced Materials Interfaces, 2022, 9, . Anisotropic optical transitions of gated \hat{l}^2 ₁₂-borophene. Journal Physics D: Applied Physics, 1049 1.3 2022, 55, 395301. Chemical insights into two-dimensional quantum materials. Matter, 2022, 5, 2168-2189. 5.0 2 1050 Enhanced acidic gas adsorption performance of arsenene by Pt mediation. AIP Advances, 2022, 12, 075108. A novel probe for tetracyclines detection and its applications in cell imaging based on fluorescent 1052 2.6 10 WS2 quantum dots. Analytica Chimica Acta, 2022, 1221, 340130. Density-Generalized Theory Study of Electronic Structure, Magnetic, and Optical Properties of Mn-Doped and Mn-X (X $\hat{a}\in$ ‰= $\hat{a}\in$ ‰B, C, N, O, and F) Co-doped Arsenenes. Journal of Superconductivity and Novel 0.8 Magnetism, 2022, 35, 2963-2973. Evolution of the Electronic and Optical Properties of Meta-Stable Allotropic Forms of 2D Tellurium 1054 1.9 2 for Increasing Number of Layers. Nanomaterials, 2022, 12, 2503. Zeolite-like molecules: Promising dielectrics for two-dimensional semiconductors. Science China 3.5 Materials, 2023, 66, 233-240. Effect of Strain on Room-Temperature Spin Transport in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" 1056 overflow="scroll"><mml:msub><mml:mi>Si</mml:mi><mml:mrow><mml:mn>0.1</mml:mn></mml:mrow></mml:msub><i Physical Review Applied, 2022, 18, Covalent Functionalization of Antimonene and Bismuthene Nanosheets. Small, 2022, 18, . 5.2 Realization of unpinned two-dimensional dirac states in antimony atomic layers. Nature 1058 5.812 Communications, 2022, 13, . Buckling variation effects on optical and electronic properties of GeP2S nanostructure: a 1.5 first-principles calculation. Optical and Quantum Electronics, 2022, 54, .

#	Article	IF	CITATIONS
1060	Enhanced photocatalytic performance of layered carbon microsphere/BiOCl composite with oxygen vacancies. Journal of Alloys and Compounds, 2022, 928, 167068.	2.8	12
1061	Electronic, optical properties and band-gap tunability of monolayer antimony under pressure: A first-principle study. Vacuum, 2022, 206, 111484.	1.6	2
1062	DFT study of honeycomb Sb layers on the Ag(111) surface. Surface Science, 2022, 726, 122177.	0.8	2
1063	SiC2/BP5: A pentagonal van der Waals heterostructure with tunable optoelectronic and mechanical properties. Applied Surface Science, 2022, 606, 154857.	3.1	2
1064	Sic2/Bp5: A Pentagonal Van Der Waals Heterostructure with Tunable Optoelectronic and Mechanical Properties. SSRN Electronic Journal, 0, , .	0.4	0
1065	Tunneling transport of 2D anisotropic XC (X = P, As, Sb, Bi) with a direct band gap and high mobility: a DFT coupled with NEGF study. Nanoscale, 2022, 14, 13608-13613.	2.8	1
1066	A hetero-phase growth method to control the crystal growth of β-antimony single crystals with high quality and large sizes. CrystEngComm, 2022, 24, 6486-6491.	1.3	1
1067	A two-dimensional Sb/InS van der Waals heterostructure for electronic and optical related applications. Physical Chemistry Chemical Physics, 2022, 24, 22000-22006.	1.3	0
1068	Functionalization of antimonene and bismuthene with Lewis acids. Nanoscale, 2022, 14, 13834-13843.	2.8	2
1069	Evolution from Alloying to Nanostrips of Sb on Ag(110) Probed by Scanning Tunneling Microscopy. Journal of Physical Chemistry C, 2022, 126, 15030-15036.	1.5	1
1070	The marriage of Xenes and Hydrogels: Fundamentals, Applications, and Outlook. Innovation(China), 2022, , 100327.	5.2	5
1072	2D Xenes: Optical and Optoelectronic Properties and Applications in Photonic Devices. Advanced Functional Materials, 2022, 32, .	7.8	12
1073	The TiNI monolayer: a two-dimensional system with promising ferroelastic, topological, and thermoelectric properties. Physical Chemistry Chemical Physics, 2022, 24, 28134-28140.	1.3	2
1074	Strain-induced enhancement of carrier mobility and optoelectronic properties in antimonene/germanane vdW heterostructure. Applied Physics A: Materials Science and Processing, 2022, 128, .	1.1	1
1075	Two dimensional Zr ₂ CO ₂ /H-FeCl ₂ van der Waals heterostructures with tunable band gap, potential difference and magnetic anisotropy. Journal of Physics Condensed Matter, 2023, 35, 024001.	0.7	1
1076	Strain related new sciences and devices in low-dimensional binary oxides. Nano Energy, 2022, 104, 107917.	8.2	4
1077	Charge density, atomic bonding and band structure of two-dimensional Sn, Sb, and Pb semimetals. Chemical Physics Letters, 2022, 808, 140124.	1.2	3
1078	A first-principles study on the electronic, piezoelectric, and optical properties and strain-dependent carrier mobility of Janus TiXY (X ≠Y, X/Y = Cl, Br, I) monolayers. Physical Chemistry Chemical Physics, 2022, 25, 274-285.	1.3	4

#	Article	IF	CITATIONS
1079	Adsorption of NO gas molecule on the vacancy defected and transition metal doped antimonene: A first-principles study. Vacuum, 2023, 207, 111654.	1.6	7
1080	Strain-regulated Electronic Properties of Helical Polymer with Phenylacetylene Monomers – A First Principle Study. Modelling and Simulation in Materials Science and Engineering, 0, , .	0.8	0
1081	Optical redshift and blueshift spectra in monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>î²</mml:mi><mml:mn>12-borophene: Inversion symmetry breaking effects. Physical Review B, 2022, 106, .</mml:mn></mml:msub></mml:math 	ואג/mml:r	n s ub>
1082	Transition Metal Doped Bismuthene and Mn-Bi/Crl ₃ Heterostructure for High Anisotropy Energy and Half-Metallicity. IEEE Open Journal of Nanotechnology, 2023, 4, 1-9.	0.9	2
1083	Transport properties of As-F-based molecular magnetic tunnel junctions. Physics Letters, Section A: General, Atomic and Solid State Physics, 2023, 457, 128570.	0.9	1
1084	Insights into the regulation of energy storage behaviors of antimonene in aqueous electrolytes. Electrochimica Acta, 2023, 439, 141585.	2.6	2
1085	Effects of tilted Dirac cones and in-plane electric field on the valley-dependent magneto-optical absorption spectra in monolayer 8–Pmmn borophene. Physics Letters, Section A: General, Atomic and Solid State Physics, 2023, 457, 128578.	0.9	1
1086	Theoretical study on the photocatalytic potential of BSe nanotubes for water splitting under visible light. Chemical Physics, 2023, 566, 111771.	0.9	2
1087	Epitaxial growth and E-beam induced structural changes of single crystalline 2D antimonene. Scripta Materialia, 2023, 226, 115262.	2.6	0
1088	二维ææ−™çš"è§'å^†è¾¨å‰ç"µå能谱ç"ç©¶. Scientia Sinica: Physica, Mechanica Et Astronomica, 2022, ,	.0.2	0
1089	Ni-Based Janus Pentagonal Monolayers as Promising Water-Splitting Photocatalysts. Journal of Physical Chemistry C, 2022, 126, 20354-20363.	1.5	6
1091	Highly efficient photocatalytic water splitting in direct Z-scheme <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si70.svg" display="inline" id="d1e839"><mml:mi>i±</mml:mi>-ln2Se3/Are van der Waals heterostructures. Surfaces and Interfaces 2023 36 102608</mml:math 	1.5	4
1092	Zero-Dimensional Cs3BiX6 (X = Br, Cl) Single Crystal Films with Second Harmonic Generation. Nanoscale Research Letters, 2022, 17, .	3.1	1
1093	Electronic and optical properties of the buckled and puckered phases of phosphorene and arsenene. Scientific Reports, 2022, 12, .	1.6	4
1094	Recent Advances in Surface Modifications of Elemental Two-Dimensional Materials: Structures, Properties, and Applications. Molecules, 2023, 28, 200.	1.7	6
1095	Effect of transition metal modification on the sensing characteristics of arsenene adsorption of nitrogenous toxic gases. Vacuum, 2023, 210, 111845.	1.6	8
1096	Monolayer group-V binary compounds <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>i^</mml:mi> -BiP and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>i^</mml:mi></mml:math> -SbP with ultrahigh piezoelectricity and stability. Physical Review Materials, 2023, 7, .</mml:math 	0.9	4
1097	Arsenene as a promising sensor for the detection of H ₂ S: a first-principles study. RSC Advances, 2023, 13, 2234-2247.	1.7	6

#	ARTICLE Electric field modulated valley- and spin-dependent electron retroreflection and Klein tunneling in a	IF	CITATIONS
1098	tited <mmi:math xmlns:mml="http://www.w3.org/1998/Math/MathML"> <mmi:mi>n</mmi:mi> <mmi:mtext> â~ </mmi:mtext> <mmi junction of monolayer <mmi:math xmlns:mml="http://www.w3.org/1998/Math/MathML"> <mmi:mrow> <mmi:mn>1</mmi:mn> <mmi:msup> <mmi:m< td=""><td>:mi>pi.1 i>T<td>nl;mi> < mml: mi> < mml;m</td></td></mmi:m<></mmi:msup></mmi:mrow></mmi:math </mmi </mmi:math 	:mi>pi.1 i>T <td>nl;mi> < mml: mi> < mml;m</td>	nl;mi> < mml: mi> < mml;m
1099	Physical Review B, 2023, 107, . Two-dimensional H– and F–BX (X = O, S, Se, and Te) photocatalysts with ultrawide bandgap and enhanced photocatalytic performance for water splitting. RSC Advances, 2023, 13, 2301-2310.	1.7	Ο
1100	(Invited) Advances in 2D nanomaterials-assisted plasmonics optical fiber sensors for biomolecules detection. Results in Optics, 2023, 10, 100342.	0.9	16
1101	Antimonene: a tuneable post-graphene material for advanced applications in optoelectronics, catalysis, energy and biomedicine. Chemical Society Reviews, 2023, 52, 1288-1330.	18.7	18
1102	Substrate engineering for wafer-scale two-dimensional material growth: strategies, mechanisms, and perspectives. Chemical Society Reviews, 2023, 52, 1650-1671.	18.7	24
1103	Kubo conductivity in phosphorene. Journal of Physics and Chemistry of Solids, 2023, 176, 111257.	1.9	1
1104	Two-dimensional materials for boosting the performance of perovskite solar cells: Fundamentals, materials and devices. Materials Science and Engineering Reports, 2023, 153, 100727.	14.8	5
1105	An optimized Fe3O4/Fe2O3 PN junction photoelectrode with multiscale structure and broad spectrum absorption. Solar Energy Materials and Solar Cells, 2023, 254, 112287.	3.0	1
1106	First-principles investigation of two-dimensional magnesium chloride: Environmental stability and fundamental properties. Physica E: Low-Dimensional Systems and Nanostructures, 2023, 151, 115715.	1.3	1
1107	Density functional theory study of the effect of the coexistence of defects and doping on the magnetic properties of arsenene. Chinese Journal of Physics, 2023, 83, 51-60.	2.0	0
1108	Intrinsic ferromagnetic half-metal: Non-equivalent alloying compounds CrMnI6 monolayer. Applied Surface Science, 2023, 623, 157084.	3.1	3
1109	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
1110	Environmentally sustainable implementations of two-dimensional nanomaterials. Frontiers in Chemistry, 0, 11, .	1.8	4
1111	Effects of strain and Li adsorption on the electronic structure and optical properties of arsenene. International Journal of Quantum Chemistry, 0, , .	1.0	2
1112	Tunable Electronic Properties of Substitutionally Doped CSb Monolayer. Physica Status Solidi - Rapid Research Letters, 0, , .	1.2	0
1113	l–Ill–VI Quantum Dots and Derivatives: Design, Synthesis, and Properties for Light-Emitting Diodes. Nano Letters, 2023, 23, 2443-2453.	4.5	11
1114	Antimonene-Modified Screen-Printed Carbon Nanofibers Electrode for Enhanced Electroanalytical Response of Metal Ions. Chemosensors, 2023, 11, 219.	1.8	2
1115	铋烯ææ−™ç"Ÿé•;控å^¶åŠå‰ç"µå器件应用ç"ç©¶è;›å±•. Hongwai Yu Jiguang Gongcheng/Infrared and I	la se r Engir	næring, 202

#	Article	IF	CITATIONS
1116	Recent progress on the synthesis, properties and applications of antimonene - A mini-review. Journal of Molecular Graphics and Modelling, 2023, 122, 108473.	1.3	10
1117	Two-Dimensional Sb Modified TiO2 Nanorod Arrays as Photoanodes for Efficient Solar Water Splitting. Nanomaterials, 2023, 13, 1293.	1.9	3
1118	Insights into electronic properties of strained two-dimensional semiconductors by out-of-plane bending. Journal of Physics Condensed Matter, 2023, 35, 284001.	0.7	0
1119	Electronic properties and optical absorption study of Arsene with PtSe2 type-II heterostructure: based on the first-principles calculation. Chemical Papers, 0, , .	1.0	0
1120	Tunable hydrogen evolution activity of black antimony–phosphorus monolayers via strain engineering: a first-principles calculation. Applied Physics A: Materials Science and Processing, 2023, 129, .	1.1	1
1121	Structural stability, electronic properties, and physical modulation effects of armchair-edged C ₃ B nanoribbons. Wuli Xuebao/Acta Physica Sinica, 2023, 72, 117101.	0.2	1
1122	Enhanced quantum capacitance in Ti, V, Cr, Fe, Ga, Ge, Se, and Br doped arsenene: A first principles investigation. Chemical Physics Letters, 2023, 823, 140500.	1.2	1
1123	The electronic and optical properties of silicon doped on arsenic and antimony nanotubes: a first-principles study. New Journal of Chemistry, 0, , .	1.4	0
1124	Gold Nanoparticles as Exquisite Colorimetric Transducers for Water Pollutant Detection. ACS Applied Materials & amp; Interfaces, 2023, 15, 19785-19806.	4.0	12
1125	Emerging monoelemental 2D materials (Xenes) for biosensor applications. Nano Research, 2023, 16, 7030-7052.	5.8	3
1126	Thickness-dependent piezoelecticity of black arsenic from few-layer to monolayer. Solid State Communications, 2023, 368, 115175.	0.9	1
1147	Recent advances in MXenes: beyond Ti-only systems. Journal of Materials Chemistry A, 2023, 11, 13107-13132.	5.2	5
1162	Advances in the synthesis and modification of two-dimensional antimonene. Physical Chemistry Chemical Physics, 2023, 25, 21773-21786.	1.3	1
1172	The Elemental Layered Solids: Group IV and V Materials. Engineering Materials, 2023, , 69-101.	0.3	0