

# Synthesis of borophenes: Anisotropic, two-dimensional

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Citation Report

#	ARTICLE	IF	CITATIONS
11	Introduction to carbon-based nanostructures. , 0, , 1-10.		0
12	Electronic properties of carbon-based nanostructures. , 0, , 11-90.		0
13	Disclosing boron's thinnest side. Science, 2015, 350, 1468-1469.	6.0	41
14	Photonic Structure-Integrated Two-Dimensional Material Optoelectronics. Electronics (Switzerland), 2016, 5, 93.	1.8	19
15	Graphene against Other Twoâ€­Dimensional Materials: A Comparative Study on the Basis of Electronic Applications. , 2016, , .		4
16	The Planar CoB <sub>18</sub> <sup>âˆ—</sup> Cluster as a Motif for Metalloâ€­Borophenes. Angewandte Chemie - International Edition, 2016, 55, 7358-7363.	7.2	90
17	Boron Nitride Nanostructures: Fabrication, Functionalization and Applications. Small, 2016, 12, 2942-2968.	5.2	187
18	Perfectly planar CoB <sub>18</sub> â€“ as a motif for metallo-borophenes. Nano Research, 2016, 9, 1877-1878.	5.8	5
19	Physically founded phonon dispersions of few-layer materials and the case of borophene. Materials Research Letters, 2016, 4, 204-211.	4.1	216
21	Zweidimensional, aber nicht flach: Borophen â€“ ein â€œGraphen aus Borâ€­mit gewellter Struktur. Angewandte Chemie, 2016, 128, 4948-4950.	1.6	11
22	The Planar CoB <sub>18</sub> <sup>âˆ—</sup> Cluster as a Motif for Metalloâ€­Borophenes. Angewandte Chemie, 2016, 128, 7484-7489.	1.6	30
23	Structural, electronic, and magnetic properties of transition-metal atom adsorbed two-dimensional GaAs nanosheet. Chinese Physics B, 2016, 25, 097305.	0.7	3
24	Phonon-mediated superconductivity in borophenes. Applied Physics Letters, 2016, 108, .	1.5	83
25	Super-stretchable borophene. Europhysics Letters, 2016, 116, 36001.	0.7	22
26	New optimization problems arising in modelling of 2D-crystal lattices. AIP Conference Proceedings, 2016, , .	0.3	2
27	From planar boron clusters to borophenes and borospherenes. Proceedings of SPIE, 2016, , .	0.8	1
28	Half-metallicity obtained in silicene nanosheet by nitrogenation engineering. Journal of Applied Physics, 2016, 120, 234303.	1.1	9
29	Application of optimization methods for finding equilibrium states of two-dimensional crystals. Computational Mathematics and Mathematical Physics, 2016, 56, 2001-2010.	0.2	6

#	ARTICLE	IF	CITATIONS
30	2D materials advances: from large scale synthesis and controlled heterostructures to improved characterization techniques, defects and applications. 2D Materials, 2016, 3, 042001.	2.0	408
31	Monolayer borophene electrode for effective elimination of both the Schottky barrier and strong electric field effect. Applied Physics Letters, 2016, 109, .	1.5	26
32	Enhanced superconductivity by strain and carrier-doping in borophene: A first principles prediction. Applied Physics Letters, 2016, 109, .	1.5	105
33	Auxetic nanomaterials: Recent progress and future development. Applied Physics Reviews, 2016, 3, .	5.5	93
34	Heterostructures of phosphorene and transition metal dichalcogenides for excitonic solar cells: A first-principles study. Applied Physics Letters, 2016, 108, .	1.5	90
35	Computational prediction of the diversity of monolayer boron phosphide allotropes. Applied Physics Letters, 2016, 109, .	1.5	35
36	Two-dimensional semiconductors: The case of silver thiolates. Applied Physics Letters, 2016, 109, .	1.5	8
37	Exploring Ag(111) Substrate for Epitaxially Growing Monolayer Stanene: A First-Principles Study. Scientific Reports, 2016, 6, 29107.	1.6	58
38	FeB <sub>6</sub> Monolayers: The Graphene-like Material with Hypercoordinate Transition Metal. Journal of the American Chemical Society, 2016, 138, 5644-5651.	6.6	219
39	Two-dimensional B <sup>+</sup> C <sup>-</sup> O alloys: a promising class of 2D materials for electronic devices. Nanoscale, 2016, 8, 8910-8918.	2.8	23
40	Hybrid nanostructures of metal/two-dimensional nanomaterials for plasmon-enhanced applications. Chemical Society Reviews, 2016, 45, 3145-3187.	18.7	341
41	Disparate Strain Dependent Thermal Conductivity of Two-dimensional Penta-Structures. Nano Letters, 2016, 16, 3831-3842.	4.5	183
42	Cage-like B <sub>40</sub> <sup>+</sup> : a perfect borospherene monocation. Journal of Molecular Modeling, 2016, 22, 124.	0.8	16
43	Between a rock and a soft place. Nature Chemistry, 2016, 8, 527-528.	6.6	1
44	The electronic, optical, and thermodynamic properties of borophene from first-principles calculations. Journal of Materials Chemistry C, 2016, 4, 3592-3598.	2.7	333
45	Graphene-like Two-Dimensional Ionic Boron with Double Dirac Cones at Ambient Condition. Nano Letters, 2016, 16, 3022-3028.	4.5	222
46	First-principles study of thermal properties of borophene. Physical Chemistry Chemical Physics, 2016, 18, 14927-14932.	1.3	109
47	Constructing carbon quantum dots/Bi <sub>2</sub> SiO <sub>5</sub> ultrathin nanosheets with enhanced photocatalytic activity and mechanism investigation. Chemical Engineering Journal, 2016, 302, 334-343.	6.6	83

#	ARTICLE	IF	CITATIONS
48	Endohedral charge-transfer complex $\text{Ca}@B_{37}^{\wedge}$ : stabilization of a $B_{37}^{\wedge}$ borospherene trianion by metal-encapsulation. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 14186-14190.	1.3	45
49	Polyphony in B flat. <i>Nature Chemistry</i> , 2016, 8, 525-527.	6.6	148
50	Thermal conductivity and mechanical properties of nitrogenated holey graphene. <i>Carbon</i> , 2016, 106, 1-8.	5.4	118
51	Two-Dimensional Phosphorus Porous Polymorphs with Tunable Band Gaps. <i>Journal of the American Chemical Society</i> , 2016, 138, 7091-7098.	6.6	119
52	On the stability of surfactant-stabilised few-layer black phosphorus in aqueous media. <i>RSC Advances</i> , 2016, 6, 86955-86958.	1.7	35
53	$\text{Bi}_4\text{O}_5\text{Br}_2$ ultrasmall nanosheets in situ strong coupling to MWCNT and improved photocatalytic activity for tetracycline hydrochloride degradation. <i>Journal of Molecular Catalysis A</i> , 2016, 424, 331-341.	4.8	52
54	Hydrogenated borophene as a stable two-dimensional Dirac material with an ultrahigh Fermi velocity. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 27284-27289.	1.3	167
55	Multilayer silicene: clear evidence. <i>2D Materials</i> , 2016, 3, 031011.	2.0	41
56	Versatile Titanium Silicide Monolayers with Prominent Ferromagnetic, Catalytic, and Superconducting Properties: Theoretical Prediction. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 3723-3729.	2.1	28
57	Mechanical properties of borophene films: a reactive molecular dynamics investigation. <i>Nanotechnology</i> , 2016, 27, 445709.	1.3	50
58	Manipulating charge density waves in $\text{TaTe}_2$ charge-carrier doping: A first-principles investigation. <i>Physical Review B</i> , 2016, 94, .	1.3	43
59	An Update from Flatland. <i>ACS Nano</i> , 2016, 10, 8121-8123.	7.3	18
60	Tuning the electronic and magnetic properties of borophene by 3d transition-metal atom adsorption. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2016, 380, 3928-3931.	0.9	46
61	Phonon transport in single-layer boron nanoribbons. <i>Nanotechnology</i> , 2016, 27, 445703.	1.3	23
62	Global minimum of two-dimensional $\text{FeB}_6$ and an oxidization induced negative Poisson's ratio: a new stable allotrope. <i>Journal of Materials Chemistry C</i> , 2016, 4, 9613-9621.	2.7	29
63	Layer-by-Layer Sorting of Rhenium Disulfide via High-Density Isopycnic Density Gradient Ultracentrifugation. <i>Nano Letters</i> , 2016, 16, 7216-7223.	4.5	54
64	Electronic and optical properties of pristine and oxidized borophene. <i>2D Materials</i> , 2016, 3, 045006.	2.0	123
65	Strain-induced pseudomagnetic field in the Dirac semimetal borophene. <i>Physical Review B</i> , 2016, 94, .	1.1	108

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66	Substrate-Induced Nanoscale Undulations of Borophene on Silver. <i>Nano Letters</i> , 2016, 16, 6622-6627.	4.5	155
67	Competition between quasi-planar and cage-like structures in the B <sub>29</sub> <sup>+</sup> cluster: photoelectron spectroscopy and ab initio calculations. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 29147-29155.	1.3	85
68	Theoretical realization of half-metallicity in two-dimensional monolayered molybdenum dinitride by Mo vacancy tuning. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2016, 380, 2669-2673.	0.9	4
69	Competition between drum and quasi-planar structures in RhB <sub>18</sub> <sup>+</sup> : motifs for metallo-boronanotubes and metallo-borophenes. <i>Chemical Science</i> , 2016, 7, 7020-7027.	3.7	97
70	Could Borophene Be Used as a Promising Anode Material for High-Performance Lithium Ion Battery?. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 22175-22181.	4.0	138
71	Unveiling the atomic structure and electronic properties of atomically thin boron sheets on an Ag(111) surface. <i>Nanoscale</i> , 2016, 8, 16284-16291.	2.8	59
72	Fabrication of Multilayer Borophene on Insulator Structure. <i>Small</i> , 2016, 12, 5251-5255.	5.2	42
73	Alkali and Alkaline earth metal doped aluminum tetraborides containing intrinsic planar boron sheet: XAlB <sub>4</sub> (X= Li, Mg, Ca, and Na). <i>Computational Materials Science</i> , 2016, 124, 130-141.	1.4	5
74	<i>Ab Initio</i> -Based Bond Order Potential to Investigate Low Thermal Conductivity of Stanene Nanostructures. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 3752-3759.	2.1	80
75	Dirac State in the FeB <sub>2</sub> Monolayer with Graphene-Like Boron Sheet. <i>Nano Letters</i> , 2016, 16, 6124-6129.	4.5	200
76	Directional dependence of the electronic and transport properties of 2D borophene and borophane. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 25491-25496.	1.3	92
77	Edge or interface effect on bandgap openings in graphene nanostructures: A thermodynamic approach. <i>Coordination Chemistry Reviews</i> , 2016, 326, 1-33.	9.5	16
78	Differential Permeability of Proton Isotopes through Graphene and Graphene Analogue Monolayer. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 3395-3400.	2.1	40
79	From Quasi-Planar B <sub>56</sub> to Penta-Ring Tubular Ca@B <sub>56</sub> : Prediction of Metal-Stabilized Ca@B <sub>56</sub> as the Embryo of Metal-Doped Boron $\bar{1}$ -Nanotubes. <i>Scientific Reports</i> , 2016, 6, 37893.	1.6	7
80	Electronic, vibrational, Raman, and scanning tunneling microscopy signatures of two-dimensional boron nanomaterials. <i>Physical Review B</i> , 2016, 94, .	1.1	21
81	Band gap engineering in penta-graphene by substitutional doping: first-principles calculations. <i>Journal of Physics Condensed Matter</i> , 2016, 28, 475001.	0.7	37
82	Mechanical responses of borophene sheets: a first-principles study. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 27405-27413.	1.3	149
83	Borophene as an anode material for Ca, Mg, Na or Li ion storage: A first-principle study. <i>Journal of Power Sources</i> , 2016, 329, 456-461.	4.0	211

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84	Borophene as an extremely high capacity electrode material for Li-ion and Na-ion batteries. <i>Nanoscale</i> , 2016, 8, 15340-15347.	2.8	396
85	Two-dimensional Boron Hydride Sheets: High Stability, Massless Dirac Fermions, and Excellent Mechanical Properties. <i>Angewandte Chemie</i> , 2016, 128, 10448-10451.	1.6	94
86	Two-dimensional Boron Hydride Sheets: High Stability, Massless Dirac Fermions, and Excellent Mechanical Properties. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 10292-10295.	7.2	100
87	Two-dimensional magnetic boron. <i>Physical Review B</i> , 2016, 93, .	1.1	101
88	Thermomechanical analysis of two-dimensional boron monolayers. <i>Physical Review B</i> , 2016, 93, .	1.1	53
89	Electronic properties of $\gamma$ -borophene. <i>Physical Review B</i> , 2016, 93, .		128
90	B=N Units as Part of Extended $\pi$ -Conjugated Oligomers and Polymers. <i>Chemistry - A European Journal</i> , 2016, 22, 12972-12982.	1.7	186
91	Low-dimensional boron: searching for Dirac materials. <i>Advances in Physics: X</i> , 2016, 1, 412-424.	1.5	14
92	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. <i>Journal of Materials Chemistry A</i> , 2016, 4, 12913-12920.	5.2	205
93	Strain effects on borophene: ideal strength, negative Poisson's ratio and phonon instability. <i>New Journal of Physics</i> , 2016, 18, 073016.	1.2	174
94	Direct evidence of metallic bands in a monolayer boron sheet. <i>Physical Review B</i> , 2016, 94, .	1.1	152
95	Two-dimensional antimonene single crystals grown by van der Waals epitaxy. <i>Nature Communications</i> , 2016, 7, 13352.	5.8	798
96	Auxetic and Ferroelastic Borophane: A Novel 2D Material with Negative Poisson's Ratio and Switchable Dirac Transport Channels. <i>Nano Letters</i> , 2016, 16, 7910-7914.	4.5	176
97	An atomically thin layer of Ru/MoS <sub>2</sub> heterostructure: structural, electronic, and magnetic properties. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 32528-32533.	1.3	10
98	High-mobility anisotropic transport in few-layer $\beta$ -B <sub>28</sub> films. <i>Nanoscale</i> , 2016, 8, 20111-20117.	2.8	14
99	Voltage-gated spin-filtering properties and global minimum of planar MnB <sub>6</sub> , and half-metallicity and room-temperature ferromagnetism of its oxide sheet. <i>Journal of Materials Chemistry C</i> , 2016, 4, 10866-10875.	2.7	26
100	Investigating Robust Honeycomb Borophenes Sandwiching Manganese Layers in Manganese Diboride. <i>Inorganic Chemistry</i> , 2016, 55, 11140-11146.	1.9	31
101	Exohedral Complexation of B <sub>40</sub> , C <sub>60</sub> and Arenes with Transition Metals: A Comparative DFT Study. <i>Chemistry - an Asian Journal</i> , 2016, 11, 3350-3354.	1.7	25

#	ARTICLE	IF	CITATIONS
102	High anisotropy of fully hydrogenated borophene. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 31424-31430.	1.3	104
103	A theoretical review on electronic, magnetic and optical properties of silicene. <i>Reports on Progress in Physics</i> , 2016, 79, 126501.	8.1	155
105	Two-dimensional, but not Flat: An All-Boron Graphene with a Corrugated Structure. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 4866-4868.	7.2	21
106	Cage Opening of a Carborane Ligand by Metal Cluster Complexes. <i>Chemistry - A European Journal</i> , 2016, 22, 6501-6504.	1.7	47
107	Stable and metallic borophene nanoribbons from first-principles calculations. <i>Journal of Materials Chemistry C</i> , 2016, 4, 6380-6385.	2.7	75
108	B <sub>36</sub> borophene as an electronic sensor for formaldehyde: Quantum chemical analysis. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2016, 380, 2664-2668.	0.9	99
109	Production of Ni(OH) <sub>2</sub> nanosheets by liquid phase exfoliation: from optical properties to electrochemical applications. <i>Journal of Materials Chemistry A</i> , 2016, 4, 11046-11059.	5.2	71
110	The nucleation and growth of borophene on the Ag (111) surface. <i>Nano Research</i> , 2016, 9, 2616-2622.	5.8	86
111	Ab initio prediction of borophene as an extraordinary anode material exhibiting ultrafast directional sodium diffusion for sodium-based batteries. <i>Science Bulletin</i> , 2016, 61, 1138-1144.	4.3	111
112	Possible Formation of Graphyne on Transition Metal Surfaces: A Competition with Graphene from the Chemical Potential Point of View. <i>Journal of Physical Chemistry C</i> , 2016, 120, 14699-14705.	1.5	24
113	Elemental Group IV Two-Dimensional Materials Beyond Graphene. <i>Semiconductors and Semimetals</i> , 2016, , 149-188.	0.4	11
114	Scandium carbides/cyanides in the boron cage: computational prediction of X@B <sub>80</sub> (X = Tj ETQq1 1 0.784314 rgBT /Overl	1.3	8
115	Borophene: A promising anode material offering high specific capacity and high rate capability for lithium-ion batteries. <i>Nano Energy</i> , 2016, 23, 97-104.	8.2	454
116	Can Two-Dimensional Boron Superconduct?. <i>Nano Letters</i> , 2016, 16, 2522-2526.	4.5	380
117	Experimental realization of two-dimensional boron sheets. <i>Nature Chemistry</i> , 2016, 8, 563-568.	6.6	1,398
118	Ca-decorated novel boron sheet: A potential hydrogen storage medium. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 5276-5283.	3.8	76
119	Mechanical behavior of planar borophenes: A molecular mechanics study. <i>Computational Materials Science</i> , 2017, 129, 304-310.	1.4	22
120	Mechanochemistry of One-Dimensional Boron: Structural and Electronic Transitions. <i>Journal of the American Chemical Society</i> , 2017, 139, 2111-2117.	6.6	41

#	ARTICLE	IF	CITATIONS
121	B <sub>26</sub> : The smallest planar boron cluster with a hexagonal vacancy and a complicated potential landscape. <i>Chemical Physics Letters</i> , 2017, 683, 336-341.	1.2	48
122	The evolution mechanism of boron nanoparticles from sphere into petal-like morphologies in copper melts. <i>Materials Letters</i> , 2017, 189, 240-242.	1.3	3
123	B <sub>40</sub> cluster stability, reactivity, and its planar structural precursor. <i>Nanoscale</i> , 2017, 9, 1805-1810.	2.8	33
124	Emergent elemental two-dimensional materials beyond graphene. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 053004.	1.3	74
125	Elasticity, Flexibility, and Ideal Strength of Borophenes. <i>Advanced Functional Materials</i> , 2017, 27, 1605059.	7.8	237
126	Recent development of two-dimensional transition metal dichalcogenides and their applications. <i>Materials Today</i> , 2017, 20, 116-130.	8.3	1,852
127	Ideal strength and elastic instability in single-layer 8-Pmmn borophene. <i>RSC Advances</i> , 2017, 7, 8654-8660.	1.7	53
128	Metastable phases of 2D boron sheets on Ag(111). <i>Journal of Physics Condensed Matter</i> , 2017, 29, 095002.	0.7	78
129	Quasiparticle interference in unconventional 2D systems. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 103001.	0.7	26
130	Oxidation of free-standing and supported borophene. <i>2D Materials</i> , 2017, 4, 025025.	2.0	31
131	Novel Two-Dimensional Silicon Dioxide with in-Plane Negative Poisson's Ratio. <i>Nano Letters</i> , 2017, 17, 772-777.	4.5	184
132	Buckled two-dimensional Xene sheets. <i>Nature Materials</i> , 2017, 16, 163-169.	13.3	641
133	Recent advances in inorganic 2D materials and their applications in lithium and sodium batteries. <i>Journal of Materials Chemistry A</i> , 2017, 5, 3735-3758.	5.2	329
134	Synthesis and chemistry of elemental 2D materials. <i>Nature Reviews Chemistry</i> , 2017, 1, .	13.8	671
135	The Role of Holes in Borophenes: An Ab Initio Study of Their Structure and Stability with and without Metal Templates. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 10093-10097.	7.2	45
136	Boron monoxide dimer as a building block for boroxine based buckyballs and related cages: a theoretical study. <i>Chemical Communications</i> , 2017, 53, 3239-3241.	2.2	10
137	Borophene nanosheet molecular device for detection of ethanol: A first-principles study. <i>Computational and Theoretical Chemistry</i> , 2017, 1105, 52-60.	1.1	62
138	The screened pseudo-charge repulsive potential in perturbed orbitals for band calculations by DFT+U. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 8008-8025.	1.3	40



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139	Suppressed superconductivity in substrate-supported $\text{h}^2$ borophene by tensile strain and electron doping. <i>2D Materials</i> , 2017, 4, 025032.	2.0	90
140	Anisotropic mechanical and optical response and negative Poisson's ratio in $\text{Mo}_2\text{C}$ nanomembranes revealed by first-principles simulations. <i>Nanotechnology</i> , 2017, 28, 115705.	1.3	57
141	Planar $\text{B}_{38}$ and $\text{B}_{37}$ clusters with a double-hexagonal vacancy: molecular motifs for borophenes. <i>Nanoscale</i> , 2017, 9, 4550-4557.	2.8	76
142	Excited-State Dynamics in Two-Dimensional Heterostructures: $\text{SiR}/\text{TiO}_2$ and $\text{GeR}/\text{TiO}_2$ (R = H, Me) as Promising Photocatalysts. <i>Journal of Physical Chemistry C</i> , 2017, 121, 6520-6532.	1.5	33
143	Magnetic properties of a doped graphene-like bilayer. <i>Physica B: Condensed Matter</i> , 2017, 513, 21-28.	1.3	10
144	Solution-Based Processing of Monodisperse Two-Dimensional Nanomaterials. <i>Accounts of Chemical Research</i> , 2017, 50, 943-951.	7.6	172
145	Thermodynamic stability and properties of boron subnitrides from first principles. <i>Physical Review B</i> , 2017, 95, .	1.1	13
146	Electronic properties of single-layer antimony: Tight-binding model, spin-orbit coupling, and the strength of effective Coulomb interactions. <i>Physical Review B</i> , 2017, 95, .	1.1	33
147	Half Layer By Half Layer Growth of a Blue Phosphorene Monolayer on a $\text{GaN}(001)$ Substrate. <i>Physical Review Letters</i> , 2017, 118, 046101.	2.9	149
148	Self-assembly of electronically abrupt borophene/organic lateral heterostructures. <i>Science Advances</i> , 2017, 3, e1602356.	4.7	79
149	Prediction of Two-Dimensional Phase of Boron with Anisotropic Electric Conductivity. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 1224-1228.	2.1	41
150	Prediction of phonon-mediated superconductivity in borophene. <i>Physical Review B</i> , 2017, 95, .	1.1	208
151	Dirac Fermions in Borophene. <i>Physical Review Letters</i> , 2017, 118, 096401.	2.9	353
152	A free-standing platinum monolayer as an efficient and selective catalyst for the oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 5303-5313.	5.2	41
153	Atomistic mechanisms of van der Waals epitaxy and property optimization of layered materials. <i>Wiley Interdisciplinary Reviews: Computational Molecular Science</i> , 2017, 7, e1300.	6.2	14
154	Sensing properties of monolayer borophane nanosheet towards alcohol vapors: A first-principles study. <i>Journal of Molecular Graphics and Modelling</i> , 2017, 73, 208-216.	1.3	37
155	Strong thermal transport along polycrystalline transition metal dichalcogenides revealed by multiscale modeling for $\text{MoS}_2$ . <i>Applied Materials Today</i> , 2017, 7, 67-76.	2.3	35
156	Stability, electronic and thermodynamic properties of aluminene from first-principles calculations. <i>Applied Surface Science</i> , 2017, 409, 85-90.	3.1	72

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157	Prediction of Single-Wall Boron Nanotube Structures and the Effects of Hydrogenation. <i>Journal of Physical Chemistry C</i> , 2017, 121, 5841-5847.	1.5	9
158	Is borophene a suitable anode material for sodium ion battery?. <i>Journal of Alloys and Compounds</i> , 2017, 704, 152-159.	2.8	62
159	Two-Dimensional Metal Oxide Nanomaterials for Next-Generation Rechargeable Batteries. <i>Advanced Materials</i> , 2017, 29, 1700176.	11.1	317
160	Electronic and magnetic properties of pristine and hydrogenated borophene nanoribbons. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2017, 91, 106-112.	1.3	60
161	The Role of Holes in Borophenes: An Ab-Initio Study of Their Structure and Stability with and without Metal Templates. <i>Angewandte Chemie</i> , 2017, 129, 10227-10231.	1.6	6
162	Effects of strain on mechanical and electronic properties of borophene. <i>Materials Research Express</i> , 2017, 4, 045020.	0.8	11
163	A computational study of hydrogen detection by borophene. <i>Journal of Materials Chemistry C</i> , 2017, 5, 5426-5433.	2.7	18
164	Effects of manganese doping on the structure evolution of small-sized boron clusters. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 265401.	0.7	23
165	Resolving the In-Plane Anisotropic Properties of Black Phosphorus. <i>Small Methods</i> , 2017, 1, 1700143.	4.6	73
166	Formation Mechanism of Boron-Based Nanosheet through the Reaction of $MgB_2$ with Water. <i>Journal of Physical Chemistry C</i> , 2017, 121, 10587-10593.	1.5	53
167	Antimonene Oxides: Emerging Tunable Direct Bandgap Semiconductor and Novel Topological Insulator. <i>Nano Letters</i> , 2017, 17, 3434-3440.	4.5	250
168	Lattice Defects and the Mechanical Anisotropy of Borophene. <i>Journal of Physical Chemistry C</i> , 2017, 121, 10224-10232.	1.5	112
169	New crystal structure prediction of fully hydrogenated borophene by first principles calculations. <i>Scientific Reports</i> , 2017, 7, 609.	1.6	41
170	Flat borophene films as anode materials for Mg, Na or Li-ion batteries with ultra high capacities: A first-principles study. <i>Applied Materials Today</i> , 2017, 8, 60-67.	2.3	122
171	Phosphorus Nanostripe Arrays on Cu(110): A Case Study to Understand the Substrate Effect on the Phosphorus thin Film Growth. <i>Advanced Materials Interfaces</i> , 2017, 4, 1601167.	1.9	18
172	Borophane as a Benchmark of Graphene: A Potential 2D Material for Anode of Li and Na-Ion Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 16148-16158.	4.0	142
173	Towards a metal-semiconductor transition in two dimensions. <i>Chemical Physics Letters</i> , 2017, 679, 127-131.	1.2	4
174	High intrinsic catalytic activity of two-dimensional boron monolayers for the hydrogen evolution reaction. <i>Nanoscale</i> , 2017, 9, 533-537.	2.8	116

#	ARTICLE	IF	CITATIONS
175	A simple method to prepare boron spheres in Cu alloy. <i>Materials Letters</i> , 2017, 205, 24-27.	1.3	6
176	Anomalous strain effect on the thermal conductivity of borophene: a reactive molecular dynamics study. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2017, 93, 202-207.	1.3	51
177	Microanalysis of single-layer hexagonal boron nitride islands on Ir(111). <i>Applied Surface Science</i> , 2017, 420, 504-510.	3.1	35
178	Topotactic reduction of layered double hydroxides for atomically thick two-dimensional non-noble-metal alloy. <i>Nano Research</i> , 2017, 10, 2988-2997.	5.8	38
179	Configurations and characteristics of boron and B <sub>36</sub> clusters. <i>Journal of Molecular Modeling</i> , 2017, 23, 198.	0.8	3
180	Oxygen defects formation and optical identification in monolayer borophene. <i>Materials Chemistry and Physics</i> , 2017, 198, 346-353.	2.0	9
181	Borophene as a Promising Material for Charge-Modulated Switchable CO <sub>2</sub> Capture. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 19825-19830.	4.0	83
182	Thermal spin current in zigzag silicene nanoribbons with sp <sup>2</sup> –sp <sup>3</sup> edges. <i>RSC Advances</i> , 2017, 7, 28124-28129.	1.7	9
183	Negative Poisson's ratio in 1T-type crystalline two-dimensional transition metal dichalcogenides. <i>Nature Communications</i> , 2017, 8, 15224.	5.8	130
184	Quasi-free-standing graphene nano-islands on Ag(110), grown from solid carbon source. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	7
185	The high hydrogen storage capacities of Li-decorated borophene. <i>Computational Materials Science</i> , 2017, 137, 119-124.	1.4	73
186	Adsorption of 3d, 4d, and 5d transition metal atoms on Ir <sub>12</sub> –Borophene. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 305302.	0.7	16
187	Honeycomb Boron Allotropes with Dirac Cones: A True Analogue to Graphene. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 2647-2653.	2.1	57
188	A novel borophene featuring heptagonal holes: a common precursor of borospherenes. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 19890-19895.	1.3	12
189	Growth of single crystalline boron nanotubes in a Cu alloy. <i>CrystEngComm</i> , 2017, 19, 4510-4518.	1.3	14
190	Stable sandwich structures of two-dimensional iron borides FeB <sub>x</sub> alloy: a first-principles calculation. <i>RSC Advances</i> , 2017, 7, 30320-30326.	1.7	7
191	Why nanoscale tank treads move? Structures, chemical bonding, and molecular dynamics of a doped boron cluster B <sub>10</sub> C. <i>Nanoscale</i> , 2017, 9, 9310-9316.	2.8	29
192	Phosphorene – The two-dimensional black phosphorous: Properties, synthesis and applications. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2017, 221, 17-34.	1.7	195

#	ARTICLE	IF	CITATIONS
193	Stability and strength of atomically thin borophene from first principles calculations. <i>Materials Research Letters</i> , 2017, 5, 399-407.	4.1	172
194	Effects of functional group mass variance on vibrational properties and thermal transport in graphene. <i>Physical Review B</i> , 2017, 95, .	1.1	17
195	Dirac Nodal Lines and Tilted Semi-Dirac Cones Coexisting in a Striped Boron Sheet. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 1707-1713.	2.1	81
196	Molecular dynamics simulations for mechanical properties of borophene: parameterization of valence force field model and Stillinger-Weber potential. <i>Scientific Reports</i> , 2017, 7, 45516.	1.6	38
197	Lattice thermal conductivity of borophene from first principle calculation. <i>Scientific Reports</i> , 2017, 7, 45986.	1.6	60
198	Calculating excitons, plasmons, and quasiparticles in 2D materials and van der Waals heterostructures. <i>2D Materials</i> , 2017, 4, 022004.	2.0	189
199	Pressure-Stabilized Tin Selenide Phase with an Unexpected Stoichiometry and a Predicted Superconducting State at Low Temperatures. <i>Physical Review Letters</i> , 2017, 118, 137002.	2.9	29
200	Surface reactivity and vacancy defects in single-layer borophene polymorphs. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 11273-11281.	1.3	50
201	Two-dimensional nanosheets for electrocatalysis in energy generation and conversion. <i>Journal of Materials Chemistry A</i> , 2017, 5, 7257-7284.	5.2	220
202	Recent Advances in Ultrathin Two-Dimensional Nanomaterials. <i>Chemical Reviews</i> , 2017, 117, 6225-6331.	23.0	3,940
203	The influence of silicon atom doping phagraphene nanoribbons on the electronic and magnetic properties. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2017, 220, 30-36.	1.7	11
204	Chelation assisted exfoliation of layered borides towards synthesizing boron based nanosheets. <i>RSC Advances</i> , 2017, 7, 1905-1914.	1.7	58
205	Rediscovering the Crystal Chemistry of Borides. <i>Advanced Materials</i> , 2017, 29, 1604506.	11.1	260
206	Elemental two-dimensional nanosheets beyond graphene. <i>Chemical Society Reviews</i> , 2017, 46, 2127-2157.	18.7	285
207	A universal mechanism of the planar boron rotors $B_{11}^{\wedge}$ , $B_{13}^{\wedge}$ , $B_{15}^{\wedge}$ , and $B_{19}^{\wedge}$ : inner wheels rotating in pseudo-rotating outer bearings. <i>Nanoscale</i> , 2017, 9, 1443-1448.	2.8	35
208	Anisotropic optical and electronic properties of two-dimensional layered germanium sulfide. <i>Nano Research</i> , 2017, 10, 546-555.	5.8	135
209	Ultrahigh energy storage and ultrafast ion diffusion in borophene-based anodes for rechargeable metal ion batteries. <i>Journal of Materials Chemistry A</i> , 2017, 5, 2328-2338.	5.2	134
210	Anisotropic intrinsic lattice thermal conductivity of borophane from first-principles calculations. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 2843-2849.	1.3	40

#	ARTICLE	IF	CITATIONS
211	Observation of a metal-centered B <sub>2</sub> -Ta@B <sub>18</sub> <sup>+</sup> tubular molecular rotor and a perfect Ta@B <sub>20</sub> <sup>+</sup> boron drum with the record coordination number of twenty. <i>Chemical Communications</i> , 2017, 53, 1587-1590.	2.2	114
212	Controlled growth of ultrathin Mo <sub>2</sub> C superconducting crystals on liquid Cu surface. <i>2D Materials</i> , 2017, 4, 011012.	2.0	112
213	Effective elastic properties of two dimensional multiplanar hexagonal nanostructures. <i>2D Materials</i> , 2017, 4, 025006.	2.0	31
214	Î-Phosphorene: a two dimensional material with a highly negative Poisson's ratio. <i>Nanoscale</i> , 2017, 9, 850-855.	2.8	150
215	What will freestanding borophene nanoribbons look like? An analysis of their possible structures, magnetism and transport properties. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 1054-1061.	1.3	32
216	Probing the Structures of Neutral B <sub>11</sub> and B <sub>12</sub> Using High-Resolution Photoelectron Imaging of B <sub>11</sub> <sup>+</sup> and B <sub>12</sub> <sup>+</sup> . <i>Journal of Physical Chemistry C</i> , 2017, 121, 10752-10759.	1.5	18
217	All-Optical Switching of Two Continuous Waves in Few Layer Bismuthene Based on Spatial Cross-Phase Modulation. <i>ACS Photonics</i> , 2017, 4, 2852-2861.	3.2	164
218	A two-dimensional TiB <sub>4</sub> monolayer exhibits planar octacoordinate Ti. <i>Nanoscale</i> , 2017, 9, 17983-17990.	2.8	50
219	Two-Dimensional Boron Polymorphs for Visible Range Plasmonics: A First-Principles Exploration. <i>Journal of the American Chemical Society</i> , 2017, 139, 17181-17185.	6.6	135
220	Two-dimensional boron: structures, properties and applications. <i>Chemical Society Reviews</i> , 2017, 46, 6746-6763.	18.7	296
221	Phonon-mediated superconductivity in Mg intercalated bilayer borophenes. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 29237-29243.	1.3	39
222	Diverse carrier mobility of monolayer BNC <sub>x</sub> : a combined density functional theory and Boltzmann transport theory study. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 455305.	0.7	1
223	Electronic structure and optical properties for blue phosphorene/graphene-like GaN van der Waals heterostructures. <i>Current Applied Physics</i> , 2017, 17, 1714-1720.	1.1	34
224	From planar boron clusters to borophenes and metalloborophenes. <i>Nature Reviews Chemistry</i> , 2017, 1, .	13.8	169
225	Manipulating charge density wave order in monolayer $\text{TaTe}_2$ by strain and charge doping: A first-principles investigation. <i>Physical Review B</i> , 2017, 96, .	4.9	49
226	Ultrathin molybdenum boride films for highly efficient catalysis of the hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 23471-23475.	5.2	104
227	Divide-and-Conquer Chemical Bonding Models for Materials: A Tool for Materials Design at the Electronic Level. <i>Chemistry of Materials</i> , 2017, 29, 8555-8565.	3.2	6
228	The interaction of halogen atoms and molecules with borophene. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 28963-28969.	1.3	28

#	ARTICLE	IF	CITATIONS
229	Effect of electron-hole asymmetry on optical conductivity in borophene. Physical Review B, 2017, 96, .	1.8	18
230	Elastic properties of noncarbon nanotubes as compared to carbon nanotubes. Physical Review B, 2017, 96, .	1.1	26
231	Band structure engineering of borophane by first principles calculations. RSC Advances, 2017, 7, 47746-47752.	1.7	17
232	Recent progress in boron nanomaterials. Science and Technology of Advanced Materials, 2017, 18, 780-804.	2.8	70
233	An intrinsic representation of atomic structure: From clusters to periodic systems. Journal of Chemical Physics, 2017, 147, 144106.	1.2	9
234	Catalytic CVD synthesis of boron nitride and carbon nanomaterials – synergies between experiment and theory. Physical Chemistry Chemical Physics, 2017, 19, 26466-26494.	1.3	24
235	Two-Dimensional Stoichiometric Boron Oxides as a Versatile Platform for Electronic Structure Engineering. Journal of Physical Chemistry Letters, 2017, 8, 4347-4353.	2.1	41
236	Gate Voltage Control of Borophene Structure Formation. Angewandte Chemie, 2017, 129, 15623-15628.	1.6	18
237	First-principles study of SO <sub>2</sub> sensors based on phosphorene and its isoelectronic counterparts: GeS, GeSe, SnS, SnSe. Chemical Physics Letters, 2017, 686, 83-87.	1.2	51
238	Gate Voltage Control of Borophene Structure Formation. Angewandte Chemie - International Edition, 2017, 56, 15421-15426.	7.2	44
239	Metallic borophene polytypes as lightweight anode materials for non-lithium-ion batteries. Physical Chemistry Chemical Physics, 2017, 19, 24945-24954.	1.3	78
240	Black phosphorus transistors with van der Waals-type electrical contacts. Nanoscale, 2017, 9, 14047-14057.	2.8	76
241	A detailed investigation into the geometric and electronic structures of CoBQ <sub>n</sub> (n = 2–10, Q = 0, ±1) clusters. New Journal of Chemistry, 2017, 41, 11208-11214.	1.4	16
242	Three polymorphs of one luminogen: how the molecular packing affects the RTP and AIE properties?. Journal of Materials Chemistry C, 2017, 5, 9242-9246.	2.7	164
243	Lithium and sodium adsorption properties of monolayer antimonene. Materials Today Energy, 2017, 5, 347-354.	2.5	62
244	Insights into the physics of interaction between borophene and O <sub>2</sub> -first-principles investigation. Computational Materials Science, 2017, 140, 261-266.	1.4	19
245	Ultrathin <sup>12</sup> -tellurium layers grown on highly oriented pyrolytic graphite by molecular-beam epitaxy. Nanoscale, 2017, 9, 15945-15948.	2.8	136
246	Formation and Characterization of Hydrogen Boride Sheets Derived from MgB <sub>2</sub> by Cation Exchange. Journal of the American Chemical Society, 2017, 139, 13761-13769.	6.6	157

#	ARTICLE	IF	CITATIONS
247	Design of Two-Dimensional Graphene-like Dirac Materials $\hat{I}^2$ -XBeB <sub>5</sub> (X = H, F). <i>Tj ETQq0 0 0 rgBT /Overlock</i> 4594-4599.	2.1	23
248	Long-range magnetic response of toroidal boron structures: B <sub>16</sub> and [Co@B <sub>16</sub> ] <sup>3+</sup> species. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 26145-26150.	1.3	8
249	Structural transition in metal-centered boron clusters: from tubular molecular rotors Ta@B <sub>21</sub> and Ta@B <sub>22</sub> <sup>+</sup> to cage-like endohedral metalloborospherene Ta@B <sub>22</sub> <sup>+</sup> . <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 27025-27030.	1.3	38
250	Prediction of a room-temperature eight-coordinate two-dimensional topological insulator: penta-RuS <sub>4</sub> monolayer. <i>Npj 2D Materials and Applications</i> , 2017, 1, .	3.9	18
251	Tuning the p-type Schottky barrier in 2D metal/semiconductor interface: boron-sheet on MoSe <sub>2</sub> , and WSe <sub>2</sub> . <i>Journal of Physics Condensed Matter</i> , 2017, 29, 405002.	0.7	3
252	The curious case of two dimensional Si <sub>2</sub> BN: A high-capacity battery anode material. <i>Nano Energy</i> , 2017, 41, 251-260.	8.2	121
253	Electronic structure, carrier mobility and device properties for mixed-edge phagraphene nanoribbon by hetero-atom doping. <i>Organic Electronics</i> , 2017, 51, 277-286.	1.4	30
254	Thermal and electronic transport characteristics of highly stretchable graphene kirigami. <i>Nanoscale</i> , 2017, 9, 16329-16341.	2.8	28
255	Strain engineering on transmission carriers of monolayer phosphorene. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 465501.	0.7	5
256	Boron Triangular Kagome Lattice with Half-Metallic Ferromagnetism. <i>Scientific Reports</i> , 2017, 7, 7279.	1.6	14
257	Multivalency-Driven Formation of Te-Based Monolayer Materials: A Combined First-Principles and Experimental study. <i>Physical Review Letters</i> , 2017, 119, 106101.	2.9	409
258	Theoretical realization of Mo <sub>2</sub> P; a novel stable 2D material with superionic conductivity and attractive optical properties. <i>Applied Materials Today</i> , 2017, 9, 292-299.	2.3	43
259	Origins of Dirac cone formation in AB <sub>3</sub> and A <sub>3</sub> B (A, B = C, Si, and Ge) binary monolayers. <i>Scientific Reports</i> , 2017, 7, 10546.	1.6	32
260	Triplet fermions and Dirac fermions in borophene. <i>Physical Review B</i> , 2017, 96, .	1.1	64
261	All-layered 2D Optoelectronics: A High-performance UV-vis-NIR Broadband SnSe Photodetector with Bi <sub>2</sub> Te <sub>3</sub> Topological Insulator Electrodes. <i>Advanced Functional Materials</i> , 2017, 27, 1701823.	7.8	222
262	On energy accumulation in double layer on the surface of materials with low electron state density. <i>Russian Journal of Electrochemistry</i> , 2017, 53, 561-566.	0.3	1
263	Electronic, optical and thermal properties of highly stretchable 2D carbon Ene-yne graphyne. <i>Carbon</i> , 2017, 123, 344-353.	5.4	46
264	Recent Progress in the Preparation, Assembly, Transformation, and Applications of Layer-Structured Nanodisks beyond Graphene. <i>Advanced Materials</i> , 2017, 29, 1701704.	11.1	65

#	ARTICLE	IF	CITATIONS
265	MnB <sub>x</sub> monolayers with quasi-planar hypercoordinate Mn atoms and unique magnetic and mechanical properties. FlatChem, 2017, 4, 42-47.	2.8	14
266	Production and Potential Applications of Elemental Two-Dimensional Materials beyond Graphene. ChemNanoMat, 2017, 3, 604-613.	1.5	14
267	First-Principles Study on the Mechanism of Hydrogen Decomposition and Spillover on Borophene. Journal of Physical Chemistry C, 2017, 121, 17314-17320.	1.5	19
268	Nanosheet Supported Single-Metal Atom Bifunctional Catalyst for Overall Water Splitting. Nano Letters, 2017, 17, 5133-5139.	4.5	395
269	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
270	Polarization-sensitive and broadband germanium sulfide photodetectors with excellent high-temperature performance. Nanoscale, 2017, 9, 12425-12431.	2.8	60
271	Two-Dimensional Hexagonal Sheet of TiO <sub>2</sub> . Chemistry of Materials, 2017, 29, 8594-8603.	3.2	69
272	Heteroborospherene clusters Ni <sub>n</sub> B <sub>40</sub> (n = 1-4) and heteroborophene monolayers Ni <sub>2</sub> B <sub>14</sub> with planar heptacoordinate transition-metal centers in 1-7-B7 heptagons. Scientific Reports, 2017, 7, 5701.	1.6	16
273	Current-voltage characteristics of borophene and borophane sheets. Physical Chemistry Chemical Physics, 2017, 19, 21461-21466.	1.3	26
274	The creation of racks and nanopores creation in various allotropes of boron due to the mechanical loads. Superlattices and Microstructures, 2017, 111, 1145-1161.	1.4	15
275	Square selenene and tellurene: novel group VI elemental 2D materials with nontrivial topological properties. 2D Materials, 2017, 4, 041003.	2.0	139
276	Wheel-like, elongated, circular, and linear geometries in boron-based C <sub>n</sub> B <sub>7n</sub> (n = 0-7) clusters: structural transitions and aromaticity. Physical Chemistry Chemical Physics, 2017, 19, 24284-24293.	1.3	7
277	Boron films produced by high energy Pulsed Laser Deposition. Materials and Design, 2017, 134, 35-43.	3.3	31
278	AELAS: Automatic ELASTic property derivations via high-throughput first-principles computation. Computer Physics Communications, 2017, 220, 403-416.	3.0	84
279	Interfacial properties of borophene contacts with two-dimensional semiconductors. Physical Chemistry Chemical Physics, 2017, 19, 23982-23989.	1.3	42
280	The effect of C, Si, N, and P impurities on structural and electronic properties of armchair boron nanotube. Journal of Nanostructure in Chemistry, 2017, 7, 243-248.	5.3	7
281	Advances and challenges in lithium-air batteries. Applied Energy, 2017, 204, 780-806.	5.1	186
282	Structural properties and strain engineering of a BeB <sub>2</sub> monolayer from first-principles. RSC Advances, 2017, 7, 38410-38414.	1.7	14



#	ARTICLE	IF	CITATIONS
283	Anisotropic carrier mobility in two-dimensional materials with tilted Dirac cones: theory and application. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 23942-23950.	1.3	69
284	A first-principles study of gas molecule adsorption on borophene. <i>AIP Advances</i> , 2017, 7, .	0.6	59
285	Superhard and superconducting B6C. <i>Materials Today Physics</i> , 2017, 3, 76-84.	2.9	13
286	Self-Assembly High-Performance UV-Vis-NIR Broadband $\text{In}_2\text{Se}_3/\text{Si}$ Photodetector Array for Weak Signal Detection. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 43830-43837.	4.0	95
287	van der Waals Layered Materials: Opportunities and Challenges. <i>ACS Nano</i> , 2017, 11, 11803-11830.	7.3	394
288	Structure, Stability, and Kinetics of Vacancy Defects in Monolayer $\text{PtSe}_2$ : A First-Principles Study. <i>ACS Omega</i> , 2017, 2, 8640-8648.	1.6	40
289	Dirac cones in two-dimensional borane. <i>Physical Review B</i> , 2017, 96, .	1.1	17
290	Two-Dimensional Semiconducting Boron Monolayers. <i>Journal of the American Chemical Society</i> , 2017, 139, 17233-17236.	6.6	57
291	Absorption and Mid-IR SHG in Two-Dimensional Halogen and Hydrogen Saturated Silicene Series. <i>Journal of Physical Chemistry C</i> , 2017, 121, 27139-27146.	1.5	10
292	Effective mechanical properties of multilayer nano-heterostructures. <i>Scientific Reports</i> , 2017, 7, 15818.	1.6	53
293	Fine-Tuning the Optoelectronic Properties of Freestanding Borophene by Strain. <i>ACS Omega</i> , 2017, 2, 8290-8299.	1.6	46
294	Toward the Realization of 2D Borophene Based Gas Sensor. <i>Journal of Physical Chemistry C</i> , 2017, 121, 26869-26876.	1.5	148
295	Theoretical Predictions on Li-Decorated Borophenes as Promising Hydrogen Storage Materials. <i>ChemistrySelect</i> , 2017, 2, 10304-10309.	0.7	16
296	Low-Frequency Shear and Layer-Breathing Modes in Raman Scattering of Two-Dimensional Materials. <i>ACS Nano</i> , 2017, 11, 11777-11802.	7.3	179
297	Superior lattice thermal conductance of single-layer borophene. <i>Npj 2D Materials and Applications</i> , 2017, 1, .	3.9	70
298	Borophene: A novel boron sheet with a hexagonal vacancy offering high sensitivity for hydrogen cyanide detection. <i>Computational and Theoretical Chemistry</i> , 2017, 1115, 179-184.	1.1	58
299	Semimetallic Two-Dimensional $\text{TiB}_{12}$ : Improved Stability and Electronic Properties Tunable by Biaxial Strain. <i>Chemistry of Materials</i> , 2017, 29, 5922-5930.	3.2	41
300	Superconductivity and unexpected chemistry of germanium hydrides under pressure. <i>Physical Review B</i> , 2017, 95, .	1.1	16

#	ARTICLE	IF	CITATIONS
301	Anisotropic plasmons, Friedel oscillations, and screening in Physical Review B, 2017, 96, .	1.1	104
302	Initial stage of hexagonal boron nitride growth in diffusion and precipitation method. Japanese Journal of Applied Physics, 2017, 56, 06GE06.	0.8	2
303	Synthesis of Antimonene on Germanium. Nano Letters, 2017, 17, 4970-4975.	4.5	200
304	Computational design of a robust two-dimensional antiferromagnetic semiconductor. Physical Review B, 2017, 96, .	1.1	20
305	Structures, stabilities and work functions of alkali-metal-adsorbed boron $\pm$ 1-sheets. Chemical Research in Chinese Universities, 2017, 33, 631-637.	1.3	8
306	Mechanics of Materials Creation: Nanotubes, Graphene, Carbyne, Borophenes. Procedia IUTAM, 2017, 21, 17-24.	1.2	4
307	Ca-decorated borophene as potential candidates for hydrogen storage: A first-principle study. International Journal of Hydrogen Energy, 2017, 42, 20036-20045.	3.8	83
308	Epitaxial Growth and Band Structure of Te Film on Graphene. Nano Letters, 2017, 17, 4619-4623.	4.5	218
309	Borophene as Efficient Sulfur Hosts for Lithium Sulfur Batteries: Suppressing Shuttle Effect and Improving Conductivity. Journal of Physical Chemistry C, 2017, 121, 15549-15555.	1.5	97
310	Two-Dimensional Boron Crystals: Structural Stability, Tunable Properties, Fabrications and Applications. Advanced Functional Materials, 2017, 27, 1603300.	7.8	130
311	Scanning Probe Nanopatterning and Layer-by-Layer Thinning of Black Phosphorus. Advanced Materials, 2017, 29, 1604121.	11.1	62
312	Germanene, Stanene and Other 2D Materials. Lecture Notes in Physics, 2017, , 63-85.	0.3	4
313	Heterogeneous activation of peroxymonosulfate by amorphous boron for degradation of bisphenol S. Journal of Hazardous Materials, 2017, 322, 532-539.	6.5	218
314	Assembly and Electronic Applications of Colloidal Nanomaterials. Advanced Materials, 2017, 29, 1603895.	11.1	98
315	Scalable exfoliation and dispersion of two-dimensional materials – an update. Physical Chemistry Chemical Physics, 2017, 19, 921-960.	1.3	261
316	Surface chemistry and catalysis confined under two-dimensional materials. Chemical Society Reviews, 2017, 46, 1842-1874.	18.7	412
317	New properties with old materials: Layered black phosphorous. Nano Today, 2017, 12, 7-9.	6.2	19
318	Plasmon spectroscopy of graphene and other two-dimensional materials with transmission electron microscopy. Materials Science in Semiconductor Processing, 2017, 65, 88-99.	1.9	40

#	ARTICLE	IF	CITATIONS
319	Two-dimensional hexagonal CrN with promising magnetic and optical properties: A theoretical prediction. <i>Nanoscale</i> , 2017, 9, 621-630.	2.8	66
320	Superconductivity in two-dimensional ferromagnetic MnB. <i>Scientific Reports</i> , 2017, 7, 17101.	1.6	11
321	Two-dimensional silicon and carbon monochalcogenides with the structure of phosphorene. <i>Beilstein Journal of Nanotechnology</i> , 2017, 8, 1338-1344.	1.5	8
322	Investigation of Semiconductor Doped B6 Nanocluster: A First Principle Study. , 2017, , .		1
323	Li-Decorated $\sqrt{2} \times \sqrt{2}$ -Borophene as Potential Candidates for Hydrogen Storage: A First-Principle Study. <i>Materials</i> , 2017, 10, 1399.	1.3	21
324	Ionic Liquid Assisted Exfoliation of Layered Magnesium Diboride. <i>IOP Conference Series: Materials Science and Engineering</i> , 2017, 225, 012111.	0.3	12
325	3D continuum phonon model for group-IV 2D materials. <i>Beilstein Journal of Nanotechnology</i> , 2017, 8, 1345-1356.	1.5	6
326	Discovery of graphene and beyond. , 2017, , 1-15.		9
327	Inorganic analogues of graphene. , 2017, , 75-101.		3
328	First-Principles Study on the Stability and STM Image of Borophene. <i>Nanoscale Research Letters</i> , 2017, 12, 514.	3.1	19
329	Parameterization of Stillinger-Weber Potential for Two- Dimensional Atomic Crystals. , 0, , .		33
330	Gas sensing and capturing based on two-dimensional layered materials: Overview from theoretical perspective. <i>Wiley Interdisciplinary Reviews: Computational Molecular Science</i> , 2018, 8, e1361.	6.2	101
331	Magnetic and thermodynamic properties of Ising model with borophene structure in a longitudinal magnetic field. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2018, 500, 11-22.	1.2	48
332	Anisotropic carrier mobility in single- and bi-layer C <sub>3</sub> N sheets. <i>Physica B: Condensed Matter</i> , 2018, 537, 314-319.	1.3	38
333	Electronic Transport in Two-Dimensional Materials. <i>Annual Review of Physical Chemistry</i> , 2018, 69, 299-325.	4.8	217
334	2D Hydrogenated graphene-like borophene as a high capacity anode material for improved Li/Na ion batteries: A first principles study. <i>Materials Today Energy</i> , 2018, 8, 22-28.	2.5	93
335	Mechanistic Quantification of Thermodynamic Stability and Mechanical Strength for Two-Dimensional Transition-Metal Carbides. <i>Journal of Physical Chemistry C</i> , 2018, 122, 4710-4722.	1.5	28
336	Nature of Bonding in Bowl-Like B <sub>36</sub> Cluster Revisited: Concentric (6 $\pi$ +18 $\pi$ ) Double Aromaticity and Reason for the Preference of a Hexagonal Hole in a Central Location. <i>Chemistry - an Asian Journal</i> , 2018, 13, 1148-1156.	1.7	11

#	ARTICLE	IF	CITATIONS
337	A new flatland buddy as toxic gas scavenger: A first principles study. <i>Journal of Hazardous Materials</i> , 2018, 351, 337-345.	6.5	113
338	Tunable electronic properties of partially edge-hydrogenated armchair boron-nitrogen carbon nanoribbons. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 10345-10358.	1.3	5
339	Fano resonances in bilayer phosphorene nanoring. <i>Nanotechnology</i> , 2018, 29, 215202.	1.3	6
340	Peculiar bonding associated with atomic doping and hidden honeycombs in borophene. <i>Physical Review B</i> , 2018, 97, .	1.1	23
341	Growth mechanisms of fiber-like and dendrite-like boron in a Cu melt. <i>CrystEngComm</i> , 2018, 20, 1970-1977.	1.3	2
342	Interplay of thermochemistry and Structural Chemistry, the journal (volume 28, 2017, issues 1-2) and the discipline. <i>Structural Chemistry</i> , 2018, 29, 947-955.	1.0	6
343	Universal Scaling of Intrinsic Resistivity in Two-Dimensional Metallic Borophene. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 4585-4589.	7.2	25
345	Tunable Band Gaps of InGaN Alloys: From Bulk to Two-Dimensional Limit. <i>Journal of Physical Chemistry C</i> , 2018, 122, 6930-6942.	1.5	35
346	Honeycomb boron: alchemy on aluminum pan?. <i>Science Bulletin</i> , 2018, 63, 270-271.	4.3	31
347	Interfacial Interaction between Boron Cluster and Metal Oxide Surface and Its Effects: A Case Study of $B_{20}/Ag_3PO_4$ van der Waals Heterostructure. <i>Journal of Physical Chemistry C</i> , 2018, 122, 6151-6158.	1.5	7
348	Two-Dimensional Lattices of VN: Emergence of Ferromagnetism and Half-Metallicity on Nanoscale. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 1422-1428.	2.1	52
349	Coordination Chemistry of Carborane Clusters: Metal-Boron Bonds in Carborane, Carboranyl, and Carboryne Complexes. <i>Comments on Inorganic Chemistry</i> , 2018, 38, 79-109.	3.0	38
350	Atomically thin transition metal layers: Atomic layer stabilization and metal-semiconductor transition. <i>Journal of Applied Physics</i> , 2018, 123, 154301.	1.1	8
351	Discovery of cobweb-like $MoC_6$ and its application for nitrogen fixation. <i>Journal of Materials Chemistry A</i> , 2018, 6, 9623-9628.	5.2	83
352	Field-effect transistors made from solution-grown two-dimensional tellurene. <i>Nature Electronics</i> , 2018, 1, 228-236.	13.1	591
353	Gallene epitaxially grown on $Si(1\%1)$ . <i>2D Materials</i> , 2018, 5, 035009.	2.0	42
354	Degradation of ultra-thin boron films in air. <i>Applied Surface Science</i> , 2018, 448, 498-501.	3.1	7
355	Adsorption behaviour of $SF_6$ decomposed species onto $Pd_4$ -decorated single-walled CNT: a DFT study. <i>Molecular Physics</i> , 2018, 116, 1749-1755.	0.8	31

#	ARTICLE	IF	CITATIONS
356	Review of thermal transport and electronic properties of borophene. Chinese Physics B, 2018, 27, 036303.	0.7	23
357	Universal Scaling of Intrinsic Resistivity in Two-Dimensional Metallic Borophene. Angewandte Chemie, 2018, 130, 4675-4679.	1.6	4
358	Borophene as Conductive Additive to Boost the Performance of MoS <sub>2</sub> -Based Anode Materials. Journal of Physical Chemistry C, 2018, 122, 9302-9311.	1.5	50
359	A general strategy for the synthesis of two-dimensional holey nanosheets as cathodes for superior energy storage. Journal of Materials Chemistry A, 2018, 6, 8374-8381.	5.2	27
360	Data-Driven Learning of Total and Local Energies in Elemental Boron. Physical Review Letters, 2018, 120, 156001.	2.9	150
361	Highly negative Poisson's ratio in a flexible two-dimensional tungsten carbide monolayer. Physical Chemistry Chemical Physics, 2018, 20, 18924-18930.	1.3	42
362	Resolving the Chemically Discrete Structure of Synthetic Borophene Polymorphs. Nano Letters, 2018, 18, 2816-2821.	4.5	56
363	Strain tuning of electronic properties of various dimension elemental tellurium with broken screw symmetry. Journal of Physics Condensed Matter, 2018, 30, 125001.	0.7	26
364	Probing the shear modulus of two-dimensional multiplanar nanostructures and heterostructures. Nanoscale, 2018, 10, 5280-5294.	2.8	50
365	MBene (MnB): a new type of 2D metallic ferromagnet with high Curie temperature. Nanoscale Horizons, 2018, 3, 335-341.	4.1	183
366	First-Principles Investigation of Borophene as a Monolayer Transparent Conductor. Journal of Physical Chemistry C, 2018, 122, 4037-4045.	1.5	89
367	Theoretical prediction of sandwiched two-dimensional phosphide binary compound sheets with tunable bandgaps and anisotropic physical properties. Nanotechnology, 2018, 29, 095703.	1.3	6
368	How to boost the sluggish lithium-ion hopping dynamic in borophene?. Applied Surface Science, 2018, 441, 356-363.	3.1	8
369	The adsorption and dissociation of oxygen on Ag (111) supported $\sqrt{3} \times \sqrt{3}$ borophene. Physica B: Condensed Matter, 2018, 537, 1-6.	1.3	18
370	Experimental realization of honeycomb borophene. Science Bulletin, 2018, 63, 282-286.	4.3	397
371	Phonon thermal transport in monolayer FeB <sub>2</sub> from first principles. Computational Materials Science, 2018, 147, 132-136.	1.4	13
372	All boron-based 2D material as anode material in Li-ion batteries. Journal of Energy Chemistry, 2018, 27, 1651-1654.	7.1	35
373	Two-Dimensional Fluorinated Boron Sheets: Mechanical, Electronic, and Thermal Properties. ACS Omega, 2018, 3, 1815-1822.	1.6	53

#	ARTICLE	IF	CITATIONS
374	Stability, elastic and electronic properties of a novel BN <sub>2</sub> sheet with extended hexagons with N–N bonds. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 135002.	0.7	3
375	Exploring Two-Dimensional Materials toward the Next-Generation Circuits: From Monomer Design to Assembly Control. <i>Chemical Reviews</i> , 2018, 118, 6236-6296.	23.0	410
376	Metal Templates and Boron Sources Controlling Borophene Structures: An Ab Initio Study. <i>Journal of Physical Chemistry C</i> , 2018, 122, 2268-2274.	1.5	20
377	Scalable Production of Few-Layer Boron Sheets by Liquid-Phase Exfoliation and Their Superior Supercapacitive Performance. <i>ACS Nano</i> , 2018, 12, 1262-1272.	7.3	177
378	Strain-engineered two-dimensional MoS <sub>2</sub> as anode material for performance enhancement of Li/Na-ion batteries. <i>Scientific Reports</i> , 2018, 8, 2079.	1.6	68
379	Borophene hydride: a stiff 2D material with high thermal conductivity and attractive optical and electronic properties. <i>Nanoscale</i> , 2018, 10, 3759-3768.	2.8	109
380	Realization of a half-metallic state on bilayer WSe <sub>2</sub> using doping transition metals (Cr, Tj). <i>ETQq0 0 0 rg BT / Overlock 10 Tf 5</i>	1.3	20
381	Metallic MoN layer and its application as anode for lithium-ion batteries. <i>Nanotechnology</i> , 2018, 29, 165402.	1.3	15
382	All-phosphorus flexible devices with non-collinear electrodes: a first principles study. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 7167-7172.	1.3	10
383	A new preparation method of Fe <sub>2</sub> B: Generating rodlike/scale-like Fe <sub>2</sub> B by dealloying Fe <sub>78</sub> Si <sub>9</sub> B <sub>13</sub> atomized particle. <i>Intermetallics</i> , 2018, 94, 186-191.	1.8	5
384	Optical and Excitonic Properties of Atomically Thin Transition-Metal Dichalcogenides. <i>Annual Review of Condensed Matter Physics</i> , 2018, 9, 379-396.	5.2	68
385	Borophene and defective borophene as potential anchoring materials for lithium–sulfur batteries: a first-principles study. <i>Journal of Materials Chemistry A</i> , 2018, 6, 2107-2114.	5.2	127
386	Two-dimensional boron as an impressive lithium–sulphur battery cathode material. <i>Energy Storage Materials</i> , 2018, 13, 80-87.	9.5	38
387	Mechanical, optoelectronic and transport properties of single-layer Ca <sub>2</sub> N and Sr <sub>2</sub> N electrides. <i>Journal of Alloys and Compounds</i> , 2018, 739, 643-652.	2.8	14
388	Temperature and strain-rate dependent mechanical properties of single-layer borophene. <i>Extreme Mechanics Letters</i> , 2018, 19, 39-45.	2.0	26
389	Recent progress in 2D group-VA semiconductors: from theory to experiment. <i>Chemical Society Reviews</i> , 2018, 47, 982-1021.	18.7	697
390	Composites of Proteins and 2D Nanomaterials. <i>Advanced Functional Materials</i> , 2018, 28, 1704990.	7.8	38
391	Atomistic analysis to characterize the impact of temperature and defects on the mechanical properties of germanene sheet. <i>Materials Research Express</i> , 2018, 5, 015062.	0.8	20

#	ARTICLE	IF	CITATIONS
392	Layered tin monoselenide as advanced photothermal conversion materials for efficient solar energy-driven water evaporation. <i>Nanoscale</i> , 2018, 10, 2876-2886.	2.8	94
393	Strain-tunable electronic and optical properties of BC <sub>3</sub> monolayer. <i>RSC Advances</i> , 2018, 8, 1686-1692.	1.7	24
394	Selective growth of two-dimensional phosphorene on catalyst surface. <i>Nanoscale</i> , 2018, 10, 2255-2259.	2.8	34
395	Novel titanium nitride halide TiNX (X = F, Cl, Br) monolayers: potential materials for highly efficient excitonic solar cells. <i>Journal of Materials Chemistry A</i> , 2018, 6, 2073-2080.	5.2	75
396	Charge transfer in (PbSe) <sub>1+x</sub> (NbSe) <sub>2</sub> and (SnSe) <sub>1+x</sub> (NbSe) <sub>2</sub> heterocrystals investigated by photoelectron spectroscopy. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 055001.	0.7	9
397	Simple, Green, and High-Yield Production of Boron-Based Nanostructures with Diverse Morphologies by Dissolution and Recrystallization of Layered Magnesium Diboride Crystals in Water. <i>ChemPhysChem</i> , 2018, 19, 880-891.	1.0	33
398	Effects of adatom and gas molecule adsorption on the physical properties of tellurene: a first principles investigation. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 4058-4066.	1.3	87
399	Plasmonics with two-dimensional semiconductors: from basic research to technological applications. <i>Nanoscale</i> , 2018, 10, 8938-8946.	2.8	79
400	Enhanced field-emission properties of buckled $\sqrt{3}$ -borophene by means of Li decoration: a first-principles investigation. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 15139-15148.	1.3	8
401	Superconductivity in two-dimensional phosphorus carbide ( $\sqrt{2}$ -PC). <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 12362-12367.	1.3	40
402	Microporosity as a new property control factor in graphene-like 2D allotropes. <i>Journal of Materials Chemistry A</i> , 2018, 6, 10348-10353.	5.2	18
403	The ground state of two-dimensional silicon. <i>2D Materials</i> , 2018, 5, 035010.	2.0	25
404	Adsorption of magnetic transition metals on borophene: an ab initio study. <i>European Physical Journal B</i> , 2018, 91, 1.	0.6	8
405	Doping-stabilized two-dimensional black phosphorus. <i>Nanoscale</i> , 2018, 10, 7898-7904.	2.8	20
406	An Innovative Method for the Removal of Toxic SO <sub>x</sub> Molecules from Environment by TiO <sub>2</sub> /Stanene Nanocomposites: A First-Principles Study. <i>Journal of Inorganic and Organometallic Polymers and Materials</i> , 2018, 28, 1901-1913.	1.9	8
407	Computational design and property predictions for two-dimensional nanostructures. <i>Materials Today</i> , 2018, 21, 391-418.	8.3	78
408	Monte Carlo study of magnetic and thermodynamic properties of a 2D boron clusters in a magnetic field. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2018, 101, 94-102.	1.3	41
409	Tight-binding model for borophene and borophane. <i>Physical Review B</i> , 2018, 97, .	1.1	51

#	ARTICLE	IF	CITATIONS
410	Freestanding $\sqrt{3} \times \sqrt{3}$ -borophene nanoribbons: a density functional theory investigation. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 10493-10501.	1.3	26
411	First-principles studies on the superconductivity of aluminene. <i>Applied Surface Science</i> , 2018, 445, 161-166.	3.1	28
412	Vibrational modes and frequencies of borophene in comparison with graphene nanosheets. <i>Superlattices and Microstructures</i> , 2018, 117, 271-282.	1.4	17
413	Black phosphorus: ambient degradation and strategies for protection. <i>2D Materials</i> , 2018, 5, 032001.	2.0	119
414	Two-Dimensional Borane with $\sigma$ -Banana <sup>TM</sup> Bonds and Dirac-Like Ring. <i>Chinese Physics Letters</i> , 2018, 35, 037101.	1.3	3
415	Graphene growth by molecular beam epitaxy: an interplay between desorption, diffusion and intercalation of elemental C species on islands. <i>Nanoscale</i> , 2018, 10, 7396-7406.	2.8	17
416	Abnormal linear elasticity in polycrystalline phosphorene. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 8668-8675.	1.3	6
417	Piezoelectric effect on the thermal conductivity of monolayer gallium nitride. <i>Journal of Applied Physics</i> , 2018, 123, .	1.1	11
418	Atomic force microscopy for two-dimensional materials: A tutorial review. <i>Optics Communications</i> , 2018, 406, 3-17.	1.0	57
419	Strategies for improving the lithium-storage performance of 2D nanomaterials. <i>National Science Review</i> , 2018, 5, 389-416.	4.6	108
420	Two-dimensional boron on Pb (1 1 0) surface. <i>FlatChem</i> , 2018, 7, 34-41.	2.8	7
421	Energy decomposition analysis of neutral and negatively charged borophenes. <i>FlatChem</i> , 2018, 7, 42-47.	2.8	12
422	Negative differential resistance and magnetoresistance in zigzag borophene nanoribbons. <i>International Journal of Modern Physics B</i> , 2018, 32, 1850033.	1.0	7
423	Structure and stability of bilayer borophene: The roles of hexagonal holes and interlayer bonding. <i>FlatChem</i> , 2018, 7, 48-54.	2.8	58
424	First principles study of P-doped borophene as anode materials for lithium ion batteries. <i>Applied Surface Science</i> , 2018, 427, 198-205.	3.1	70
425	First-principles investigation on hydrogen storage performance of Li, Na and K decorated borophene. <i>Applied Surface Science</i> , 2018, 427, 1030-1037.	3.1	134
426	Discovery of 2D Anisotropic Dirac Cones. <i>Advanced Materials</i> , 2018, 30, 1704025.	11.1	91
427	A two-dimensional tetragonal yttrium nitride monolayer: a ferroelastic semiconductor with switchable anisotropic properties. <i>Nanoscale</i> , 2018, 10, 215-221.	2.8	62



#	ARTICLE	IF	CITATIONS
428	Two-dimensional stoichiometric boron carbides with unexpected chemical bonding and promising electronic properties. <i>Journal of Materials Chemistry C</i> , 2018, 6, 1651-1658.	2.7	35
429	Katalyse der Kohlenstoffdioxid-Photoreduktion an Nanoschichten: Grundlagen und Herausforderungen. <i>Angewandte Chemie</i> , 2018, 130, 7734-7752.	1.6	27
430	Bandgap engineering and charge separation in two-dimensional GaS-based van der Waals heterostructures for photocatalytic water splitting. <i>Applied Surface Science</i> , 2018, 439, 374-379.	3.1	36
431	Impact of position and number of nitrogen atom substitution on the curvature and hydrogen adsorption properties of metallized borophene. <i>Journal of Materials Science</i> , 2018, 53, 4540-4553.	1.7	11
432	Exploring the charge localization and band gap opening of borophene: a first-principles study. <i>Nanoscale</i> , 2018, 10, 1403-1410.	2.8	77
433	Interaction Studies of Ammonia Gas Molecules on Borophene Nanosheet and Nanotubes: A Density Functional Study. <i>Journal of Inorganic and Organometallic Polymers and Materials</i> , 2018, 28, 920-931.	1.9	13
434	Catalysis of Carbon Dioxide Photoreduction on Nanosheets: Fundamentals and Challenges. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 7610-7627.	7.2	361
435	Edge-Dependent Electronic and Magnetic Characteristics of Freestanding $\sqrt{2} \times \sqrt{2}$ Borophene Nanoribbons. <i>Nano-Micro Letters</i> , 2018, 10, 14.	14.4	28
436	Borophene sheets with in-plane chain-like boundaries; a reactive molecular dynamics study. <i>Computational Materials Science</i> , 2018, 143, 1-14.	1.4	18
437	Theoretical prediction of borophene monolayer as anode materials for high-performance lithium-ion batteries. <i>Ionics</i> , 2018, 24, 1603-1615.	1.2	28
438	The electronic and transport properties of borophane with defects: A first principles study. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2018, 97, 170-176.	1.3	9
439	Chemical intuition for high thermoelectric performance in monolayer black phosphorus, $\sqrt{2} \times \sqrt{2}$ -arsenene and $\sqrt{2} \times \sqrt{2}$ -antimonene. <i>Journal of Materials Chemistry A</i> , 2018, 6, 2018-2033.	5.2	80
440	<i>h</i> -BN/graphene van der Waals vertical heterostructure: a fully spin-polarized photocurrent generator. <i>Nanoscale</i> , 2018, 10, 174-183.	2.8	49
441	Phase transformation in two-dimensional covalent organic frameworks under compressive loading. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 29462-29471.	1.3	15
442	Discovery of a novel spin-polarized nodal ring in a two-dimensional HK lattice. <i>Nanoscale</i> , 2018, 10, 20748-20753.	2.8	54
443	Thermal transport characterization of carbon and silicon doped stanene nanoribbon: an equilibrium molecular dynamics study. <i>RSC Advances</i> , 2018, 8, 31690-31699.	1.7	13
444	Thermal and thermoelectric properties of monolayer indium triphosphide ( $\text{InP}_3$ ): a first-principles study. <i>Journal of Materials Chemistry A</i> , 2018, 6, 21532-21541.	5.2	91
445	Hexagonal $\text{M}_2\text{C}_3$ ( $\text{M} = \text{As}, \text{Sb}, \text{and Bi}$ ) monolayers: new functional materials with desirable band gaps and ultrahigh carrier mobility. <i>Journal of Materials Chemistry C</i> , 2018, 6, 12689-12697.	2.7	42

#	ARTICLE	IF	CITATIONS
446	Boron based nanosheets as reducing templates in aqueous solutions: towards novel nanohybrids with gold nanoparticles and graphene. <i>Nanoscale</i> , 2018, 10, 20514-20518.	2.8	24
447	Synthesis of Two-Dimensional (2-D) Polymer in the Realm of Liquid-Liquid Interfaces. , 2018, , 453-471.		3
448	Suppressing Ambient Degradation of Exfoliated InSe Nanosheet Devices via Seeded Atomic Layer Deposition Encapsulation. <i>Nano Letters</i> , 2018, 18, 7876-7882.	4.5	54
449	Tilt-induced kink in the plasmon dispersion of two-dimensional Dirac electrons. <i>Physical Review B</i> , 2018, 98, .	1.1	30
450	From graphene to borophene the fascinating 2D materials. <i>Chemical Modelling</i> , 0, , 217-254.	0.2	0
451	Cat's-cradle-like Dirac semimetals in layer groups with multiple screw axes: Application to two-dimensional borophene and borophane. <i>Physical Review B</i> , 2018, 98, .	1.1	18
452	Stability of intrinsic and extrinsic co-decorated boron sheets with Li and Mg. <i>Computational Condensed Matter</i> , 2018, 17, e00345.	0.9	0
453	Boron oxides under pressure: Prediction of the hardest oxides. <i>Physical Review B</i> , 2018, 98, .	1.1	18
454	Synthesis of Silicene. <i>Nanoscience and Technology</i> , 2018, , 99-113.	1.5	1
455	Kinked plasmon dispersion in borophene-borophene and borophene-graphene double layers. <i>Physical Review B</i> , 2018, 98, .	1.1	25
456	Strain Dependent Carrier Mobility in 8 × 8 Pmmn Borophene: ab-initio study. , 2018, , .		0
457	Semiconducting defect-free polymorph of borophene: Peierls distortion in two dimensions. <i>Physical Review B</i> , 2018, 98, .	1.1	16
458	TGMin: An efficient global minimum searching program for free and surface-supported clusters. <i>Journal of Computational Chemistry</i> , 2019, 40, 1105-1112.	1.5	43
459	Two dimensional boron nanosheets: synthesis, properties and applications. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 28964-28978.	1.3	37
460	Quantum Monte Carlo study of the electron binding energies and aromaticity of small neutral and charged boron clusters. <i>Journal of Chemical Physics</i> , 2018, 149, 214303.	1.2	10
461	Difluorophosphorane-Flattened Phosphorene through Difluorination. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 6963-6966.	2.1	7
462	Two-dimensional quantum dots: Fundamentals, photoluminescence mechanism and their energy and environmental applications. <i>Materials Today Energy</i> , 2018, 10, 222-240.	2.5	87
463	The effect of halogen atom adsorption on electrical and mechanical properties of 12 borophene sheet. <i>Modern Physics Letters B</i> , 2018, 32, 1850347.	1.0	7

#	ARTICLE	IF	CITATIONS
464	Band Renormalization of Blue Phosphorus on Au(111). Nano Letters, 2018, 18, 6672-6678.	4.5	63
465	Electronic and Hydrogen Storage Properties of Li-Terminated Linear Boron Chains Studied by TAO-DFT. Scientific Reports, 2018, 8, 13538.	1.6	32
466	B $\sigma$ -B Coupling and B $\sigma$ -B Catenation: Computational Study of the Structure and Reactions of Metal $\sigma$ -Bis(borylene) Complexes. Chemistry - A European Journal, 2018, 24, 17844-17851.	1.7	3
467	Multigap anisotropic superconductivity in borophenes. Physical Review B, 2018, 98, .	1.1	34
468	Stable GaSe-Like Phosphorus Carbide Monolayer with Tunable Electronic and Optical Properties from Ab Initio Calculations. Materials, 2018, 11, 1937.	1.3	13
469	Silicene, germanene and other group IV 2D materials. Beilstein Journal of Nanotechnology, 2018, 9, 2665-2667.	1.5	15
470	Binary Two-Dimensional Honeycomb Lattice with Strong Spin-Orbit Coupling and Electron-Hole Asymmetry. Physical Review Letters, 2018, 121, 126801.	2.9	33
471	Topological phase transitions driven by strain in monolayer tellurium. Physical Review B, 2018, 98, .	1.1	34
472	Dirac nodal line in bilayer borophene: Tight-binding model and low-energy effective Hamiltonian. Physical Review B, 2018, 98, .	1.1	29
473	In Pursuit of 2D Materials for Maximum Optical Response. ACS Nano, 2018, 12, 10880-10889.	7.3	50
474	Effects of vacancies and divacancies on the failure of C3N nanosheets. Diamond and Related Materials, 2018, 89, 257-265.	1.8	33
475	Anomalous heat flow in 8- <i>Pmmn</i> borophene with tilted Dirac cones. Journal of Physics Condensed Matter, 2018, 30, 435701.	0.7	13
476	Electric field manipulation of multiple nonequivalent Dirac cones in the electronic structures of hexagonal CrB <sub>4</sub> sheet. Chinese Physics B, 2018, 27, 097304.	0.7	1
477	Unraveling a novel ferroelectric GeSe phase and its transformation into a topological crystalline insulator under high pressure. NPC Asia Materials, 2018, 10, 882-887.	3.8	27
478	Perspectives on Thermoelectricity in Layered and 2D Materials. Advanced Electronic Materials, 2018, 4, 1800248.	2.6	77
479	Liquid catalysts: an innovative solution to 2D materials in CVD processes. Materials Horizons, 2018, 5, 1021-1034.	6.4	19
480	Enhancement of lithium-ion hopping on halogen-doped $\sqrt{3} \times \sqrt{3}$ borophene. Physical Chemistry Chemical Physics, 2018, 20, 24427-24433.	1.3	17
481	Polyaniline (C <sub>3</sub> N) nanoribbons: Magnetic metal, semiconductor, and half-metal. Journal of Applied Physics, 2018, 124, .	1.1	26

#	ARTICLE	IF	CITATIONS
482	Electronic Band Engineering in Elemental 2D Materials. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800749.	1.9	16
483	Al doped boron clusters: Planar B <sub>19</sub> Al. <i>Chemical Physics Letters</i> , 2018, 710, 26-30.	1.2	4
484	Porous hexagonal boron oxide monolayer with robust wide band gap: A computational study. <i>FlatChem</i> , 2018, 9, 27-32.	2.8	29
485	Nonlinear and anisotropic polarization rotation in two-dimensional Dirac materials. <i>Physical Review B</i> , 2018, 97, .	1.1	10
486	Charge Transfer Doping Modulated Raman Scattering and Enhanced Stability of Black Phosphorus Quantum Dots on a ZnO Nanorod. <i>Advanced Optical Materials</i> , 2018, 6, 1800440.	3.6	34
487	Lithium doped tubular structure in LiB <sub>20</sub> and LiB <sub>20</sub> <sup>+</sup> : a viable global minimum. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 16202-16208.	1.3	32
488	Two-dimensional phosphorus carbide as a promising anode material for lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2018, 6, 12029-12037.	5.2	60
489	Drastic Modulation of Stimuli-Responsive Fluorescence by a Subtle Structural Change of Organic Fluorophore and Polymorphism Controlled Mechanofluorochromism. <i>Crystal Growth and Design</i> , 2018, 18, 3971-3979.	1.4	36
490	An evolving energy solution: Intermediate hydrogen storage. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 12168-12188.	3.8	72
491	A theoretical insight into a feasible strategy for the fabrication of borophane. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 16216-16221.	1.3	19
492	Novel phases and superconductivity of tin sulfide compounds. <i>Journal of Chemical Physics</i> , 2018, 148, 194701.	1.2	17
493	Two-dimensional GeAsSe with high and unidirectional conductivity. <i>Nanoscale</i> , 2018, 10, 15998-16004.	2.8	7
494	Cu atomic chains supported on $\hat{I}^2$ -borophene sheets for effective CO <sub>2</sub> electroreduction. <i>Nanoscale</i> , 2018, 10, 11064-11071.	2.8	50
495	2D AlB <sub>2</sub> flakes for epitaxial thin film growth. <i>Journal of Materials Research</i> , 2018, 33, 2318-2326.	1.2	6
496	Geometric symmetry modulated spin polarization of electron transport in graphene-like zigzag FeB <sub>2</sub> nanoribbons. <i>European Physical Journal B</i> , 2018, 91, 1.	0.6	2
497	Lattice-matched heterojunctions between blue phosphorene and MXene Y <sub>2</sub> CX <sub>2</sub> (X = F, O, and Y = Zr, Hf). <i>Computational Materials Science</i> , 2018, 152, 256-261.	1.4	6
498	Oblique Klein tunneling in borophene junctions. <i>Physical Review B</i> , 2018, 97, .	1.1	46
499	Red phosphorus in its two-dimensional limit: novel clathrates with varying band gaps and superior chemical stabilities. <i>Nanoscale</i> , 2018, 10, 13969-13975.	2.8	7

#	ARTICLE	IF	CITATIONS
500	Electrical and mechanical properties of a fully hydrogenated two-dimensional polyaniline sheet. <i>Computational Materials Science</i> , 2018, 153, 126-133.	1.4	35
501	van der Waals Metallic Transition Metal Dichalcogenides. <i>Chemical Reviews</i> , 2018, 118, 6297-6336.	23.0	252
502	Realizing an Epitaxial Decorated Stanene with an Insulating Bandgap. <i>Advanced Functional Materials</i> , 2018, 28, 1802723.	7.8	63
503	Strain Effect on the Superconductivity in Borophenes. <i>Journal of Physical Chemistry C</i> , 2018, 122, 16916-16924.	1.5	38
504	Epitaxial growth and physical properties of 2D materials beyond graphene: from monatomic materials to binary compounds. <i>Chemical Society Reviews</i> , 2018, 47, 6073-6100.	18.7	97
505	First-principles study of adsorption of 3d and 4d transition metal atoms on aluminene. <i>Computational Condensed Matter</i> , 2018, 16, e00319.	0.9	6
506	Interplay between <i>p</i> and <i>d</i> orbitals yields multiple Dirac states in one- and two-dimensional CrB <sub>4</sub> . <i>2D Materials</i> , 2018, 5, 035041.	2.0	23
507	Computational exploration of borophane-supported single transition metal atoms as potential oxygen reduction and evolution electrocatalysts. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 21095-21104.	1.3	54
508	Recent Advances in Growth of Novel 2D Materials: Beyond Graphene and Transition Metal Dichalcogenides. <i>Advanced Materials</i> , 2018, 30, e1800865.	11.1	203
509	Silicene, silicene derivatives, and their device applications. <i>Chemical Society Reviews</i> , 2018, 47, 6370-6387.	18.7	261
510	Borophene's tryst with stability: exploring 2D hydrogen boride as an electrode for rechargeable batteries. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 22008-22016.	1.3	45
511	Unique physicochemical properties of two-dimensional light absorbers facilitating photocatalysis. <i>Chemical Society Reviews</i> , 2018, 47, 6410-6444.	18.7	178
512	Discovery of asymmetric NaXBi (X= Sn /Pb) monolayers with non-trivial topological properties. <i>RSC Advances</i> , 2018, 8, 27995-28001.	1.7	1
513	Electronic and mechanical properties of few-layer borophene. <i>Physical Review B</i> , 2018, 98, .	1.1	83
514	Interface Characterization and Control of 2D Materials and Heterostructures. <i>Advanced Materials</i> , 2018, 30, e1801586.	11.1	134
515	Scrupulous Probing of Bifunctional Catalytic Activity of Borophene Monolayer: Mapping Reaction Coordinate with Charge Transfer. <i>ACS Applied Energy Materials</i> , 2018, 1, 3571-3576.	2.5	32
516	Can an element form a two-dimensional nanosheet of type 15 pentagons?. <i>Computational Materials Science</i> , 2018, 154, 37-40.	1.4	34
517	Germanene Growth on Al(111): A Case Study of Interface Effect. <i>Journal of Physical Chemistry C</i> , 2018, 122, 18669-18681.	1.5	17

#	ARTICLE	IF	CITATIONS
518	Atomic insight into the structural transformation and anionic/cationic redox reactions of VS <sub>2</sub> nanosheets in sodium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2018, 6, 15985-15992.	5.2	33
519	Magnetization, the susceptibilities and the hysteresis loops of a borophene structure. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2018, 104, 138-145.	1.3	53
520	Two-Dimensional Antimonene-Based Photonic Nanomedicine for Cancer Theranostics. <i>Advanced Materials</i> , 2018, 30, e1802061.	11.1	314
521	The effect of strain and functionalization on the optical properties of borophene. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 21043-21050.	1.3	45
522	How does the electric current propagate through fully-hydrogenated borophene?. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 21552-21556.	1.3	32
523	Boron Monochalcogenides; Stable and Strong Two-Dimensional Wide Band-Gap Semiconductors. <i>Energies</i> , 2018, 11, 1573.	1.6	32
524	Intermixing and periodic self-assembly of borophene line defects. <i>Nature Materials</i> , 2018, 17, 783-788.	13.3	129
525	Theoretical Prediction of Blue Phosphorene/Borophene Heterostructure as a Promising Anode Material for Lithium-Ion Batteries. <i>Journal of Physical Chemistry C</i> , 2018, 122, 18294-18303.	1.5	59
526	A Novel Top-Down Synthesis of Ultrathin 2D Boron Nanosheets for Multimodal Imaging-Guided Cancer Therapy. <i>Advanced Materials</i> , 2018, 30, e1803031.	11.1	318
527	Hydrogenated and halogenated MB (M=As, Sb and Bi) monolayers: Structural, electronic, optical and topological properties by first principles calculations. <i>Journal of Alloys and Compounds</i> , 2018, 767, 552-558.	2.8	8
528	First principles study of the gas sensing 2D GeTe: atomic, electronic and transport properties. <i>Journal Physics D: Applied Physics</i> , 2018, 51, 345304.	1.3	13
529	A super-stretchable boron nanoribbon network. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 16510-16517.	1.3	8
530	Synthesis of two dimensional materials on extremely clean surfaces. <i>Nano Today</i> , 2018, 22, 7-9.	6.2	6
531	Double Kagome Bands in a Two-Dimensional Phosphorus Carbide P <sub>2</sub> C <sub>3</sub> . <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 2751-2756.	2.1	29
532	Evolutionary structure prediction of two-dimensional IrB <sub>14</sub> : a promising gas sensor material. <i>Journal of Materials Chemistry C</i> , 2018, 6, 5803-5811.	2.7	13
533	Modulating the electronic and magnetic properties of bilayer borophene via transition metal atoms intercalation: from metal to half metal and semiconductor. <i>Nanotechnology</i> , 2018, 29, 305706.	1.3	16
534	Dirac Cones and Nodal Line in Borophene. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 2757-2762.	2.1	56
535	Charge-induced structural transition between seashell-like B <sub>29</sub> <sup>+</sup> and B <sub>29</sub> <sup>+</sup> in 18 $\pi$ -electron configurations. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 15330-15334.	1.3	12

#	ARTICLE	IF	CITATIONS
536	Electronic transport properties of heterojunction devices constructed by single-wall Fe <sub>2</sub> /Si and carbon nanotubes. Journal of Materials Chemistry C, 2018, 6, 5794-5802.	2.7	11
537	Superconductivity in electron-doped arsenene. Chinese Physics B, 2018, 27, 046301.	0.7	21
538	Borophene layers on an Al(111) surface – the finding of a borophene layer with hexagonal double chains and B <sub>9</sub> nonagons using <i>ab initio</i> calculations. Nanoscale, 2018, 10, 17198-17205.	2.8	9
539	Strain controlled electronic and transport anisotropies in two-dimensional borophene sheets. Physical Chemistry Chemical Physics, 2018, 20, 22952-22960.	1.3	53
540	Phase polymorphism and electronic structures of TeSe <sub>2</sub> . Journal of Materials Chemistry C, 2018, 6, 10218-10225.	2.7	12
541	Borophene: a promising adsorbent material with strong ability and capacity for SO <sub>2</sub> adsorption. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	1.1	36
542	When defects are not defects. Nature Materials, 2018, 17, 757-758.	13.3	21
543	Probing the structural and electronic properties of zirconium doped boron clusters: Zr distorted B <sub>12</sub> ligand framework. Physical Chemistry Chemical Physics, 2018, 20, 23740-23746.	1.3	43
544	Thermoelectric properties of two-dimensional selenene and tellurene from group-VI elements. Physical Chemistry Chemical Physics, 2018, 20, 24250-24256.	1.3	73
545	Spindle nodal chain in three-dimensional $\hat{\pm}\hat{\alpha}^2$ boron. Physical Chemistry Chemical Physics, 2018, 20, 23500-23506.	1.3	21
546	Two-Dimensional Tellurium Nanosheets Exhibiting an Anomalous Switchable Photoresponse with Thickness Dependence. Angewandte Chemie, 2018, 130, 13721-13725.	1.6	3
547	Exploring Multifunctional Applications of Hexagonal Boron Arsenide Sheet: A DFT Study. ACS Omega, 2018, 3, 9533-9543.	1.6	35
548	Boron-based binary Be <sub>6</sub> B <sub>10</sub> <sup>2+</sup> cluster: three-layered aromatic sandwich, electronic transmutation, and dynamic structural fluxionality. Physical Chemistry Chemical Physics, 2018, 20, 22719-22729.	1.3	30
549	Electronic and Optical Properties of 2D Materials Constructed from Light Atoms. Advanced Materials, 2018, 30, e1801600.	11.1	36
550	Two-Dimensional Tellurium Nanosheets Exhibiting an Anomalous Switchable Photoresponse with Thickness Dependence. Angewandte Chemie - International Edition, 2018, 57, 13533-13537.	7.2	67
551	Optimized tight binding parameters for single layer honeycomb borophene. Solid State Communications, 2018, 282, 50-54.	0.9	4
552	Ideal inert substrates for planar antimonene: h-BN and hydrogenated SiC(0001). Physical Chemistry Chemical Physics, 2018, 20, 23397-23402.	1.3	2
553	Computational Understanding of the Growth of 2D Materials. Advanced Theory and Simulations, 2018, 1, 1800085.	1.3	30

#	ARTICLE	IF	CITATIONS
554	Stretch-Driven Increase in Ultrahigh Thermal Conductance of Hydrogenated Borophene and Dimensionality Crossover in Phonon Transmission. <i>Advanced Functional Materials</i> , 2018, 28, 1801685.	7.8	76
555	A Bird's Eye view on process and engineering aspects of hydrogen storage. <i>Renewable and Sustainable Energy Reviews</i> , 2018, 91, 838-860.	8.2	91
556	Finite temperature stability of single-layer black and blue phosphorus adsorbed on Au(111): a first-principles study. <i>2D Materials</i> , 2018, 5, 035044.	2.0	14
557	Two-Dimensional Manganese Nitride Monolayer with Room Temperature Rigid Ferromagnetism under Strain. <i>Journal of Physical Chemistry C</i> , 2018, 122, 14918-14927.	1.5	50
558	Hydrogen storage in Li, Na and Ca decorated and defective borophene: a first principles study. <i>RSC Advances</i> , 2018, 8, 20748-20757.	1.7	64
559	Elastic deformation behavior of freestanding MoS <sub>2</sub> films using a continuum approach. <i>Solid State Communications</i> , 2018, 280, 24-31.	0.9	3
560	Borophene as a prototype for synthetic 2D materials development. <i>Nature Nanotechnology</i> , 2018, 13, 444-450.	15.6	392
561	Two-dimensional materials for gas sensors: from first discovery to future possibilities. <i>Surface Innovations</i> , 2018, 6, 205-230.	1.4	25
562	Layer-dependent band alignment of few layers of blue phosphorus and their van der Waals heterostructures with graphene. <i>Physical Review B</i> , 2018, 97, .	1.1	45
563	Interface-Assisted Synthesis of 2D Materials: Trend and Challenges. <i>Chemical Reviews</i> , 2018, 118, 6189-6235.	23.0	505
564	Adsorption of the Gas Molecules NH <sub>3</sub> , NO, NO <sub>2</sub> , and CO on Borophene. <i>Journal of Physical Chemistry C</i> , 2018, 122, 14665-14670.	1.5	91
565	An electron compensation mechanism for the polymorphism of boron monolayers. <i>Nanoscale</i> , 2018, 10, 13410-13416.	2.8	19
566	Functionalization of 2D materials by intercalation. <i>Progress in Surface Science</i> , 2019, 94, 1-20.	3.8	48
567	Orbital Pseudospin-Momentum Locking in Two-Dimensional Chiral Borophene. <i>Nano Letters</i> , 2019, 19, 6564-6568.	4.5	17
568	Electronic Properties of Linear and Cyclic Boron Nanoribbons from Thermally-Assisted-Occupation Density Functional Theory. <i>Scientific Reports</i> , 2019, 9, 12139.	1.6	13
569	Negative differential thermal conductance in a borophane normal metal-superconductor junction. <i>Superconductor Science and Technology</i> , 2019, 32, 115002.	1.8	7
570	Large-area borophene sheets on sacrificial Cu(111) films promoted by recrystallization from subsurface boron. <i>Npj Quantum Materials</i> , 2019, 4, .	1.8	34
571	The charge carrier dynamics, efficiency and stability of two-dimensional material-based perovskite solar cells. <i>Chemical Society Reviews</i> , 2019, 48, 4854-4891.	18.7	139



#	ARTICLE	IF	CITATIONS
572	2D materials for quantum information science. <i>Nature Reviews Materials</i> , 2019, 4, 669-684.	23.8	305
573	2D Crystal-Based Fibers: Status and Challenges. <i>Small</i> , 2019, 15, e1902691.	5.2	35
574	Auxetic $B_{4N}$ Monolayer: A Promising 2D Material with in-Plane Negative Poisson's Ratio and Large Anisotropic Mechanics. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 33231-33237.	4.0	67
575	One-dimensional nearly free electron states in borophene. <i>Nanoscale</i> , 2019, 11, 15605-15611.	2.8	25
576	Solution Phase Mass Synthesis of 2D Atomic Layer with Hexagonal Boron Network. <i>Journal of the American Chemical Society</i> , 2019, 141, 12984-12988.	6.6	14
577	A Perspective on Recent Advances in 2D Stanene Nanosheets. <i>Advanced Materials Interfaces</i> , 2019, 6, 1900752.	1.9	54
578	Sandwich-type $Na_6B_7$ and $Na_8B_7$ clusters: charge-transfer complexes, four-fold aromaticity, and dynamic fluxionality. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 18338-18345.	1.3	29
579	Strain in van der Waals epitaxy and evidence for a collective macroscopic effect of a negligibly small perturbation. <i>Physical Review B</i> , 2019, 100, .	1.1	3
580	Room-Temperature Ferromagnetism in Transition Metal Embedded Borophene Nanosheets. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 4417-4421.	2.1	26
581	Unveiling the Electric-Current-Limiting and Photodetection Effect in Two-Dimensional Hydrogenated Borophene. <i>Physical Review Applied</i> , 2019, 11, .	1.5	45
582	Few-Body Systems in Condensed Matter Physics. <i>Few-Body Systems</i> , 2019, 60, 1.	0.7	27
583	Density functional theory insight towards high sensitivity for NO, NO <sub>2</sub> and O <sub>2</sub> over monolayer SnO. <i>Materials Research Express</i> , 2019, 6, 095078.	0.8	7
584	Defect tolerant and dimension dependent ferromagnetism in $MnSe_2$ . <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 16718-16725.	1.3	18
585	Giant anisotropy of thermal expansion and thermomechanical properties of monolayer $\hat{\pm}$ -antimonene: A first-principles study. <i>Computational Materials Science</i> , 2019, 169, 109132.	1.4	1
586	Boron-based inorganic heterocyclic clusters: electronic structure, chemical bonding, aromaticity, and analogy to hydrocarbons. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 20523-20537.	1.3	16
587	Electron-phonon coupling in a honeycomb borophene grown on Al(111) surface. <i>Physical Review B</i> , 2019, 100, .	1.1	22
588	Velocity-determined anisotropic behaviors of RKKY interaction in 8-Pmmn borophene. <i>Journal of Magnetism and Magnetic Materials</i> , 2019, 491, 165631.	1.0	11
589	Thermoelectric properties of 1 T monolayer pristine and Janus Pd dichalcogenides. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 455502.	0.7	22

#	ARTICLE	IF	CITATIONS
590	Solid-state platform for space-time engineering: The $\sqrt{3} \times \sqrt{3}$ borophene sheet. Physical Review B, 2019, 99, .	4.1	143
591	Edge-modulated dual spin-filter effect in zigzag-shaped buckling $\text{Ag}_2\text{S}$ nanoribbons. Physical Chemistry Chemical Physics, 2019, 21, 15623-15629.	1.3	6
592	Pressure-induced $\text{Ge}_2\text{Se}_3$ and $\text{Ge}_3\text{Se}_4$ crystals with low superconducting transition temperatures. Physical Chemistry Chemical Physics, 2019, 21, 15417-15421.	1.3	1
593	Topography Modulates Effects of Nitrogen Deposition on Asymbiotic $\text{N}_2$ Fixation in Soil but not Litter or Moss in a Secondary Karst Forest. Journal of Geophysical Research: Biogeosciences, 2019, 124, 3015-3023.	1.3	17
594	Anomalous caustics and Veselago focusing in 8-Pmmn borophene $\pi$ -junctions with arbitrary junction directions. New Journal of Physics, 2019, 21, 103052.	1.2	17
595	Low-Energy GeP Monolayers with Natural Type-II Homojunctions for SunLight-Driven Water Splitting. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1900470.	1.2	12
596	Modelling the adsorption of natural organic matter on Ag (111) surface: Insights from dispersion corrected density functional theory calculations. Journal of Molecular Graphics and Modelling, 2019, 92, 313-319.	1.3	9
597	Borophene-graphene heterostructures. Science Advances, 2019, 5, eaax6444.	4.7	89
598	Two-dimensional nanomaterials: fascinating materials in biomedical field. Science Bulletin, 2019, 64, 1707-1727.	4.3	171
599	De novo exploration and self-guided learning of potential-energy surfaces. Npj Computational Materials, 2019, 5, .	3.5	132
600	Silicon micromachining with nanometer-thin boron masking and membrane material. Materials Research Express, 2019, 6, 116438.	0.8	4
601	Transparent Collision Visualization of Point Clouds Acquired by Laser Scanning. ISPRS International Journal of Geo-Information, 2019, 8, 425.	1.4	1
602	Massless Dirac fermions in stable two-dimensional carbon-arsenic monolayer. Physical Review B, 2019, 100, .	1.1	10
603	Interfacial Effects on the Growth of Atomically Thin Film: Group VA Elements on Au(111). Advanced Materials Interfaces, 2019, 6, 1901050.	1.9	14
604	Emerging mono-elemental 2D nanomaterials for electrochemical sensing applications: From borophene to bismuthene. TrAC - Trends in Analytical Chemistry, 2019, 121, 115696.	5.8	31
605	Two novel triangular borophenes B <sub>3</sub> H and B <sub>6</sub> O: first-principles prediction. Nanotechnology, 2019, 30, 495201.	1.3	2
606	Photoinduced hydrogen release from hydrogen boride sheets. Nature Communications, 2019, 10, 4880.	5.8	63
607	Transgelin in bladder cancer: A potential biomarker and therapeutic target. EBioMedicine, 2019, 48, 16-17.	2.7	3

#	ARTICLE	IF	CITATIONS
608	Recent progress on the prediction of two-dimensional materials using CALYPSO. Chinese Physics B, 2019, 28, 107306.	0.7	24
609	Stabilizing honeycomb borophene by metal decoration: a computational study. Journal of Materials Chemistry C, 2019, 7, 11493-11499.	2.7	17
610	Fluxional Boron Clusters: From Theory to Reality. Accounts of Chemical Research, 2019, 52, 2732-2744.	7.6	79
611	Dynamical band gap tuning in anisotropic tilted Dirac semimetals by intense elliptically polarized normal illumination and its application to $\sqrt{3}\times\sqrt{3}$ borophene. Physical Review B, 2019, 100, .	1.1	22
612	Borophene Is a Promising 2D Allotropic Material for Biomedical Devices. Applied Sciences (Switzerland), 2019, 9, 3446.	1.3	61
613	B80 Fullerene: A Promising Metal-Free Photocatalyst for Efficient Conversion of CO <sub>2</sub> to HCOOH. Journal of Physical Chemistry C, 2019, 123, 24193-24199.	1.5	19
614	Electronic stripes and transport properties in borophene heterostructures. Nanoscale, 2019, 11, 17894-17903.	2.8	21
615	An emerging Janus MoSeTe material for potential applications in optoelectronic devices. Journal of Materials Chemistry C, 2019, 7, 12312-12320.	2.7	85
616	Discovery of Weyl Nodal Lines in a Single-Layer Ferromagnet. Physical Review Letters, 2019, 123, 116401.	2.9	70
617	Emerging 2D material-based nanocarrier for cancer therapy beyond graphene. Coordination Chemistry Reviews, 2019, 400, 213041.	9.5	103
618	Fully spin-polarized open and closed nodal lines in $\sqrt{3}\times\sqrt{3}$ -borophene by magnetic proximity effect. Physical Review B, 2019, 100, .	1.1	16
619	Tight-binding model for the electronic properties of buckled triangular borophene. Micro and Nano Letters, 2019, 14, 992-994.	0.6	2
620	Two-Dimensional Mesoporous Heterostructure Delivering Superior Pseudocapacitive Sodium Storage via Bottom-Up Monomicelle Assembly. Journal of the American Chemical Society, 2019, 141, 16755-16762.	6.6	99
621	Near-equilibrium growth from borophene edges on silver. Science Advances, 2019, 5, eaax0246.	4.7	47
622	Ge3P2: New viable two-dimensional semiconductors with ultrahigh carrier mobility. Applied Surface Science, 2019, 497, 143803.	3.1	17
623	The mechanical flexibility, electronic structure and carrier mobility of monolayer GeP: A first principles study. Physics Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 125856.	0.9	4
624	Introduction to MXenes: synthesis and characteristics. Materials Today Chemistry, 2019, 14, 100191.	1.7	89
625	KTlO: a metal shrouded 2D semiconductor with high carrier mobility and tunable magnetism. Nanoscale, 2019, 11, 1131-1139.	2.8	50

#	ARTICLE	IF	CITATIONS
626	Observation of a Dirac state in borophene hetero-bilayers by Cr intercalation. <i>Journal of Materials Chemistry C</i> , 2019, 7, 2068-2075.	2.7	7
627	Atomically thin NiB <sub>6</sub> monolayer: a robust Dirac material. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 617-622.	1.3	25
628	Negative Poisson's ratio in monolayer PdSe <sub>2</sub> . <i>Computational Materials Science</i> , 2019, 160, 309-314.	1.4	29
629	Two-Dimensional Anti-Vanâ€™t Hoff/Le Bel Array AlB <sub>6</sub> with High Stability, Unique Motif, Triple Dirac Cones, and Superconductivity. <i>Journal of the American Chemical Society</i> , 2019, 141, 3630-3640.	6.6	154
630	Structure evolution of chromium-doped boron clusters: toward the formation of endohedral boron cages. <i>RSC Advances</i> , 2019, 9, 2870-2876.	1.7	18
631	Exfoliation of borophenes from silver substrates assisted by Li/Mg atomsâ€™ a density functional theory study. <i>Journal of Materials Chemistry C</i> , 2019, 7, 4043-4048.	2.7	15
632	Effect of Net Charge on the Relative Stability of 2D Boron Allotropes. <i>Nano Letters</i> , 2019, 19, 1359-1365.	4.5	23
633	Two-dimensional honeycomb borophene oxide: strong anisotropy and nodal loop transformation. <i>Nanoscale</i> , 2019, 11, 2468-2475.	2.8	84
634	Broadband photodetectors based on 2D group IVA metal chalcogenides semiconductors. <i>Applied Materials Today</i> , 2019, 15, 115-138.	2.3	82
635	Single-Metal Atom Anchored on Boron Monolayer (Î² <sub>12</sub> ) as an Electrocatalyst for Nitrogen Reduction into Ammonia at Ambient Conditions: A First-Principles Study. <i>Journal of Physical Chemistry C</i> , 2019, 123, 4274-4281.	1.5	86
636	Prospects for experimental realization of two-dimensional aluminium allotropes. <i>Journal of Materials Chemistry C</i> , 2019, 7, 2666-2675.	2.7	24
637	Cryo-assisted exfoliation of atomically thin 2D Sb <sub>2</sub> Se <sub>3</sub> nanosheets for photo-induced theranostics. <i>Chemical Communications</i> , 2019, 55, 2805-2808.	2.2	11
638	Discovery of a ferroelastic topological insulator in a two-dimensional tetragonal lattice. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 5165-5169.	1.3	5
639	TIP <sub>5</sub> : an unexplored direct band gap 2D semiconductor with ultra-high carrier mobility. <i>Journal of Materials Chemistry C</i> , 2019, 7, 639-644.	2.7	30
640	First-principles calculations on the intrinsic resistivity of borophene: anisotropy and temperature dependence. <i>Journal of Materials Chemistry C</i> , 2019, 7, 986-997.	2.7	12
641	Three-dimensional auxetic properties in group Vâ€™VI binary monolayer crystals X <sub>3</sub> M <sub>2</sub> (X = S, Se; M = N, P, As). <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 5916-5924.	1.3	10
642	Two-dimensional antiferromagnetic boron from first principles. <i>AIP Advances</i> , 2019, 9, 055211.	0.6	2
643	Two-dimensional materials with intrinsic auxeticity: progress and perspectives. <i>Nanoscale</i> , 2019, 11, 11413-11428.	2.8	44

#	ARTICLE	IF	CITATIONS
644	Silicanes Modified by Conjugated Substituents for Optoelectronic Devices. <i>Advanced Optical Materials</i> , 2019, 7, 1900696.	3.6	8
645	Flat Boron: A New Cousin of Graphene. <i>Advanced Materials</i> , 2019, 31, e1900392.	11.1	82
646	The Magnetism and Transport Properties of Bare and Hydrogenated Borophene Nanoribbons. <i>Journal of Superconductivity and Novel Magnetism</i> , 2019, 32, 3893-3900.	0.8	3
647	Strain engineering of optical activity in phosphorene. <i>RSC Advances</i> , 2019, 9, 19006-19015.	1.7	23
648	Hexagonal CuCl Monolayer for Water Splitting: A DFT Study. <i>ACS Applied Nano Materials</i> , 2019, 2, 4238-4246.	2.4	25
649	Application of lasers in the synthesis and processing of two-dimensional quantum materials. <i>Journal of Laser Applications</i> , 2019, 31, 031202.	0.8	9
650	Charge-controlled switchable H <sub>2</sub> storage on conductive borophene nanosheet. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 20150-20157.	3.8	26
651	Novel structures of two-dimensional tungsten boride and their superconductivity. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 15327-15338.	1.3	23
652	Toward heterostructured transition metal hybrids with highly promoted electrochemical hydrogen evolution. <i>RSC Advances</i> , 2019, 9, 19924-19929.	1.7	4
653	Electronic transport properties of partially hydrogenated and fluorinated borophene, a DFT study. <i>Computational Materials Science</i> , 2019, 168, 74-80.	1.4	4
654	Elektronenâ€defizitÃre Triboranâ€und Tetraboranâ€Ringverbindungen: Synthese, Struktur und Bindung. <i>Angewandte Chemie</i> , 2019, 131, 11724-11742.	1.6	16
655	How is Honeycomb Borophene Stabilized on Al(111)? <i>Journal of Physical Chemistry C</i> , 2019, 123, 14858-14864.	1.5	35
656	Production of large-area 2D materials for high-performance photodetectors by pulsed-laser deposition. <i>Progress in Materials Science</i> , 2019, 106, 100573.	16.0	160
657	Thermoelectric transport properties of borophane. <i>Physical Review B</i> , 2019, 99, .	1.1	15
658	Mn <sub>2</sub> C Monolayer: Hydrogenation/Oxygenation-Induced Strong Ferromagnetism and Potential Applications. <i>Journal of Physical Chemistry C</i> , 2019, 123, 16388-16392.	1.5	13
659	Electron transport properties of boron nitride chains between two-dimensional metallic borophene electrodes. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2019, 114, 113565.	1.3	7
660	Predicting two-dimensional semiconducting boron carbides. <i>Nanoscale</i> , 2019, 11, 11099-11106.	2.8	29
661	A mechanistic study of B<sub>36</sub>-supported atomic Au promoted CO<sub>2</sub> electroreduction to formic acid. <i>Journal of Materials Chemistry A</i> , 2019, 7, 13935-13940.	5.2	25

#	ARTICLE	IF	CITATIONS
662	Anisotropic thermal expansion and thermodynamic properties of monolayer $\text{Te}$ . <i>Physical Review B</i> , 2019, 99, .	1.1	25
663	Intercalation of transition metals in aluminene bi-layers: An ab initio study. <i>Journal of Chemical Physics</i> , 2019, 150, 194702.	1.2	3
664	Discovery of hexagonal ternary phase $\text{Ti}_2\text{InB}_2$ and its evolution to layered boride $\text{TiB}$ . <i>Nature Communications</i> , 2019, 10, 2284.	5.8	159
665	Probing the structures and bonding of size-selected boron and doped-boron clusters. <i>Chemical Society Reviews</i> , 2019, 48, 3550-3591.	18.7	169
666	Magnetic and thermal properties of a core-shell borophene structure: Monte Carlo study. <i>Physica B: Condensed Matter</i> , 2019, 566, 63-70.	1.3	49
667	Concentric Advancing Front Corrugations and Multiple Ordered Growth of 2D $\text{MoS}_2$ Crystals. <i>Crystal Growth and Design</i> , 2019, 19, 3097-3102.	1.4	6
668	Solution-Phase Synthesis of Few-Layer Hexagonal Antimonene Nanosheets via Anisotropic Growth. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 9891-9896.	7.2	50
669	2D Elemental Nanomaterials Beyond Graphene. <i>ChemNanoMat</i> , 2019, 5, 1062-1091.	1.5	64
670	Boron Nanosheets for Efficient All-Optical Modulation and Logic Operation. <i>Advanced Optical Materials</i> , 2019, 7, 1900322.	3.6	39
671	Thermal transport properties in monolayer $\text{GeS}$ . <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2019, 383, 2499-2503.	0.9	12
672	A novel two-dimensional $\text{InP}_3$ monolayer with high stability, tunable bandgap, high carrier mobility, and gas sensing of $\text{NO}_2$ . <i>Journal of Materials Chemistry C</i> , 2019, 7, 7352-7359.	2.7	44
673	Chemically Robust, Cu-based Porous Coordination Polymer Nanosheets for Efficient Hydrogen Evolution: Experimental and Theoretical Studies. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 21086-21093.	4.0	22
674	Magnetic borophenes from an evolutionary search. <i>Physical Review B</i> , 2019, 99, .	1.1	25
675	Solution-Phase Synthesis of Few-Layer Hexagonal Antimonene Nanosheets via Anisotropic Growth. <i>Angewandte Chemie</i> , 2019, 131, 9996-10001.	1.6	5
676	Computational Discovery and Design of MXenes for Energy Applications: Status, Successes, and Opportunities. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 24885-24905.	4.0	105
677	$\text{B}_{31}^{\wedge}$ and $\text{B}_{32}^{\wedge}$ : chiral quasi-planar boron clusters. <i>Nanoscale</i> , 2019, 11, 9698-9704.	2.8	22
678	Borophene as an anode material for Zn-ion batteries: a first-principles investigation. <i>Materials Research Express</i> , 2019, 6, 085504.	0.8	15
679	Fingerprints of tilted Dirac cones on the RKKY exchange interaction in 8- <i>Pmmn</i> borophene. <i>Physical Review B</i> , 2019, 99, .	1.1	24

#	ARTICLE	IF	CITATIONS
680	Ab Initio Study of the Electronic, Vibrational, and Mechanical Properties of the Magnesium Diboride Monolayer. <i>Condensed Matter</i> , 2019, 4, 37.	0.8	9
681	Band engineering of B <sub>2</sub> H <sub>2</sub> nanoribbons. <i>Chinese Physics B</i> , 2019, 28, 046803.	0.7	12
682	Effect of oxygen doping on the stability and band structure of borophene nanoribbons. <i>Chemical Physics Letters</i> , 2019, 728, 53-56.	1.2	32
683	From Two- to Three-Dimensional van der Waals Layered Structures of Boron Crystals: An Ab Initio Study. <i>ACS Omega</i> , 2019, 4, 8015-8021.	1.6	19
684	Band Gap Opening in 8-Pmmn Borophene by Hydrogenation. <i>ACS Applied Electronic Materials</i> , 2019, 1, 667-674.	2.0	23
685	Freestanding Borophene and Its Hybrids. <i>Advanced Materials</i> , 2019, 31, e1900353.	11.1	195
686	Separated and intermixed phases of borophene as anode material for lithium-Ion batteries. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 245501.	1.3	19
687	A Large Family of Synthetic Two-Dimensional Metal Hydrides. <i>Journal of the American Chemical Society</i> , 2019, 141, 7899-7905.	6.6	25
688	Electronic and optical properties of the supercell of 8-Pmmn borophene modified on doping by H, Li, Be, and C: a DFT approach. <i>Applied Physics A: Materials Science and Processing</i> , 2019, 125, 1.	1.1	21
689	Prediction of Stable and High-Performance Charge Transport in Zigzag Tellurene Nanoribbons. <i>IEEE Transactions on Electron Devices</i> , 2019, 66, 2365-2369.	1.6	8
690	Crystalline Tetraatomic Boron(0) Species. <i>Journal of the American Chemical Society</i> , 2019, 141, 5164-5168.	6.6	29
691	Flexible Molybdenum Disulfide (MoS <sub>2</sub> ) Atomic Layers for Wearable Electronics and Optoelectronics. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 11061-11105.	4.0	277
692	Borophene Synthesis on Au(111). <i>ACS Nano</i> , 2019, 13, 3816-3822.	7.3	261
693	High yield synthesis of boron-based nanosheets. <i>Advances in Applied Ceramics</i> , 2019, 118, 209-216.	0.6	14
694	Design and Prediction of a Novel Two-Dimensional Carbon Nanostructure with In-Plane Negative Poisson's Ratio. <i>Journal of Nanomaterials</i> , 2019, 2019, 1-10.	1.5	2
695	Flexible, auxetic and strain-tunable two dimensional penta-X <sub>2</sub> C family as water splitting photocatalysts with high carrier mobility. <i>Journal of Materials Chemistry A</i> , 2019, 7, 7791-7799.	5.2	66
696	Preparations, properties and applications of low-dimensional black phosphorus. <i>Chemical Engineering Journal</i> , 2019, 370, 120-135.	6.6	71
697	Strain-induced electronic phase transition in phosphorene: A Green's function study. <i>Chemical Physics</i> , 2019, 522, 249-255.	0.9	14

#	ARTICLE	IF	CITATIONS
698	Raman Spectroscopy of Two-Dimensional Borophene Sheets. ACS Nano, 2019, 13, 4133-4139.	7.3	73
699	Structural and electronic properties of MB <sub>22</sub> <sup>+</sup> (M = Na, K) clusters: tubular boron versus quasi-planar boron forms. New Journal of Chemistry, 2019, 43, 6507-6512.	1.4	17
700	Two-dimensional haeckelite h567: A promising high capacity and fast Li diffusion anode material for lithium-ion batteries. Carbon, 2019, 148, 344-353.	5.4	59
701	A theoretical study of several fully hydrogenated borophenes. Physical Chemistry Chemical Physics, 2019, 21, 7630-7634.	1.3	16
702	Gas adsorption on the pristine monolayer GeP <sub>3</sub> : A first-principles calculation. Vacuum, 2019, 164, 181-185.	1.6	19
703	Thermal transport across grain boundaries in polycrystalline silicene: A multiscale modeling. Scientific Reports, 2019, 9, 5684.	1.6	22
704	Geometric imaging of borophene polymorphs with functionalized probes. Nature Communications, 2019, 10, 1642.	5.8	65
705	Stress-sign-tunable Poisson's ratio in monolayer blue phosphorus oxide. Journal of Physics Condensed Matter, 2019, 31, 295702.	0.7	12
706	Review of borophene and its potential applications. Frontiers of Physics, 2019, 14, 1.	2.4	201
707	Orbitally driven giant thermal conductance associated with abnormal strain dependence in hydrogenated graphene-like borophene. Npj Computational Materials, 2019, 5, .	3.5	47
708	Electronic Structure of Boron Flat Holeless Sheet. Condensed Matter, 2019, 4, 28.	0.8	6
709	Nonlinear elastic behavior and anisotropic electronic properties of two-dimensional borophene. Journal of Applied Physics, 2019, 125, .	1.1	23
710	Structure prediction drives materials discovery. Nature Reviews Materials, 2019, 4, 331-348.	23.3	402
711	Inorganic Boron-Based Nanostructures: Synthesis, Optoelectronic Properties, and Prospective Applications. Nanomaterials, 2019, 9, 538.	1.9	34
712	The Ultrahigh Quantum Thermal Conductance of Hydrogenated Boron Nanotubes. Physica Status Solidi (B): Basic Research, 2019, 256, 1900122.	0.7	3
713	Study of mechanical and electronic properties of single-layer FeB <sub>2</sub> . Physica E: Low-Dimensional Systems and Nanostructures, 2019, 112, 71-77.	1.3	12
714	Interfacial competition between a borophene-based cathode and electrolyte for the multiple-sulfide immobilization of a lithium sulfur battery. Journal of Materials Chemistry A, 2019, 7, 7092-7098.	5.2	30
715	2D selenium allotropes from first principles and swarm intelligence. Journal of Physics Condensed Matter, 2019, 31, 235702.	0.7	21



#	ARTICLE	IF	CITATIONS
716	2D Organic Hybrid Heterostructures for Optoelectronic Applications. <i>Advanced Materials</i> , 2019, 31, e1803831.	11.1	86
717	Tunable Topological State, High Hole-Carrier Mobility, and Prominent Sunlight Absorbance in Monolayered Calcium Triarsenide. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 761-767.	2.1	15
718	Stable global tubular boron clusters in $\text{Na}_2\text{B}_{18}$ and $\text{Na}_2\text{B}_{18}^+$ . <i>RSC Advances</i> , 2019, 9, 4665-4670.	1.7	18
719	Monolayer tellurenyne assembled with helical telluryne: structure and transport properties. <i>Nanoscale</i> , 2019, 11, 4053-4060.	2.8	7
720	2D Triphosphides: SbP <sub>3</sub> and GaP <sub>3</sub> monolayer as promising photocatalysts for water splitting. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 5948-5954.	3.8	52
721	Ideal Nodal Line Semimetal in a Two-Dimensional Boron Bilayer. <i>Journal of Physical Chemistry C</i> , 2019, 123, 4977-4983.	1.5	35
722	Single Photon Sources in Atomically Thin Materials. <i>Annual Review of Physical Chemistry</i> , 2019, 70, 123-142.	4.8	145
723	Tuning the electronic transport anisotropy in borophene via oxidation strategy. <i>Science China Technological Sciences</i> , 2019, 62, 799-810.	2.0	14
724	Charge Transport in Borophene: Role of Intrinsic Line Defects. <i>Journal of Physical Chemistry C</i> , 2019, 123, 6270-6275.	1.5	13
725	Structural and Electronic Properties of Medium-Sized Aluminum-Doped Boron Clusters $\text{AlB}_n$ and Their Anions. <i>Journal of Physical Chemistry C</i> , 2019, 123, 6276-6283.	1.5	59
726	Recent progress in 2D group IV monochalcogenides: synthesis, properties and applications. <i>Nanotechnology</i> , 2019, 30, 252001.	1.3	104
727	Rediscover $\sqrt{5}$ boron sheet: Interaction with Ni substrate and MoS <sub>2</sub> monolayer. <i>Journal of Applied Physics</i> , 2019, 125, 075304.	1.1	0
728	Electron-Deficient Triborane and Tetraborane Ring Compounds: Synthesis, Structure, and Bonding. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 11600-11617.	7.2	25
729	Penta-MX <sub>2</sub> (M = Ni, Pd and Pt; X = P and As) monolayers: direct band-gap semiconductors with high carrier mobility. <i>Journal of Materials Chemistry C</i> , 2019, 7, 3569-3575.	2.7	34
730	Modelling high-performing batteries with Mxenes: The case of S-functionalized two-dimensional nitride Mxene electrode. <i>Nano Energy</i> , 2019, 58, 877-885.	8.2	100
731	An Experimental Setup for Combined In-Vacuo Raman Spectroscopy and Cavity-Interferometry Measurements on TMDC Nano-resonators. <i>Experimental Mechanics</i> , 2019, 59, 349-359.	1.1	6
732	Structural and Electronic Properties of B <sub>8</sub> , VB <sub>8</sub> , CRB <sub>8</sub> , and MNB <sub>8</sub> Nanoclusters: A DFT study. , 2019, , .		0
733	Multifunctional 2D CuSe monolayer nanodevice. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 355301.	0.7	8

#	ARTICLE	IF	CITATIONS
734	Insight into Two-Dimensional Borophene: Five-Center Bond and Phonon-Mediated Superconductivity. ACS Applied Materials & Interfaces, 2019, 11, 47279-47288.	4.0	14
735	Control of highly anisotropic electrical conductance of tellurene by strain-engineering. Nanoscale, 2019, 11, 21775-21781.	2.8	11
736	Planar B <sub>41</sub> <sup>+</sup> and B <sub>42</sub> <sup>+</sup> clusters with double-hexagonal vacancies. Nanoscale, 2019, 11, 23286-23295.	2.8	44
737	Evolutionary search for (M@B <sub>16</sub> ) <sup>+</sup> (M = Sc, Ni; Q = 0, 1) clusters: bowl/boat vs. tubular shape. Physical Chemistry Chemical Physics, 2019, 21, 22618-22628.	1.3	18
738	<sup>12</sup> B-Borophene becomes a semiconductor and semimetal via a perpendicular electric field and dilute charged impurity. Physical Chemistry Chemical Physics, 2019, 21, 21790-21797.	1.3	39
739	Mechanical properties and superconductivity in two-dimensional B <sub>2</sub> O under extreme strain. Physical Chemistry Chemical Physics, 2019, 21, 25859-25864.	1.3	4
740	Electronic transport properties in the stable phase of a cumulene/B <sub>7</sub> /cumulene molecular bridge investigated using density functional theory and a tight-binding method. New Journal of Chemistry, 2019, 43, 16515-16523.	1.4	11
741	Recent advances in two-dimensional materials and their nanocomposites in sustainable energy conversion applications. Nanoscale, 2019, 11, 21622-21678.	2.8	201
742	Emerging two-dimensional noncarbon nanomaterials for flexible lithium-ion batteries: opportunities and challenges. Journal of Materials Chemistry A, 2019, 7, 25227-25246.	5.2	44
743	Phenanthroimidazole derivatives with minor structural differences: crystalline polymorphisms, different molecular packing, and totally different mechanoluminescence. Journal of Materials Chemistry C, 2019, 7, 13759-13763.	2.7	39
744	A New Metallic In <sub>3</sub> O <sub>4</sub> Sheet as an Anode Material for Sodium-Ion Batteries. Journal of Physical Chemistry C, 2019, 123, 30213-30220.	1.5	11
745	Valley-dependent electron retroreflection and anomalous Klein tunneling in an 8- borophene-based junction. Physical Review B, 2019, 100, .	1.1	21
746	Kubo conductivity for anisotropic tilted Dirac semimetals and its application to 8- Role of frequency, temperature, and scattering limits. Physical Review B, 2019, 100, .	1.1	18
747	Synthesis of Boron Nanosheets in Copper Medium. Scientific Reports, 2019, 9, 17337.	1.6	15
748	Recent progress of spintronics based on emerging 2D materials: Cr <sub>3</sub> and Xenos. Materials Research Express, 2019, 6, 122004.	0.8	21
749	Near-zero-index materials for photonics. Nature Reviews Materials, 2019, 4, 742-760.	23.3	234
750	Effect of point defects and functionalization on structural stability and electron properties of borophene as investigated by means of density functional theory. IOP Conference Series: Materials Science and Engineering, 2019, 672, 012032.	0.3	0
751	Single-Phase Borophene on Ir(111): Formation, Structure, and Decoupling from the Support. ACS Nano, 2019, 13, 14511-14518.	7.3	99

#	ARTICLE	IF	CITATIONS
752	The shape-dependent surface oxidation of 2D ultrathin Mo <sub>2</sub> C crystals. <i>Nanoscale Advances</i> , 2019, 1, 4692-4696.	2.2	7
753	Density functional study of Li/Na adsorption properties of single-layer and double-layer antimonenes. <i>RSC Advances</i> , 2019, 9, 32608-32619.	1.7	8
754	Stability and bonding nature for icosahedral or planar cluster of hydrogenated boron or aluminum. <i>AIP Advances</i> , 2019, 9, .	0.6	0
755	Tuning the Electronic Properties of Hexagonal Two-Dimensional GaN Monolayers via Doping for Enhanced Optoelectronic Applications. <i>ACS Applied Nano Materials</i> , 2019, 2, 202-213.	2.4	60
756	How Silver Grows on the Silicon (001) Surface: A Theoretical and Experimental Investigation. <i>ACS Applied Electronic Materials</i> , 2019, 1, 122-131.	2.0	4
757	Negative differential conductance effect and electrical anisotropy of 2D ZrB <sub>2</sub> monolayers. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 065301.	0.7	33
758	Data-driven and probabilistic learning of the process-structure-property relationship in solution-grown tellurene for optimized nanomanufacturing of high-performance nanoelectronics. <i>Nano Energy</i> , 2019, 57, 480-491.	8.2	44
759	Mechanical properties of double-layered borophene with Li-storage. <i>Materials Research Express</i> , 2019, 6, 035010.	0.8	3
760	High intrinsic catalytic activity of boron nanotubes for hydrogen evolution reaction: an <i>ab initio</i> study. <i>Materials Research Express</i> , 2019, 6, 025036.	0.8	3
761	Stability, spontaneous and induced polarization in monolayer MoC, WC, WS, and WSe. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 045301.	0.7	6
762	Metal-insulator transition in $B_8$ borophene under normal incidence of electromagnetic radiation. <i>Physical Review B</i> , 2019, 99, .	1.0	4
763	Strong chemisorption of CO <sub>2</sub> on B <sub>10</sub> B <sub>13</sub> planar-type clusters. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 145504.	0.7	5
764	Wrinkling C <sub>3</sub> N nano-grids in uniaxial tensile testing; a molecular dynamics study. <i>Diamond and Related Materials</i> , 2019, 92, 130-137.	1.8	9
765	A molecular dynamics study on the thermal conductivities of single- and multi-layer two-dimensional borophene. <i>Nano Futures</i> , 2019, 3, 015001.	1.0	22
766	Atomically Thin 2D Transition Metal Oxides: Structural Reconstruction, Interaction with Substrates, and Potential Applications. <i>Advanced Materials Interfaces</i> , 2019, 6, 1801160.	1.9	100
767	STM study of exfoliated few layer black phosphorus annealed in ultrahigh vacuum. <i>2D Materials</i> , 2019, 6, 015005.	2.0	14
768	Polytypism in ultrathin tellurium. <i>2D Materials</i> , 2019, 6, 015013.	2.0	68
769	Electrochemical exfoliation of graphene-like two-dimensional nanomaterials. <i>Nanoscale</i> , 2019, 11, 16-33.	2.8	184

#	ARTICLE	IF	CITATIONS
770	Electron Transport in Nanoporous Graphene: Probing the Talbot Effect. Nano Letters, 2019, 19, 576-581.	4.5	22
771	Large-area single-crystal sheets of borophene on Cu(111) surfaces. Nature Nanotechnology, 2019, 14, 44-49.	15.6	285
772	Li-decorated Pmmn8 phase of borophene for hydrogen storage. A van der Waals corrected density-functional theory study. International Journal of Hydrogen Energy, 2019, 44, 1021-1033.	3.8	35
773	Hydrogen adsorption property of Na-decorated boron monolayer: A first principles investigation. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 107, 170-176.	1.3	27
774	Van der Waals Heteroepitaxial Growth of Monolayer Sb in a Puckered Honeycomb Structure. Advanced Materials, 2019, 31, e1806130.	11.1	75
775	Acoustical characteristics of single-walled noncarbon nanotubes: Longitudinal and torsional waves. Computational Condensed Matter, 2019, 18, e00350.	0.9	2
776	Tensile mechanical properties and fracture behavior of monolayer InSe under axial tension. Computational Materials Science, 2019, 158, 340-345.	1.4	14
777	MXene: A New Trend in 2D Materials Science. , 2019, , 319-330.		20
778	Can fluorine and chlorine functionalization stabilize the graphene like borophene?. Computational Materials Science, 2019, 156, 56-66.	1.4	34
779	Spin current generation by thermal gradient in graphene/h-BN/graphene lateral heterojunctions. Journal Physics D: Applied Physics, 2019, 52, 015303.	1.3	11
780	N-, P-, As-triphenylene-graphdiyne: Strong and stable 2D semiconductors with outstanding capacities as anodes for Li-ion batteries. Carbon, 2019, 141, 291-303.	5.4	73
781	Recent progress on graphene-analogous 2D nanomaterials: Properties, modeling and applications. Progress in Materials Science, 2019, 100, 99-169.	16.0	235
782	Advanced Photoelectron Spectroscopies. , 2019, , 113-157.		2
783	Basics and Families of Monatomic Layers. , 2019, , 3-22.		5
784	Semiconducting borophene as a promising anode material for Li-ion and Na-ion batteries. Materials Science in Semiconductor Processing, 2019, 89, 250-255.	1.9	38
785	The magnetism enhancement and spin transport in zigzag borophene nanoribbons edge-passivated by N atoms. Applied Nanoscience (Switzerland), 2020, 10, 29-35.	1.6	7
786	Enhancing gas adsorption properties of borophene by embedding transition metals. Computational Condensed Matter, 2020, 22, e00436.	0.9	18
787	Influence of Cu dopant on the electronic and optical properties of graphene-like ZnO monolayer. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 115, 113702.	1.3	16

#	ARTICLE	IF	CITATIONS
788	2D Boron Sheets: Structure, Growth, and Electronic and Thermal Transport Properties. <i>Advanced Functional Materials</i> , 2020, 30, 1904349.	7.8	124
789	2D MXene-based Energy Storage Materials: Interfacial Structure Design and Functionalization. <i>ChemSusChem</i> , 2020, 13, 1409-1419.	3.6	63
790	The Xenos Generations: A Taxonomy of Epitaxial Single-Element 2D Materials. <i>Physica Status Solidi - Rapid Research Letters</i> , 2020, 14, 1900439.	1.2	42
791	Large Spin-Gap Nodal-Line Half-Metal and High-Temperature Ferromagnetic Semiconductor in Cr <sub>2</sub> X <sub>3</sub> (X=O,S,Se) Monolayers. <i>Advanced Electronic Materials</i> , 2020, 6, 1900490.	2.6	27
792	Nb <sub>2</sub> SiTe <sub>4</sub> and Nb <sub>2</sub> GeTe <sub>4</sub> : Unexplored 2D Ternary Layered Tellurides with High Stability, Narrow Band Gap and High Electron Mobility. <i>Journal of Electronic Materials</i> , 2020, 49, 959-968.	1.0	39
793	Unraveling the stacking effect and stability in nanocrystalline antimony through DFT. <i>Journal of Physics and Chemistry of Solids</i> , 2020, 136, 109156.	1.9	5
794	Emerging Applications of Elemental 2D Materials. <i>Advanced Materials</i> , 2020, 32, e1904302.	11.1	336
795	Exploring Two-Dimensional Materials Thermodynamic Stability via Machine Learning. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 20149-20157.	4.0	80
796	Thermal conductivity and thermal rectification of nanoporous graphene: A molecular dynamics simulation. <i>International Journal of Heat and Mass Transfer</i> , 2020, 146, 118884.	2.5	55
797	The gas sensing performance of borophene/MoS <sub>2</sub> heterostructure. <i>Applied Surface Science</i> , 2020, 504, 144412.	3.1	59
798	A preliminary study on the differential expression of long noncoding RNAs and messenger RNAs in obese and control mice. <i>Journal of Cellular Biochemistry</i> , 2020, 121, 1126-1143.	1.2	5
799	Determination of hormones in human urine by ultra-high-performance liquid chromatography/triple quadrupole mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 2020, 34, e8583.	0.7	12
800	Influence of Stone-Wales defects on the mechanical properties of graphene-like polyaniline (PANI) C <sub>3</sub> N nanosheets. <i>Diamond and Related Materials</i> , 2020, 101, 107555.	1.8	16
801	Genetic factors in isolated and syndromic laryngeal cleft. <i>Paediatric Respiratory Reviews</i> , 2020, 33, 24-27.	1.2	4
803	Introduction to Carbon-Based Nanostructures. , 2020, , 1-10.		0
804	The New Family of Two-Dimensional Materials and van der Waals Heterostructures. , 2020, , 70-91.		0
805	Quantum Transport: General Concepts. , 2020, , 92-119.		0
806	Klein Tunneling and Ballistic Transport in Graphene and Related Materials. , 2020, , 120-144.		0

#	ARTICLE	IF	CITATIONS
807	Quantum Transport in Disordered Graphene-Based Materials. , 2020, , 145-209.		0
808	Superconductivity in predicted two dimensional XB <sub>6</sub> (X = Ga, In). Journal of Materials Chemistry C, 2020, 8, 1704-1714.	2.7	30
809	A DFT study on a borophene/boron nitride interface for its application as an electrode. Physical Chemistry Chemical Physics, 2020, 22, 3304-3313.	1.3	33
812	Electronic Properties of Carbon-Based Nanostructures. , 2020, , 11-69.		0
813	Quantum Hall Effects in Graphene. , 2020, , 210-236.		0
814	Spin-Related Phenomena. , 2020, , 237-277.		0
815	Ab Initio and Multiscale Quantum Transport in Graphene-Based Materials. , 2020, , 293-353.		0
819	The effects of strain and electric field on the half-metallicity of pristine and O/H/C/N-decorated zigzag graphene nanoribbons. Journal of Physics Condensed Matter, 2020, 32, 175302.	0.7	7
820	Heterostructures of tellurium on NbSe <sub>2</sub> from sub-monolayer to few-layer films. Nanoscale, 2020, 12, 1994-2001.	2.8	7
821	Atomic and electronic properties of few-layer hexagonal boron. Solid State Communications, 2020, 307, 113804.	0.9	2
822	Fabrication and characterization of a single monolayer NiSi <sub>2</sub> sandwiched between a TI capping layer and a Si(111) substrate. 2D Materials, 2020, 7, 025009.	2.0	11
823	Solar-Inspired Water Purification Based on Emerging 2D Materials: Status and Challenges. Solar Rrl, 2020, 4, 1900400.	3.1	133
824	Breakdown of the electron delocalization in hexagonal borophene toward tunable energy gap. Applied Surface Science, 2020, 507, 144940.	3.1	1
825	Semi-hydrogenated polyaniline sheet: A half-metal with exotic properties. Journal of Magnetism and Magnetic Materials, 2020, 497, 166027.	1.0	3
826	Diameter-dependent polygonal cross section for holey phenine nanotubes. Nanotechnology, 2020, 31, 085702.	1.3	3
827	Molecular beam epitaxy fabrication of two-dimensional materials. , 2020, , 103-134.		4
828	Boron based layered electrode materials for metal-ion batteries. Physical Chemistry Chemical Physics, 2020, 22, 709-715.	1.3	9
829	YS2 monolayer as a high-efficient anode material for rechargeable Li-ion and Na-ion batteries. Solid State Ionics, 2020, 345, 115187.	1.3	19

#	ARTICLE	IF	CITATIONS
830	Metallic and intra-band investigation of optical properties for Borophene nano-sheet: a DFT study. <i>International Nano Letters</i> , 2020, 10, 33-41.	2.3	14
831	A brief review on synthesis, properties and lithium-ion battery applications of borophene. <i>FlatChem</i> , 2020, 19, 100150.	2.8	35
832	The feasibility analysis of growing the modified borophene on substrates: First-principles calculation. <i>Applied Surface Science</i> , 2020, 507, 144154.	3.1	2
833	Geometrical Frustration of B-H Bonds in Layered Hydrogen Borides Accessible by Soft Chemistry. <i>CheM</i> , 2020, 6, 406-418.	5.8	35
834	Layered Metal Hydroxides and Their Derivatives: Controllable Synthesis, Chemical Exfoliation, and Electrocatalytic Applications. <i>Advanced Energy Materials</i> , 2020, 10, 1902535.	10.2	90
835	Adsorption properties of formaldehyde on $\hat{1}^2$ 12-borophene surfaces: A first-principles study. <i>Chemical Physics Letters</i> , 2020, 739, 137035.	1.2	9
836	Electronic structure and morphology of thin surface alloy layers formed by deposition of Sn on Au(111). <i>Applied Surface Science</i> , 2020, 506, 144606.	3.1	13
837	Novel phenomena in two-dimensional semiconductors. , 2020, , 25-79.		0
838	Strain tunable Schottky barriers and tunneling characteristics of borophene/MX <sub>2</sub> van der Waals heterostructures. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020, 120, 113842.	1.3	12
839	Acid Assisted Synthesis of HB Sheets through Exfoliation of MgB <sub>2</sub> Bulk in Organic Media. <i>Chemistry Letters</i> , 2020, 49, 1194-1196.	0.7	17
840	Designed Single Atom Bifunctional Electrocatalysts for Overall Water Splitting: 3d Transition Metal Atoms Doped Borophene Nanosheets. <i>ChemPhysChem</i> , 2020, 21, 2651-2659.	1.0	17
841	Transition metals doped borophene-graphene heterostructure for robust polysulfide anchoring: A first principle study. <i>Applied Surface Science</i> , 2020, 534, 147575.	3.1	18
842	Tuning the Electronic Structure of an $\hat{1}^{\pm}$ -Antimonene Monolayer through Interface Engineering. <i>Nano Letters</i> , 2020, 20, 8408-8414.	4.5	33
843	Recent Advancements and Future Prospects in Ultrathin 2D Semiconductor-Based Photocatalysts for Water Splitting. <i>Catalysts</i> , 2020, 10, 1111.	1.6	35
844	Realizing Few-Layer Iodine for High-Rate Sodium-Ion Batteries. <i>Advanced Materials</i> , 2020, 32, e2004835.	11.1	41
845	Improved Adsorption and Migration of Divalent Ions Over C <sub>4</sub> N Nanosheets: Potential Anode for Divalent Batteries. <i>Surfaces and Interfaces</i> , 2020, 21, 100758.	1.5	5
846	Three-dimensional borophene: A light-element topological nodal-line semimetal with direction-dependent type-II Weyl fermions. <i>Physical Review B</i> , 2020, 102, .	1.1	9
847	$\hat{1}$ -CS: A Direct-Band-Gap Semiconductor Combining Auxeticity, Ferroelasticity, and Potential for High-Efficiency Solar Cells. <i>Physical Review Applied</i> , 2020, 14, .	1.5	69

#	ARTICLE	IF	CITATIONS
848	Highly anisotropic and tunable charge carrier of monolayer phosphorus allotropes by bi-axial strain. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126896.	0.9	0
849	All Boron Atoms in a ScB <sub>12</sub> Monolayer Contribute to the Hydrogen Evolution Reaction. Journal of Physical Chemistry C, 2020, 124, 23221-23229.	1.5	14
850	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
851	Scattering of Ultrashort X-ray Pulses by Various Nanosystems. Nanomaterials, 2020, 10, 1355.	1.9	7
852	The structural, electronic and optic properties in a series of M <sub>2</sub> XY (M = Ga, In; X,Y = S, Se, Te) Janus monolayer materials based on GW and the Bethe-Salpeter equation. European Physical Journal B, 2020, 93, 1.	0.6	7
853	Atomic adsorption of Sn on mechanically cleaved WS <sub>2</sub> surface at room temperature. Surface Science, 2020, 701, 121685.	0.8	5
854	Borophene with Large Holes. Journal of Physical Chemistry Letters, 2020, 11, 6235-6241.	2.1	26
855	Molecular Modelling and Synthesis of Nanomaterials. Springer Series in Materials Science, 2020, , .	0.4	5
856	Two-Dimensional Sheets. Springer Series in Materials Science, 2020, , 285-362.	0.4	0
857	Valley caloritronics in a photodriven heterojunction of Dirac materials. Physical Review B, 2020, 102, .	1.1	11
858	Activating microwave absorption performance by reduced graphene oxide-borophene heterostructure. Composites Part A: Applied Science and Manufacturing, 2020, 138, 106033.	3.8	48
859	Dilution effects on compensation temperature in borophene core-shell structure: Monte Carlo simulations. Solid State Communications, 2020, 316-317, 113944.	0.9	13
860	Theoretical dissection of superconductivity in two-dimensional honeycomb borophene oxide B <sub>2</sub> O crystal with a high stability. Npj Computational Materials, 2020, 6, .	3.5	47
861	Investigations of monoclinic- and orthorhombic-based (B <sub>x</sub> Ga <sub>1-x</sub> ) <sub>2</sub> O <sub>3</sub> alloys. Applied Physics Letters, 2020, 117, .	1.5	12
862	Borophene: New Sensation in Flatland. Advanced Materials, 2020, 32, e2000531.	11.1	118
863	Magnetic Properties of a Diluted Bi-Layer Borophene Structure: Monte Carlo Study. Integrated Ferroelectrics, 2020, 212, 120-134.	0.3	3
864	Effects of Electric and Magnetic Fields on Zitterbewegung of Electron Wave Packet in Borophene. Journal of the Physical Society of Japan, 2020, 89, 124705.	0.7	9
865	Highly efficient heterojunction solar cells enabled by edge-modified tellurene nanoribbons. Physical Chemistry Chemical Physics, 2020, 22, 28414-28422.	1.3	8



#	ARTICLE	IF	CITATIONS
866	Electric field tuning of the properties of monolayer hexagonal boron phosphide. <i>Journal of Applied Physics</i> , 2020, 128, .	1.1	22
867	Novel $\text{I}^{\pm}$ -decorated borophene  as potential high-performance for hydrogen storage medium. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 29059-29069.	3.8	19
868	Rectifying Performance of Heterojunction Based on $\text{I}^{\pm}$ -Borophene Nanoribbons with Edge Passivation. <i>Nanoscale Research Letters</i> , 2020, 15, 185.	3.1	5
869	Nonlinear absorption-induced transparency and extinction of boron nanosheets. <i>Optical Materials</i> , 2020, 108, 110199.	1.7	6
870	Stacking-dependent electronic properties of aluminene based multilayer van der Waals heterostructures. <i>Computational Materials Science</i> , 2020, 185, 109952.	1.4	3
871	Thermal and magnetic property behaviors of a binary alloy borophene structure: A Monte Carlo study. <i>Materials Today Communications</i> , 2020, 25, 101508.	0.9	5
872	Surface functional group modification induced partial Fermi level pinning and ohmic contact at borophene- $\text{MoS}_2$ interfaces. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 19202-19212.	1.3	4
873	Structures, properties and application of 2D monoelemental materials (Xenes) as graphene analogues under defect engineering. <i>Nano Today</i> , 2020, 35, 100906.	6.2	107
874	Anisotropic basic electronic properties of strained black phosphorene. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020, 124, 114323.	1.3	15
875	Growth and Grain Boundaries in 2D Materials. <i>ACS Nano</i> , 2020, 14, 9320-9346.	7.3	62
876	Recent Advances of Spatial Self-Phase Modulation in 2D Materials and Passive Photonic Device Applications. <i>Small</i> , 2020, 16, e2002252.	5.2	35
877	A novel two-dimensional $\text{sp-sp}^2\text{-sp}^3$ hybridized carbon nanostructure with a negative in-plane Poisson ratio and high electron mobility. <i>Computational Materials Science</i> , 2020, 185, 109904.	1.4	20
878	Reaction coordinate mapping of hydrogen evolution mechanism on $\text{Mg}_3\text{N}_2$ monolayer. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 22848-22854.	3.8	7
879	Engineered porous borophene with tunable anisotropic properties. <i>Composites Part B: Engineering</i> , 2020, 200, 108260.	5.9	19
880	Diborane Concatenation Leads to New Planar Boron Chemistry. <i>ChemPhysChem</i> , 2020, 21, 2460-2467.	1.0	17
881	Novel ultra-thin two-dimensional structures of strontium chloride. <i>Journal of Materials Chemistry C</i> , 2020, 8, 12527-12532.	2.7	2
882	Processable dispersions of photocatalytically active nanosheets derived from titanium diboride: self assembly into hydrogels and paper-like macrostructures. <i>Nanoscale</i> , 2020, 12, 17121-17131.	2.8	27
883	Borophene vs. graphene interfaces: Tuning the electric double layer in ionic liquids. <i>Journal of Molecular Liquids</i> , 2020, 303, 112647.	2.3	8

#	ARTICLE	IF	CITATIONS
884	Theoretical investigation on anti-sandwich beryllium-boron clusters $\text{Be}_2\text{B}(\text{m}\hat{\text{A}}\hat{\text{A}}\hat{\text{E}}\hat{\text{C}}\hat{\text{3}})$ : Fluxionality and multi-aromaticity. Computational and Theoretical Chemistry, 2020, 1188, 112949.	1.1	5
885	Boron kagome-layer induced intrinsic superconductivity in a $\text{MnB}_3$ monolayer with a high critical temperature. Physical Review B, 2020, 102, .	1.1	3
886	Observation of flat band, RKKY plateau, and magnetization jump in quasi-one-dimensional triangular kagome lattice model. Journal of Applied Physics, 2020, 128, 163903.	1.1	3
887	Energetic Stability of Free-standing and Metal-Supported Borophenes: Quantum Monte Carlo and Density Functional Theory Calculations. Journal of Physical Chemistry C, 2020, 124, 24420-24428.	1.5	5
888	Metal-Doped Two-Dimensional Borophene Nanosheets for the Carbon Dioxide Electrochemical Reduction Reaction. Journal of Physical Chemistry C, 2020, 124, 24156-24163.	1.5	17
889	Realization of Regular Mixed Quasi-1D Borophene Chains with Long-Range Order. Advanced Materials, 2020, 32, e2005128.	11.1	30
890	Are all planar and quasi-planar boron clusters aromatic? Counter examples of island or global $\pi$ antiaromaticity from chemical bonding analysis. Physical Chemistry Chemical Physics, 2020, 22, 25084-25094.	1.3	3
891	Properties of substitutional impurities in graphenelike $\text{C}_N\text{B}_3$ nanoribbons. Physical Chemistry Chemical Physics, 2020, 22, 25095-25104.	1.1	11
892	Me-graphene: a graphene allotrope with near zero Poisson's ratio, sizeable band gap, and high carrier mobility. Nanoscale, 2020, 12, 19359-19366.	2.8	48
893	Boron-based ternary $\text{Rb}_6\text{Be}_2\text{B}_6$ cluster featuring unique sandwich geometry and a naked hexagonal boron ring. Physical Chemistry Chemical Physics, 2020, 22, 20043-20049.	1.3	12
894	Theoretical Study of the Electronic and Optical Properties of a Heterostructure Based on PTCDA Organic Semiconductor and $\text{MoSe}_2$ . JETP Letters, 2020, 111, 627-632.	0.4	3
895	Phosphorus Pentamers: Floating Nanoflowers form a 2D Network. Advanced Functional Materials, 2020, 30, 2004531.	7.8	12
896	Bandgap Engineering of Hydroxy-Functionalized Borophene for Superior Photo-Electrochemical Performance. Angewandte Chemie, 2020, 132, 23765-23769.	1.6	3
897	Design, characterization, and application of elemental 2D materials for electrochemical energy storage, sensing, and catalysis. Materials Advances, 2020, 1, 2562-2591.	2.6	21
898	Hidden porous boron nitride as a high-efficiency membrane for hydrogen purification. Physical Chemistry Chemical Physics, 2020, 22, 22778-22784.	1.3	16
899	Regular Arrangement of Two-Dimensional Clusters of Blue Phosphorene on $\text{Ag}(111)$ . Chinese Physics Letters, 2020, 37, 096803.	1.3	17
900	Band engineering of borophene superlattice based on zigzag nanoribbons: A DFT study. Modern Physics Letters B, 2020, 34, 2050359.	1.0	3
901	Computational Study of Borophene with Line Defects as Sensors for Nitrogen-Containing Gas Molecules. ACS Applied Nano Materials, 2020, 3, 9961-9968.	2.4	24

#	ARTICLE	IF	CITATIONS
902	Photo- and Nanoelectronics Based on Two-Dimensional Materials. Part I. Two-Dimensional Materials: Properties and Synthesis. Journal of Communications Technology and Electronics, 2020, 65, 1062-1104.	0.2	9
903	Integrated single photon emitters. AVS Quantum Science, 2020, 2, .	1.8	40
904	Three-Fold Enhancement of In-Plane Thermal Conductivity of Borophene through Metallic Atom Intercalation. Nano Letters, 2020, 20, 7619-7626.	4.5	33
905	Enhanced ion diffusion induced by structural transition of Li-modified borophosphene. Physical Chemistry Chemical Physics, 2020, 22, 21326-21333.	1.3	6
906	Isoelectronically substituted group-III based monolayers: An <i>ab initio</i> study. Physical Review B, 2020, 102, .	1.1	3
907	Quantum Floquet oscillation in borophane. European Physical Journal Plus, 2020, 135, 1.	1.2	2
908	Quasi-planar B <sub>36</sub> boron cluster: a new potential basis for ammonia detection. Journal of Molecular Modeling, 2020, 26, 263.	0.8	5
909	Two-Dimensional Boron-Phosphorus Monolayer for Reversible NO <sub>2</sub> Gas Sensing. ACS Applied Nano Materials, 2020, 3, 10073-10081.	2.4	40
910	Electric field tuned anisotropic to isotropic thermal transport transition in monolayer borophene without altering its atomic structure. Nanoscale, 2020, 12, 19178-19190.	2.8	15
911	Bandgap Engineering of Hydroxy-Functionalized Borophene for Superior Photo-Electrochemical Performance. Angewandte Chemie - International Edition, 2020, 59, 23559-23563.	7.2	41
912	Inverse sandwich complexes of B <sub>7</sub> M <sub>2</sub> <sup>+</sup> , B <sub>8</sub> M <sub>2</sub> , and B <sub>9</sub> M <sub>2</sub> <sup>+</sup> (M = Zr, Hf): the nonclassical M-M bonds embedded in monocyclic boron rings. New Journal of Chemistry, 2020, 44, 17705-17713.	1.4	6
913	Thermoelectric properties of two-dimensional hydrogenated borophene: A first-principles study. AIP Conference Proceedings, 2020, , .	0.3	1
914	Borophene: Current Status, Challenges and Opportunities. ChemPlusChem, 2020, 85, 2186-2196.	1.3	63
915	Integrated Plasmonics: Broadband Dirac Plasmons in Borophene. Physical Review Letters, 2020, 125, 116802.	2.9	67
916	Two-dimensional silicon bismotide (SiBi) monolayer with a honeycomb-like lattice: first-principles study of tuning the electronic properties. RSC Advances, 2020, 10, 31894-31900.	1.7	23
917	Novel architectures of boron. Structural Chemistry, 2020, 31, 2105-2128.	1.0	15
918	The Applications of 2D Nanomaterials in Energy-Related Process. ACS Symposium Series, 2020, , 219-251.	0.5	1
919	Ferromagnetic hybrid nodal loop and switchable type-I and type-II Weyl fermions in two dimensions. Physical Review B, 2020, 102, .	1.1	75

#	ARTICLE	IF	CITATIONS
920	Two-Dimensional Direct Semiconductor Boron Monochalcogenide $\hat{1}^3$ -BTe: Room-Temperature Single-Bound Exciton and Novel Donor Material in Excitonic Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 58349-58359.	4.0	7
921	Axially Chiral Cage-Like B38+ and B382+: New Aromatic Members of the Borospherene Family. Journal of Cluster Science, 2020, , 1.	1.7	5
922	First-Principles Study on the Oxidation of Supported $\hat{1}^{212}$ -Borophene. Journal of Physical Chemistry C, 2020, 124, 28145-28151.	1.5	13
923	Thermal Transport in Two-Dimensional Heterostructures. Frontiers in Materials, 2020, 7, .	1.2	21
924	Lithium and Sodium Adsorption on Monolayer Tellurene. Journal of Physical Chemistry C, 2020, 124, 28074-28082.	1.5	4
925	The Expanding Frontiers of Tip-Enhanced Raman Spectroscopy. Applied Spectroscopy, 2020, 74, 1313-1340.	1.2	26
926	Recent advances in photodynamic therapy based on emerging two-dimensional layered nanomaterials. Nano Research, 2020, 13, 1485-1508.	5.8	36
927	Epitaxial fabrication of monolayer copper arsenide on Cu(111)*. Chinese Physics B, 2020, 29, 077301.	0.7	5
928	Structural, electronic, and energetic investigations of acrolein adsorption on B36 borophene nanosheet: a dispersion-corrected DFT insight. Journal of Molecular Modeling, 2020, 26, 128.	0.8	21
929	Highly Stable Two-Dimensional Iron Monocarbide with Planar Hypercoordinate Moiety and Superior Li-Ion Storage Performance. ACS Applied Materials & Interfaces, 2020, 12, 30297-30303.	4.0	21
930	Negative Poisson's ratio in two-dimensional honeycomb structures. Npj Computational Materials, 2020, 6, .	3.5	56
931	Protein Corona and Immune Responses of Borophene: A Comparison of Nanosheet's Plasma Interface with Graphene and Phosphorene. ACS Applied Bio Materials, 2020, 3, 4220-4229.	2.3	20
932	Valley splitting and anomalous Klein tunneling in borophane-based n-p and n-p-n junctions. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126612.	0.9	7
933	Large-area ultrathin Te films with substrate-tunable orientation. Nanoscale, 2020, 12, 12613-12622.	2.8	22
934	Synthesis Techniques, Optoelectronic Properties, and Broadband Photodetection of Thin-Film Black Phosphorus. Advanced Optical Materials, 2020, 8, 2000045.	3.6	39
935	Ab-Initio Study of the Electronic and Magnetic Properties of Boron- and Nitrogen-Doped Penta-Graphene. Nanomaterials, 2020, 10, 816.	1.9	11
936	Thermal expansion and vibrational properties of $\hat{1}^{\pm}$ -Se and $\hat{1}^{\pm}$ -TeSe <sub>2</sub> based on first-principles calculations. Solid State Communications, 2020, 314-315, 113912.	0.9	1
937	Structural Transition in Oxidized Ca <sub>2</sub> N Electrenes: CaO/CaN 2D Heterostructures. Journal of Physical Chemistry C, 2020, 124, 14706-14712.	1.5	4

#	ARTICLE	IF	CITATIONS
938	Thermodynamic stability of borophene, $B_{2\text{O}_3}$ and other $B_{1-x}O_x$ sheets. Journal of Physics Communications, 2020, 4, 031001.	0.5	14
939	Recent breakthroughs in two-dimensional van der Waals magnetic materials and emerging applications. Nano Today, 2020, 34, 100902.	6.2	49
940	Toward the application of electromagnetic wave absorption by two-dimension materials. Journal of Materials Science: Materials in Electronics, 2021, 32, 25562-25576. An ab initio study of the <a href="http://www.w3.org/1998/Math/MathML">http://www.w3.org/1998/Math/MathML</a> $B_{1-x}O_x$ sheets. <a href="http://www.w3.org/1998/Math/MathML">http://www.w3.org/1998/Math/MathML</a> $B_{1-x}O_x$ sheets. <a href="http://www.w3.org/1998/Math/MathML">http://www.w3.org/1998/Math/MathML</a> $B_{1-x}O_x$ sheets.	1.1	20
941			

#	ARTICLE	IF	CITATIONS
956	Highly Effective Work Function Reduction of $\Gamma$ - $\hat{\alpha}$ Borophene via Caesium Decoration: A First-Principles Investigation. <i>Advanced Theory and Simulations</i> , 2020, 3, 1900249.	1.3	8
957	Embedded carbon nanowire in black phosphorene and C-doping: the rule to control electronic properties. <i>Nanotechnology</i> , 2020, 31, 275201.	1.3	7
958	Two-dimensional materials as anodes for sodium-ion batteries. <i>Materials Today Advances</i> , 2020, 6, 100054.	2.5	49
959	Polymorphism of low dimensional boron nanomaterials driven by electrostatic gating: a computational discovery. <i>Nanoscale</i> , 2020, 12, 10543-10549.	2.8	5
960	Tuning the thermoelectric efficiency of a polyaniline sheet using strain engineering. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 255302.	1.3	6
961	Few-Layer Borophene Prepared by Mechanical Resonance and Its Application in Terahertz Shielding. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 19746-19754.	4.0	22
962	High thermoelectric efficiency of $\text{LaX}$ ( $\text{X} = \text{Sb, Bi}$ ) two dimensional topological insulators. <i>Journal of Physics Condensed Matter</i> , 2020, 32, 255501.	0.7	10
963	Present advances and perspectives of broadband photo-detectors based on emerging 2D-Xenes beyond graphene. <i>Nano Research</i> , 2020, 13, 891-918.	5.8	36
964	Microscopic Theory of Plasmons in Substrate-Supported Borophene. <i>Nano Letters</i> , 2020, 20, 2986-2992.	4.5	11
965	Crystalline Semiconductor Boron Quantum Dots. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 17669-17675.	4.0	45
966	Electronic structural critique of interesting thermal and optical properties of $\text{C}_{17}\text{Ge}$ germanaphene. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 8606-8615.	1.3	8
967	$\text{MoB}_2$ : a new multifunctional transition metal diboride monolayer. <i>Journal of Physics Condensed Matter</i> , 2020, 32, 055503.	0.7	21
968	Electric field modulation in the auxetic effect of BP-analog monolayer As and Sb by first-principles calculations. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 8739-8744.	1.3	5
969	Monolayer $\text{Ti}_2\text{C}$ MXene: manipulating magnetic properties and electronic structures by an electric field. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 11266-11272.	1.3	38
970	Planar Hypercoordinate Motifs in Two-Dimensional Materials. <i>Accounts of Chemical Research</i> , 2020, 53, 887-895.	7.6	54
971	First-principles study of $\Gamma$ - $\hat{\alpha}$ -borophene for charge-modulated switchable $\text{CO}_2$ capture. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 8864-8869.	1.3	6
972	Beyond silicene: synthesis of germanene, stanene and plumbene. <i>Japanese Journal of Applied Physics</i> , 2020, 59, SN0801.	0.8	39
973	Recent progress in high-performance photo-detectors enabled by the pulsed laser deposition technology. <i>Journal of Materials Chemistry C</i> , 2020, 8, 4988-5014.	2.7	18

#	ARTICLE	IF	CITATIONS
974	Ultrastable Crystalline Semiconducting Hydrogenated Borophene. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 10819-10825.	7.2	108
975	Surface Adsorption and Vacancy in Tuning the Properties of Tellurene. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 19110-19115.	4.0	20
976	Insights into the binding mechanism of 2D copper-tetrakis-(4-carboxyphenyl)-porphyrin metal-organic framework nanosheets with Rhodamine B: Spectroscopic and thermodynamics studies. <i>Chemical Physics</i> , 2020, 534, 110743.	0.9	13
977	Chemical instability of free-standing boron monolayers and properties of oxidized borophene sheets. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020, 120, 114082.	1.3	6
978	Two-Dimensional Honeycomb B <sub>2</sub> Se with Orthogonal Lattice: High Stability and Strong Anisotropic Dirac Cone. <i>Journal of Physical Chemistry C</i> , 2020, 124, 7558-7565.	1.5	16
979	Computational Atomistic Modeling in Carbon Flatland and Other 2D Nanomaterials. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 1724.	1.3	2
980	Synthesis of Monolayer Blue Phosphorus Enabled by Silicon Intercalation. <i>ACS Nano</i> , 2020, 14, 3687-3695.	7.3	52
981	Two-Dimensional Materials in Large-Areas: Synthesis, Properties and Applications. <i>Nano-Micro Letters</i> , 2020, 12, 66.	14.4	172
982	A first principle study of black phosphorene/N-doped graphene heterostructure: Electronic, mechanical and interface properties. <i>Applied Surface Science</i> , 2020, 528, 146962.	3.1	12
983	Two-dimensional Xenos and their device concepts for future micro- and nanoelectronics and energy applications. , 2020, , 181-219.		1
984	Emerging Dirac materials for THz plasmonics. <i>Applied Materials Today</i> , 2020, 20, 100732.	2.3	14
985	CO/CO <sub>2</sub> adsorption and sensing on borophene. <i>SN Applied Sciences</i> , 2020, 2, 1.	1.5	8
986	First-principles investigation of a new 2D magnetic crystal: Ferromagnetic ordering and intrinsic half-metallicity. <i>Journal of Chemical Physics</i> , 2020, 152, 244704.	1.2	10
987	Cu Atomic Chain Supported on Graphene Nanoribbon for Effective Conversion of CO <sub>2</sub> to Ethanol. <i>ChemPhysChem</i> , 2020, 21, 1768-1774.	1.0	9
988	Hydrogen Sensors Using 2D Materials: A Review. <i>ChemistrySelect</i> , 2020, 5, 7277-7297.	0.7	23
989	Anisotropic mechanical strength, negative Poisson's ratio and fracture mechanism of borophene with defects. <i>Thin Solid Films</i> , 2020, 709, 138197.	0.8	14
990	A nano-lateral heterojunction of selenium-coated tellurium for infrared-band soliton fiber lasers. <i>Nanoscale</i> , 2020, 12, 15252-15260.	2.8	11
991	Xenos as an Emerging 2D Monoelemental Family: Fundamental Electrochemistry and Energy Applications. <i>Advanced Functional Materials</i> , 2020, 30, 2002885.	7.8	66

#	ARTICLE	IF	CITATIONS
992	Advances in ultrathin borophene materials. Chemical Engineering Journal, 2020, 401, 126109.	6.6	42
993	The nature of the triple B-B, double, B-B, single, B-B, and one-electron, B-B boron-boron bonds from the topological analysis of electron localisation function (ELF) perspective. Journal of Molecular Structure, 2020, 1221, 128530.	1.8	6
994	Hydrogen Boride Sheets as Reductants and the Formation of Nanocomposites with Metal Nanoparticles. Chemistry Letters, 2020, 49, 789-793.	0.7	16
995	Electronic properties of two-dimensional materials. , 2020, , 77-109.		11
996	Mechanical response of $\hat{I}$ -layered borophene: impact of strain, temperature, vacancies and intercalation. EPJ Applied Physics, 2020, 90, 30401.	0.3	3
997	Tip-enhanced Raman spectroscopy: Chemical analysis with nanoscale to angstrom scale resolution. Journal of Chemical Physics, 2020, 153, 010902.	1.2	48
998	CuAu, a hexagonal two-dimensional metal. 2D Materials, 2020, 7, 045017.	2.0	11
999	Tunable wavevector filtering in borophane based normal metal-barrier-normal metal junctions. Journal of Physics Condensed Matter, 2020, 32, 235301.	0.7	2
1000	Boron-Based Chiral Helix $\text{Be}_6\text{B}_{10}^{2+}$ and $\text{Be}_6\text{B}_{11}^{+}$ Clusters: Structures, Chemical Bonding, and Formation Mechanism. Chemistry - an Asian Journal, 2020, 15, 1094-1104.	1.7	14
1001	Evaluating the exfoliation of two-dimensional materials with a Green's function surface model. Physical Review B, 2020, 101, .	1.1	32
1002	Negative and near-zero Poisson's ratios in 2D graphene/MoS <sub>2</sub> and graphene/h-BN heterostructures. Journal of Materials Chemistry C, 2020, 8, 4021-4029.	2.7	24
1003	Chemical Syntheses of Two-Dimensional Boron Materials. Chem, 2020, 6, 324-326.	5.8	11
1004	Charge transport in a molecule-borophene junction: The effect of junction configurations. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126341.	0.9	2
1005	Modulating Electronic Structures of Armchair GaN Nanoribbons by Chemical Functionalization under an Electric Field Effect. ACS Omega, 2020, 5, 1261-1269.	1.6	6
1006	A self-powered photodetector based on two-dimensional boron nanosheets. Nanoscale, 2020, 12, 5313-5323.	2.8	60
1007	On the in-plane electronic thermal conductivity of biased nanosheet $\hat{I}^2_{12}$ -borophene. Physical Chemistry Chemical Physics, 2020, 22, 6318-6325.	1.3	3
1008	Honeycomb Borophene Fragment Stabilized in Polyanionic Sandwich Lithium Salt: A New Type of Two-Dimensional Material with Superconductivity. Journal of Physical Chemistry C, 2020, 124, 5870-5879.	1.5	9
1009	Highly Selective and Sensitive Detection of Formaldehyde by $\hat{I}^2_{12}$ -Borophene/SnO <sub>2</sub> Heterostructures: The Role of an External Electric Field and In-Plane Biaxial Strain. Journal of Physical Chemistry A, 2020, 124, 2288-2300.	1.1	29



#	ARTICLE	IF	CITATIONS
1010	Coexistence of type-I and type-II nodal lines in monolayer TiBF. <i>Solid State Communications</i> , 2020, 310, 113839.	0.9	6
1011	Identifying the Molecular Edge Termination of Exfoliated Hexagonal Boron Nitride Nanosheets with Solid-State NMR Spectroscopy and Plane-Wave DFT Calculations. <i>Chemistry of Materials</i> , 2020, 32, 3109-3121.	3.2	41
1012	Theory of Epitaxial Growth of Borophene on Layered Electride: Thermodynamic Stability and Kinetic Pathway. <i>Journal of Physical Chemistry C</i> , 2020, 124, 6063-6069.	1.5	7
1013	Abnormally low thermal conductivity of 2D selenene: An <i>ab initio</i> study. <i>Journal of Applied Physics</i> , 2020, 127, .	1.1	26
1014	Adsorption of adenine molecule on borophene nanosheets: A density functional theory study. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020, 119, 114026.		
1015	First-principles calculations of the electronic properties of two-dimensional pentagonal structure XS <sub>2</sub> (X=Ni, Pd, Pt). <i>Vacuum</i> , 2020, 174, 109176.	1.6	35
1016	Photoinduced Hall effect and transport properties of irradiated 8-Pmmn borophene monolayer. <i>Journal of Applied Physics</i> , 2020, 127, .	1.1	21
1017	The Rise of 2D Photothermal Materials beyond Graphene for Clean Water Production. <i>Advanced Science</i> , 2020, 7, 1902236.	5.6	206
1018	Borophene Concentric Superlattices via Self-Assembly of Twin Boundaries. <i>Nano Letters</i> , 2020, 20, 1315-1321.	4.5	36
1019	Tuning the electronic, mechanical, thermal, and optical properties of tetrahexcarbon via hydrogenation. <i>Carbon</i> , 2020, 161, 71-82.	5.4	31
1020	Realizing graphene-like Dirac cones in triangular boron sheets by chemical functionalization. <i>Journal of Materials Chemistry C</i> , 2020, 8, 2798-2805.	2.7	16
1021	Two-dimensional materials for energy conversion and storage. <i>Progress in Materials Science</i> , 2020, 111, 100637.	16.0	134
1022	Experimental realization of quasicubic boron sheets. <i>Nanoscale</i> , 2020, 12, 3787-3794.	2.8	38
1023	borophene-based detection of hydrogen sulfide via gas nanosensors. <i>Chemical Physics Letters</i> , 2020, 741, 137066.	1.2	18
1024	Quantum Transport beyond DC. , 2020, , 278-292.		0
1026	Ultrathin boron nanosheets as an emerging two-dimensional photoluminescence material for bioimaging. <i>Nanoscale Horizons</i> , 2020, 5, 705-713.	4.1	33
1027	Structure stability, mechanical properties and thermal conductivity of the new hexagonal ternary phase Ti <sub>2</sub> InB <sub>2</sub> under pressure. <i>Philosophical Magazine</i> , 2020, 100, 2054-2067.	0.7	14
1028	Ultrastable Crystalline Semiconducting Hydrogenated Borophene. <i>Angewandte Chemie</i> , 2020, 132, 10911-10917.	1.6	27

#	ARTICLE	IF	CITATIONS
1029	In search of the smallest boroxolane-type heterocyclic ring system: Planar hexagonal B <sub>3</sub> S <sub>3</sub> + cluster with double $\sigma/\pi$ aromaticity. International Journal of Quantum Chemistry, 2020, 120, e26229.	1.0	1
1030	Investigation into the fracture mechanism and thermal conductivity of borophene nanofilm; a reactive molecular dynamics simulation. Computational Materials Science, 2020, 178, 109625.	1.4	7
1031	Structures, mobilities, electronic and optical properties of two-dimensional $\hat{I}\pm$ -phase group-VI binary compounds: $\hat{I}\pm$ -Se <sub>2</sub> Te and $\hat{I}\pm$ -SeTe <sub>2</sub> . Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126431.	0.9	10
1032	Strongly anisotropic thermal conductivity in planar hexagonal borophene oxide sheet. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126457.	0.9	4
1033	Electronegativity, phase transition, and ferroelectricity of TeSe <sub>2</sub> few-layers. Journal of Physics Condensed Matter, 2020, 32, 045301.	0.7	2
1034	A review on role of tetra-rings in graphene systems and their possible applications. Reports on Progress in Physics, 2020, 83, 056501.	8.1	47
1035	Exotic Two-Dimensional Structure: The First Case of Hexagonal NaCl. Journal of Physical Chemistry Letters, 2020, 11, 3821-3827.	2.1	38
1036	Imparting Boron Nanosheets with Ambient Stability through Methyl Group Functionalization for Mechanistic Investigation of Their Lithiation Process. ACS Applied Materials & Interfaces, 2020, 12, 23370-23377.	4.0	15
1037	Experimental evidence of monolayer AlB <sub>2</sub> with symmetry-protected Dirac cones. Physical Review B, 2020, 101, .	1.1	20
1038	Ultrahigh capacity 2D anode materials for lithium/sodium-ion batteries: an entirely planar B <sub>7</sub> P <sub>2</sub> monolayer with suitable pore size and distribution. Journal of Materials Chemistry A, 2020, 8, 10301-10309.	5.2	44
1039	Borophene and Boron Fullerene Materials in Hydrogen Storage: Opportunities and Challenges. ChemSusChem, 2020, 13, 3754-3765.	3.6	62
1040	Recent progress in self-supported two-dimensional transition metal oxides and (oxy)hydroxides as oxygen evolution reaction catalysts. Sustainable Energy and Fuels, 2020, 4, 2625-2637.	2.5	28
1041	Highly sensitive tuning of lattice thermal conductivity of graphene-like borophene by fluorination and chlorination. Nano Research, 2020, 13, 1171-1177.	5.8	10
1042	Cancer theranostic applications of MXene nanomaterials: Recent updates. Nano Structures Nano Objects, 2020, 22, 100457.	1.9	53
1043	Monolayer Honeycomb Borophene: A Promising Anode Material with a Record Capacity for Lithium-Ion and Sodium-Ion Batteries. Journal of the Electrochemical Society, 2020, 167, 090527.	1.3	28
1044	Epitaxial Growth of Main Group Monoelemental 2D Materials. Advanced Functional Materials, 2021, 31, 2006997.	7.8	37
1045	Establishing a Theoretical Landscape for Identifying Basal Plane Active 2D Metal Borides (MBenes) toward Nitrogen Electroreduction. Advanced Functional Materials, 2021, 31, 2008056.	7.8	97
1046	First steps of blue phosphorene growth on Au(1 1 1). Materials Today: Proceedings, 2021, 39, 1153-1156.	0.9	4

#	ARTICLE	IF	CITATIONS
1047	Double-Sided surface functionalization: An effective approach to stabilize and modulate the electronic structure of graphene-like borophene. <i>Informa Mater</i> , 2021, 3, 327-336.	8.5	18
1048	Investigating and comparing structural, electronic and optical properties of $\sqrt{3}$ -Borophene in monolayer, nanoribbon and nanotube modes as a transparent metal. <i>Journal of Physics and Chemistry of Solids</i> , 2021, 148, 109683.	1.9	8
1049	Tailoring Single- and Double-Sided Fluorination of Bilayer Graphene via Substrate Interactions. <i>Nano Letters</i> , 2021, 21, 891-898.	4.5	14
1050	Tuning electronic properties in the C3N/C3B lateral heterostructures. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2021, 126, 114497.	1.3	4
1051	First-principles study of BC7 monolayer an ultra-high capacity anode for lithium-ion and sodium-ion batteries applications. <i>Materials Chemistry and Physics</i> , 2021, 257, 123751.	2.0	14
1052	Electron transport along boron nanotubes rolled from $\sqrt{2}$ -borophene: A first-principles study. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2021, 126, 114457.	1.3	1
1053	Prediction of room-temperature ferromagnetism and large perpendicular magnetic anisotropy in a planar hypercoordinate FeB <sub>3</sub> monolayer. <i>Nanoscale Horizons</i> , 2021, 6, 43-48.	4.1	50
1054	Piezo-response in two-dimensional $\sqrt{2}$ -Tellurene films. <i>Materials Today</i> , 2021, 44, 40-47.	8.3	9
1055	Tunable Electronic and Optical Properties of 2D Monoelemental Materials Beyond Graphene for Promising Applications. <i>Energy and Environmental Materials</i> , 2021, 4, 522-543.	7.3	48
1056	Structure, Preparation, and Applications of 2D Material-Based Metal-Semiconductor Heterostructures. <i>Small Structures</i> , 2021, 2, 2000093.	6.9	71
1057	Magnetic Properties of a Bi-Layer Borophene Structure with Mixed Spins: Monte Carlo Study. <i>Journal of Low Temperature Physics</i> , 2021, 202, 231-246.	0.6	4
1058	Tuning the hybrid borophene/graphene-ionic liquid interface: Effect of metal cations on the electronic and photonic properties. <i>Journal of Molecular Liquids</i> , 2021, 321, 114759.	2.3	7
1059	Application of two-dimensional materials as anodes for rechargeable metal-ion batteries: A comprehensive perspective from density functional theory simulations. <i>Energy Storage Materials</i> , 2021, 35, 203-282.	9.5	84
1060	Elemental 2D Materials: Progress and Perspectives Toward Unconventional Structures. <i>Small Structures</i> , 2021, 2, 2000101.	6.9	30
1061	Detection of nucleobases on borophene nanosheet: A DFT investigation. <i>Bioelectrochemistry</i> , 2021, 138, 107721.	2.4	9
1062	Insights on the dual role of two-dimensional materials as catalysts and supports for energy and environmental catalysis. <i>Journal of Materials Chemistry A</i> , 2021, 9, 2018-2042.	5.2	34
1063	Thermodynamics and kinetics of 2D g-GeC monolayer as an anode materials for Li/Na-ion batteries. <i>Journal of Power Sources</i> , 2021, 485, 229318.	4.0	60
1064	Two-dimensional Ga <sub>2</sub> O <sub>2</sub> monolayer with tunable band gap and high hole mobility. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 666-673.	1.3	9

#	ARTICLE	IF	CITATIONS
1065	Electric field and charged impurity doping effects on the Schottky anomaly of $\Gamma^2$ -borophene. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 2080-2087.	1.3	6
1066	Highly anisotropic gas sensing of atom-thin borophene: a first-principles study. <i>Journal of Materials Chemistry C</i> , 2021, 9, 1069-1076.	2.7	28
1067	Recent advances in anisotropic two-dimensional materials and device applications. <i>Nano Research</i> , 2021, 14, 897-919.	5.8	69
1068	Engineering oxygen defects in the boron nanosheet for stabilizing complex bonding structure: An approach for high-performance supercapacitor. <i>Chemical Engineering Journal</i> , 2021, 407, 127122.	6.6	37
1069	Engineering 2D Multifunctional Ultrathin Bismuthene for Multiple Photonic Nanomedicine. <i>Advanced Functional Materials</i> , 2021, 31, 2005093.	7.8	40
1070	Sensing Applications of Atomically Thin Group IV Carbon Siblings Xenes: Progress, Challenges, and Prospects. <i>Advanced Functional Materials</i> , 2021, 31, 2005957.	7.8	37
1071	Recent Advances in Hybridization, Doping, and Functionalization of 2D Xenes. <i>Advanced Functional Materials</i> , 2021, 31, .	7.8	33
1072	Elongated heterometal double-sites promote nitrogen reduction on two-dimensional $\text{MM}^2\text{B}_7$ monolayers. <i>Journal of Materials Chemistry A</i> , 2021, 9, 10855-10868.	5.2	16
1073	Introduction, History, and Origin of Two Dimensional (2D) Materials. <i>Materials Horizons</i> , 2021, , 1-9.	0.3	4
1074	Oxygen-substituted borophene as a potential anode material for Li/Na-ion batteries: a first principles study. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 9270-9279.	1.3	15
1075	Two-dimensional aluminium, gallium, and indium metallic crystals by first-principles design. <i>Journal of Physics Condensed Matter</i> , 2021, 33, 125901.	0.7	12
1076	Computational discovery of $\text{PtS}_2/\text{GaSe}$ van der Waals heterostructure for solar energy applications. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 20163-20173.	1.3	19
1077	Ultrasensitive humidity sensing and the multifunctional applications of borophene- $\text{MoS}_2$ heterostructures. <i>Journal of Materials Chemistry A</i> , 2021, 9, 13100-13108.	5.2	55
1078	A new tunnel-type $\text{V}_4\text{O}_9$ cathode for high power density aqueous zinc ion batteries. <i>Inorganic Chemistry Frontiers</i> , 2021, 8, 4497-4506.	3.0	24
1079	A structure map for $\text{AB}_2$ type 2D materials using high-throughput DFT calculations. <i>Materials Advances</i> , 2021, 2, 4392-4413.	2.6	21
1080	An ideal two-dimensional nodal-ring semimetal in tetragonal borophene oxide. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 17348-17353.	1.3	3
1081	Thermodynamic Insights into Polymorphism-Driven Lithium-Ion Storage in Monoelemental 2D Materials. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 1220-1227.	2.1	5
1082	Recent advances in single-atom electrocatalysts supported on two-dimensional materials for the oxygen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2021, 9, 9979-9999.	5.2	50

#	ARTICLE	IF	CITATIONS
1083	Adsorption of toxic gases on borophene: surface deformation links to chemisorptions. RSC Advances, 2021, 11, 18279-18287.	1.7	21
1084	Atomic adsorption on monolayer Cu <sub>2</sub> Se: a first-principles study. Physical Chemistry Chemical Physics, 2021, 23, 9814-9821.	1.3	5
1085	Structural, Topological, and Superconducting Properties of Two-Dimensional Tellurium Allotropes from Ab Initio Predictions. Advanced Theory and Simulations, 2021, 4, 2000265.	1.3	4
1086	Emerging beyond-graphene elemental 2D materials for energy and catalysis applications. Chemical Society Reviews, 2021, 50, 10983-11031.	18.7	170
1087	High-quality two-dimensional tellurium flakes grown by high-temperature vapor deposition. Journal of Materials Chemistry C, 2021, 9, 14394-14400.	2.7	10
1088	First-principles prediction of polar half-metallicity and out-of-plane piezoelectricity in two-dimensional quintuple layered cobalt selenide. Journal of Materials Chemistry C, 2021, 9, 12046-12050.	2.7	11
1089	Flexible ferroelasticity in monolayer PdS <sub>2</sub> : a DFT study. Physical Chemistry Chemical Physics, 2021, 23, 10551-10559.	1.3	7
1090	Controllable preparation and photoelectric applications of two-dimensional in-plane and van der Waals heterostructures. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 027901-027901.	0.2	5
1091	Hydrogenation as a source of superconductivity in two-dimensional TiB <sub>2</sub> . International Journal of Modern Physics C, 2021, 32, 2150057.	0.8	2
1092	Domain walls in topological tri-hinge matter. European Physical Journal Plus, 2021, 136, 1.	1.2	7
1093	Crystalline borophene quantum dots and their derivative boron nanospheres. Materials Advances, 2021, 2, 3269-3273.	2.6	20
1094	High-quality borophene quantum dot realization and their application in a photovoltaic device. Journal of Materials Chemistry A, 2021, 9, 24036-24043.	5.2	14
1095	B <sub>48</sub> <sup>+</sup> : a bilayer boron cluster. Nanoscale, 2021, 13, 3868-3876.	2.8	43
1096	Advances in electromagnetic shielding properties of composite foams. Journal of Materials Chemistry A, 2021, 9, 8896-8949.	5.2	184
1097	Tuning CO binding strength via engineering the copper/borophene interface for highly efficient conversion of CO into ethanol. Journal of Materials Chemistry A, 2021, 9, 13192-13199.	5.2	23
1098	First-principles study of electronic structure, magnetic and optical properties of Ti, V, Co and Ni doped two-dimensional CrSi <sub>2</sub> materials. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 227301.	0.2	2
1099	Mechanical properties and thermal conductivity of newly introduced graphene-like borophanes: a reactive molecular dynamics study. Physical Chemistry Chemical Physics, 2021, 23, 17009-17017.	1.3	4
1100	Hypercoordinate two-dimensional transition-metal borides for spintronics and catalyst applications. Journal of Materials Chemistry C, 0, , .	2.7	18

#	ARTICLE	IF	CITATIONS
1101	Emerging elemental two-dimensional materials for energy applications. <i>Journal of Materials Chemistry A</i> , 2021, 9, 18793-18817.	5.2	30
1102	Unique Omnidirectional Negative Poisson's Ratio in $\sqrt{3}$ -Phase Carbon Monochalcogenides. <i>Journal of Physical Chemistry C</i> , 2021, 125, 4133-4138.	1.5	39
1103	Controllable hybridization between localized and delocalized anisotropic borophene plasmons in the near-infrared region. <i>Optics Letters</i> , 2021, 46, 725.	1.7	17
1104	Two-dimensional iodine-monofluoride epitaxy on WSe <sub>2</sub> . <i>Npj 2D Materials and Applications</i> , 2021, 5, .	3.9	5
1105	Chemical Vapor Deposition of Two-Dimensional Boron Sheets by Thermal Decomposition of Diborane. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 8844-8850.	4.0	31
1106	Chemical exfoliation synthesis of boron nitride and molybdenum disulfide 2D sheets via modified Hummers's method. <i>Emergent Materials</i> , 2021, 4, 645-654.	3.2	17
1107	Borophene-supported single transition metal atoms as potential oxygen evolution/reduction electrocatalysts: a density functional theory study. <i>Journal of Molecular Modeling</i> , 2021, 27, 67.	0.8	17
1108	Energetic aspects of elemental boron: a mini-review. <i>Energy Sources, Part A: Recovery, Utilization and Environmental Effects</i> , 2022, 44, 182-194.	1.2	3
1109	Borophene-Functionalized Magnetic Nanoparticles: Synthesis and Memory Device Application. <i>ACS Applied Electronic Materials</i> , 2021, 3, 1133-1141.	2.0	18
1110	First-principles study of two-dimensional puckered and buckled honeycomb-like carbon sulfur systems. <i>Journal of Computational Electronics</i> , 2021, 20, 759-774.	1.3	3
1111	Tunneling Effects in Crossed Ta <sub>2</sub> Pt <sub>3</sub> Se <sub>8</sub> Nanowire Junctions: Implications for Anisotropic Photodetectors. <i>ACS Applied Nano Materials</i> , 2021, 4, 1817-1824.	2.4	9
1112	Manipulating electronic dynamics of 8-Pmmn borophene with surface optical phonons. <i>Semiconductor Science and Technology</i> , 2021, 36, 045001.	1.0	13
1113	Polymorphism in Post-Dichalcogenide Two-Dimensional Materials. <i>Chemical Reviews</i> , 2021, 121, 2713-2775.	23.0	64
1114	Segregation-Enhanced Epitaxy of Borophene on Ir(111) by Thermal Decomposition of Borazine. <i>ACS Nano</i> , 2021, 15, 7421-7429.	7.3	32
1115	Scalable Production of Boron Quantum Dots for Broadband Ultrafast Nonlinear Optical Performance. <i>Nanomaterials</i> , 2021, 11, 687.	1.9	5
1116	Tuning the Fermi surface of In/Si(111)-( $\sqrt{3} \times \sqrt{3}$ )Tj ETQq1 1 0.784314 rgBT by CuPc adsorption. <i>Surface Science</i> . 2021. 705. 121777.	0.8	8
1117	Synthesis of borophane polymorphs through hydrogenation of borophene. <i>Science</i> , 2021, 371, 1143-1148.	6.0	129
1118	Transport properties of Na-decorated borophene under CO/CO <sub>2</sub> adsorption. <i>Computational and Theoretical Chemistry</i> , 2021, 1197, 113159.	1.1	11

#	ARTICLE	IF	CITATIONS
1119	High intrinsic lattice thermal conductivity in monolayer MoSi <sub>2</sub> N <sub>4</sub> . New Journal of Physics, 2021, 23, 033005.	1.2	74
1120	Possible verification of tilt mismatch in asymmetric Dirac-cone systems using resonant tunneling properties. Physics Letters, Section A: General, Atomic and Solid State Physics, 2021, 393, 127154.	0.9	3
1121	Structural Defects, Mechanical Behaviors, and Properties of Two-Dimensional Materials. Materials, 2021, 14, 1192.	1.3	48
1122	Monte Carlo study of magnetic behaviors in a ferrimagnetic Ising ladder-like boronene nanoribbon. Superlattices and Microstructures, 2021, 151, 106833.	1.4	32
1123	Ab Initio Analysis of Periodic Self-Assembly Phases of Borophene as Anode Material for Na-Ion Batteries. Journal of Physical Chemistry C, 2021, 125, 5436-5446.	1.5	13
1124	In-situ electrochemical conversion of vanadium dioxide for enhanced zinc-ion storage with large voltage range. Journal of Power Sources, 2021, 487, 229369.	4.0	61
1125	Prediction of the two-dimensional cobalt carbonitride compounds $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mi} \rangle \text{CoN} \langle \text{mml:mi} \rangle \langle \text{mml:mn} \rangle 4 \langle \text{mml:mn} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mi} \rangle \text{C} \langle \text{mml:mi} \rangle \langle \text{mml:mn} \rangle 10 \langle \text{mml:mn} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle$ ,	1.1	12
1126	Anisotropic longitudinal optical conductivities of tilted Dirac bands in $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mi} \rangle \text{Co} \langle \text{mml:mi} \rangle \langle \text{mml:mn} \rangle 2 \langle \text{mml:mn} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mi} \rangle \text{N} \langle \text{mml:mi} \rangle \langle \text{mml:mn} \rangle 8 \langle \text{mml:mn} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle$ . Physical Review B, 2021, 103, .	1.1	27
1127	Half-Auxeticity and Anisotropic Transport in Pd Decorated Two-Dimensional Boron Sheets. Nano Letters, 2021, 21, 2356-2362.	4.5	29
1128	Electrical Switch of Poisson's Ratio in IV <sup>VI</sup> Monolayers via Pseudophase Transitions. Journal of Physical Chemistry Letters, 2021, 12, 3217-3223.	2.1	1
1129	Tailoring anisotropic absorption in a borophene-based structure via critical coupling. Optics Express, 2021, 29, 8941.	1.7	22
1130	Exfoliation of Quasi-Two-Dimensional Nanosheets of Metal Diborides. Journal of Physical Chemistry C, 2021, 125, 6787-6799.	1.5	32
1131	Blume-Capel model of a borophene layers structure with RKKY interactions: Monte Carlo simulations. Ferroelectrics, 2021, 573, 141-153.	0.3	8
1132	Electrocatalytic Reduction of N <sub>2</sub> Using Metal-Doped Borophene. ACS Applied Materials & Interfaces, 2021, 13, 14091-14101.	4.0	70
1133	Perspectives on solution processing of two-dimensional MXenes. Materials Today, 2021, 48, 214-240.	8.3	178
1134	Novel 2D allotropic forms and nanoflakes of silicon, phosphorus, and germanium: a computational study. Journal of Molecular Modeling, 2021, 27, 142.	0.8	5
1135	The thermal transport characterization of borophene: A molecular dynamics study. Computational Materials Science, 2021, 190, 110302.	1.4	10
1136	Prediction of Phonon-Mediated Superconductivity with High Critical Temperature in the Two-Dimensional Topological Semimetal W <sub>2</sub> N <sub>3</sub> . Nano Letters, 2021, 21, 3435-3442.	4.5	31

#	ARTICLE	IF	CITATIONS
1137	Self-Assembled Borophene/Graphene Nanoribbon Mixed-Dimensional Heterostructures. Nano Letters, 2021, 21, 4029-4035.	4.5	11
1138	A first-principle study of FeB6 monolayer as a potential anode material for Li-ion and Na-ion batteries. Computational Materials Science, 2021, 190, 110273.	1.4	17
1139	Tunable Negative Poisson's Ratio in Van der Waals Superlattice. Research, 2021, 2021, 1904839.	2.8	5
1140	Unconventional line defects engineering in two-dimensional boron monolayers. Physical Review Materials, 2021, 5, .	0.9	7
1141	Borophene-Based Three-Dimensional Porous Structures as Anode Materials for Alkali Metal-Ion Batteries with Ultrahigh Capacity. Chemistry of Materials, 2021, 33, 2976-2983.	3.2	20
1142	The stability analysis of the monolayer triangular borophene adsorbed on substrates: First-principles simulation. Computational Materials Science, 2021, 190, 110271.	1.4	0
1143	A New Monolayer B <sub>4</sub> C <sub>4</sub> with Robust Stability and Excellent Performance for Spontaneous Water Splitting Under Visible Light. Advanced Theory and Simulations, 2021, 4, 2100015.	1.3	1
1144	Enhanced Stability and Epitaxial Growth Mechanism of the Honeycomb Borophene Monolayer on a Two-Dimensional Ti <sub>2</sub> C Substrate. Journal of Physical Chemistry C, 2021, 125, 8589-8596.	1.5	6
1145	Van der waals SiSe <sub>2</sub> homo-bilayers for optoelectronics applications. Superlattices and Microstructures, 2021, 152, 106858.	1.4	18
1146	Theoretical Prediction of Two-Dimensional Materials, Behavior, and Properties. ACS Nano, 2021, 15, 5959-5976.	7.3	30
1147	DFT insights into new B-containing 212 MAX phases: Hf <sub>2</sub> AB <sub>2</sub> (A = In, Sn). Journal of Alloys and Compounds, 2021, 860, 158408.	2.8	45
1148	Effects of temperature on strain engineering and transition-metal adatom magnetization in phosphorene: Ab initio molecular dynamics studies. Physical Review B, 2021, 103, .	1.1	4
1149	Two-dimensional nanomaterials with engineered bandgap: Synthesis, properties, applications. Nano Today, 2021, 37, 101059.	6.2	82
1150	Umbrella-shaped vs planar; evolutionary search for B <sub>n</sub> , Be <sub>n</sub> O <sub>n</sub> (n=12, Q=0, a=1) clusters. Journal of Molecular Liquids, 2021, 328, 115389.	2.3	10
1151	Structural Evolution of Boron Clusters on Ag(111) Surfaces " From Atomic Chains to Triangular Sheets with Hexagonal Holes. ChemPhysChem, 2021, 22, 894-903.	1.0	1
1152	Recent Development of Gas Sensing Platforms Based on 2D Atomic Crystals. Research, 2021, 2021, 9863038.	2.8	29
1153	Electronic, magnetic and optical properties of penta-BN <sub>2</sub> nanoribbons: A first principles study. Computational Materials Science, 2021, 190, 110275.	1.4	9
1154	Mechanical strength and flexibility in $\alpha$ -4H borophene. Scientific Reports, 2021, 11, 7547.	1.6	15



#	ARTICLE	IF	CITATIONS
1155	Metal-organic framework nanosheets and their composites for heterogeneous thermal catalysis: Recent progresses and challenges. Chinese Chemical Letters, 2021, 32, 3307-3321.	4.8	23
1156	Highly Active and Abundant MAB Phases Ni <sub>1+1</sub> ZnB <sub>2.8</sub> (1.07843)	2.8	6
1157	The Emergence and Evolution of Borophene. Advanced Science, 2021, 8, 2001801.	5.6	98
1158	Oblique and Asymmetric Klein Tunneling across Smooth NP Junctions or NPN Junctions in 8-Pmmn Borophene. Nanomaterials, 2021, 11, 1462.	1.9	5
1159	Two-Dimensional Silicene-Stanene Heterostructures by Epitaxy. Advanced Functional Materials, 2021, 31, 2102797.	7.8	23
1160	First-principles study of pristine and Li-doped borophene as a candidate to detect and scavenge SO <sub>2</sub> gas. Nanotechnology, 2021, 32, 325502.	1.3	16
1161	Defects and Strain Engineering of Structural, Elastic, and Electronic Properties of Boron-Phosphide Monolayer: A Hybrid Density Functional Theory Study. Nanomaterials, 2021, 11, 1395.	1.9	8
1162	A computational study of physical, electronic, thermal and transport properties of one-dimensional boron and boron nitride systems. Journal of Solid State Chemistry, 2021, 297, 122037.	1.4	4
1163	Atomically Thin Pythagorean Tilings in Two Dimensions. Journal of Physical Chemistry Letters, 2021, 12, 4972-4979.	2.1	6
1164	A Multiscale Investigation on the Thermal Transport in Polydimethylsiloxane Nanocomposites: Graphene vs. Borophene. Nanomaterials, 2021, 11, 1252.	1.9	6
1165	Effect of Doping on the Photoelectric Properties of Borophene. Advances in Condensed Matter Physics, 2021, 2021, 1-7.	0.4	4
1166	Two-Dimensional Planar BGe Monolayer as an Anode Material for Sodium-Ion Batteries. ACS Applied Materials & Interfaces, 2021, 13, 29764-29769.	4.0	21
1167	Computational study of borophene/boron nitride (B/BN) interface as a promising gas sensor for industrial affiliated gasses. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 130, 114692.	1.3	20
1168	Robust Topological Nodal-Line Semimetals from Periodic Vacancies in Two-Dimensional Materials. Journal of Physical Chemistry Letters, 2021, 12, 5710-5715.	2.1	6
1169	Phonon dispersion of a two-dimensional boron sheet on Ag(111). Physical Review Materials, 2021, 5, .	0.9	5
1170	Superconductivity in gallenene. 2D Materials, 2021, 8, 035056.	2.0	18
1171	Concentric Inner 2f and Outer 10f Aromaticity Underlies the Dynamic Structural Fluxionality of Planar B <sub>19</sub> Wankel Motor Cluster. Journal of Physical Chemistry A, 2021, 125, 5022-5030.	1.1	3
1172	A new family of copper-based MXenes. Scientific Reports, 2021, 11, 12393.	1.6	3

#	ARTICLE	IF	CITATIONS
1173	Recent Advances in Two-Dimensional Quantum Dots and Their Applications. <i>Nanomaterials</i> , 2021, 11, 1549.	1.9	39
1174	Ferrielectric properties and hysteresis loops of a Blumeâ€“Capel of coreâ€“shell with mixed spins: Monte Carlo study. <i>Phase Transitions</i> , 2021, 94, 587-598.	0.6	0
1175	Understanding porosity and temperature induced variabilities in interface, mechanical characteristics and thermal conductivity of borophene membranes. <i>Scientific Reports</i> , 2021, 11, 12123.	1.6	17
1176	Mechanical and electrical properties of borophene and its band structure modulation via strain and electric fields: a first-principles study. <i>Materials Research Express</i> , 2021, 8, 065003.	0.8	10
1177	Chemical stability of hydrogen boride nanosheets in water. <i>Communications Materials</i> , 2021, 2, .	2.9	15
1178	Ultrathin nickel oxide nanosheets: Highly exposed Ni <sup>3+</sup> -doped high-energy {110} facets. <i>Materials Research Bulletin</i> , 2021, 139, 111251.	2.7	9
1179	Phonon modes contribution in thermal rectification in graphene-C <sub>3</sub> B junction: A molecular dynamics study. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2021, 131, 114724.	1.3	6
1180	A First-Principle Study of Monolayer Transition Metal Carbon Trichalcogenides. <i>Journal of Superconductivity and Novel Magnetism</i> , 2021, 34, 2141-2149.	0.8	3
1181	2D Vâ€“VI Binary Nanosheets with Square Lattice: A Theoretical Investigation. <i>Physica Status Solidi (B): Basic Research</i> , 2021, 258, 2100178.	0.7	4
1182	Intercalation of Lithium inside Bilayer Buckled Borophene: A First Principles Prospective. <i>Journal of the Electrochemical Society</i> , 2021, 168, 070535.	1.3	13
1183	Computational Prediction of Superlubric Layered Heterojunctions. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 33600-33608.	4.0	11
1184	The Rise of the Xenos: From the Synthesis to the Integration Processes for Electronics and Photonics. <i>Materials</i> , 2021, 14, 4170.	1.3	13
1185	<i>Ab-initio</i> and Monte Carlo study of Fe-based two-dimensional magnets at borophene supported by Ag(111) surface. <i>Physical Review Materials</i> , 2021, 5, .	0.9	0
1186	Recent Developments of Two-Dimensional Anode Materials and Their Composites in Lithium-Ion Batteries. <i>ACS Applied Energy Materials</i> , 2021, 4, 7440-7461.	2.5	48
1187	Electronic and optical properties of boron-based hybrid monolayers. <i>Nanotechnology</i> , 2021, 32, 415203.	1.3	2
1188	A new route of synthesizing atomically thin 2D materials embedded in bulk oxides. <i>Journal of Applied Physics</i> , 2021, 130, 035302.	1.1	0
1189	Thermal transport in pristine and defective two-dimensional polyaniline ( $T_j$ ETQq0 0 0 rgBT /Overlock 10 Tf 50 112 Td (xmlr	2.5	8
1190	International Journal of Heat and Mass Transfer, 2021, 173, 121235.		
1190	Stable Low-Dimensional Boron Chalcogenides from Planar Structural Motifs. <i>Journal of Physical Chemistry A</i> , 2021, 125, 6059-6063.	1.1	2

#	ARTICLE	IF	CITATIONS
1191	$\hat{\Gamma}$ -SnS: An Emerging Bidirectional Auxetic Direct Semiconductor with Desirable Carrier Mobility and High-Performance Catalytic Behavior toward the Water-Splitting Reaction. ACS Applied Materials & Interfaces, 2021, 13, 31934-31946.	4.0	25
1192	Preparation Engineering of Two-Dimensional Heterostructures <i>via</i> Bottom-Up Growth for Device Applications. ACS Nano, 2021, 15, 11040-11065.	7.3	22
1193	Surface Magnetism in Pristine $\hat{\Gamma}$ Rhombohedral Boron and Intersurface Exchange Coupling Mechanism of Boron Icosahedra. Journal of Physical Chemistry Letters, 2021, 12, 6812-6817.	2.1	5
1194	Formation of copper boride on Cu(111). Fundamental Research, 2021, 1, 482-487.	1.6	15
1195	van der Waals Epitaxial Growth of Borophene on a Mica Substrate toward a High-Performance Photodetector. ACS Applied Materials & Interfaces, 2021, 13, 31808-31815.	4.0	48
1196	Borophene and Boron-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
1197	Effect of edge contact on electronic transport in lateral Borophene/WTe <sub>2</sub> /Borophene heterojunctions. Computational Materials Science, 2021, 195, 110502.	1.4	2
1198	First-Principles Multiscale Modeling of Mechanical Properties in Graphene/Borophene Heterostructures Empowered by Machine-Learning Interatomic Potentials. Advanced Materials, 2021, 33, e2102807.	11.1	171
1199	Electronic and optical properties of antimonene/palladium ditelluride (Sb/PdTe <sub>2</sub> ) heterostructure with the effect of strain and external electric field: A computational study. Physica B: Condensed Matter, 2021, 612, 412977.	1.3	3
1200	Electron-phonon coupling, spin-polarized Zeeman field, and exchange field effects on the electronic properties of monolayer h-BP. Journal Physics D: Applied Physics, 2021, 54, 385301.	1.3	2
1201	Borophene via Micromechanical Exfoliation. Advanced Materials, 2021, 33, e2102039.	11.1	56
1202	Bounds on the in-plane Poisson's ratios and the in-plane linear and area compressibilities for sheet crystals. Journal of the Mechanics and Physics of Solids, 2021, 152, 104409.	2.3	10
1203	Borophene Nanoribbons via Strain Engineering for the Hydrogen Evolution Reaction: A First-Principles Study. Journal of Physical Chemistry C, 2021, 125, 16955-16962.	1.5	12
1204	Hydrogenated group IV-V monolayer HAB6: A new type of Dirac material constructed by isoelectronic rule. Applied Surface Science, 2021, 554, 149635.	3.1	7
1205	Ultrahigh stiffness and anisotropic Dirac cones in BeN <sub>4</sub> and MgN <sub>4</sub> monolayers: a first-principles study. Materials Today Nano, 2021, 15, 100125.	2.3	23
1206	Ultrahigh Carrier Mobility in the Two-Dimensional Semiconductors B <sub>8</sub> Si <sub>4</sub> , B <sub>8</sub> Ge <sub>4</sub> , and B <sub>8</sub> Sn <sub>4</sub> . Chemistry of Materials, 2021, 33, 6475-6483.	3.2	104
1207	Novel thermoelectric performance of 2D 1T- Se <sub>2</sub> Te and SeTe <sub>2</sub> with ultralow lattice thermal conductivity but high carrier mobility. Nanotechnology, 2021, 32, 455401.	1.3	18
1208	Boridene: Two-dimensional Mo <sub>4/3</sub> B <sub>2-x</sub> with ordered metal vacancies obtained by chemical exfoliation. Science, 2021, 373, 801-805.	6.0	126

#	ARTICLE	IF	CITATIONS
1209	Borophene synthesis beyond the single-atomic-layer limit. <i>Nature Materials</i> , 2022, 21, 35-40.	13.3	137
1210	Hyperbolic plasmon modes in tilted Dirac cone phases of borophene. <i>Physical Review B</i> , 2021, 104, .	1.1	12
1211	Spin thermoelectric transport of co-salophene with borophene nanoribbon electrodes. <i>Europhysics Letters</i> , 0, , .	0.7	1
1212	Emerging two-dimensional monoelemental materials (Xenes): Fabrication, modification, and applications thereof in the field of bioimaging as nanocarriers. <i>Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology</i> , 2022, 14, e1750.	3.3	5
1213	Electronic structure of a borophene layer in rare-earth aluminum/chromium boride and its hydrogenated derivative borophane. <i>Physical Review Materials</i> , 2021, 5, .	0.9	13
1214	Honeycomb Boron on Al(111): From the Concept of Borophene to the Two-Dimensional Boride. <i>ACS Nano</i> , 2021, 15, 15153-15165.	7.3	20
1215	Selective Oxygen and Hydrogen Functionalization of the $\alpha$ -BN/Rh(111) Nanomesh. <i>Chemistry - A European Journal</i> , 2021, 27, 13172-13180.	1.7	2
1216	Recent progress and prospect of carbon-free single-site catalysts for the hydrogen and oxygen evolution reactions. <i>Nano Research</i> , 2022, 15, 818-837.	5.8	90
1217	Fused borophenes: A new family of superhard light-weight materials. <i>Physical Review Materials</i> , 2021, 5, .	0.9	5
1218	Two-Dimensional Boron-Rich Monolayer $B_xN$ as High Capacity for Lithium-Ion Batteries: A First-Principles Study. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 41169-41181.	4.0	20
1219	Strain-induced electronic, stability and enhancement of thermoelectric performance of 2D $Si_2C_3$ monolayer: An emerging material for renewable energy. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2021, 132, 114769.	1.3	3
1220	Density functional theory study on the electronic structure and optical properties of Li absorbed borophene. <i>Molecular Physics</i> , 0, , e1966114.	0.8	2
1221	Flat epitaxial quasi-1D phosphorene chains. <i>Nature Communications</i> , 2021, 12, 5160.	5.8	22
1222	Reversible Hydrogen Storage in Metal-Decorated Honeycomb Borophene Oxide. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 43233-43240.	4.0	40
1223	Photoelectron Spectroscopy of Size-Selected Bismuth-Boron Clusters: $BiB_n^+$ ( $n = 6-8$ ). <i>Journal of Physical Chemistry A</i> , 2021, 125, 6751-6760.	1.1	18
1224	Angstrom-Scale Spectroscopic Visualization of Interfacial Interactions in an Organic/Borophene Vertical Heterostructure. <i>Journal of the American Chemical Society</i> , 2021, 143, 15624-15634.	6.6	29
1225	Active tuning of longitudinal strong coupling between anisotropic borophene plasmons and Bloch surface waves. <i>Optics Express</i> , 2021, 29, 27750.	1.7	14
1226	Gas sensing properties of defective tellurene on the nitrogen oxides: A first-principles study. <i>Sensors and Actuators A: Physical</i> , 2021, 328, 112766.	2.0	16

#	ARTICLE	IF	CITATIONS
1227	Contact strength and deformation of straining free-standing borophene. Computational Materials Science, 2021, 197, 110624.	1.4	4
1228	Electronic structures and topological properties of TeSe <sub>2</sub> monolayers*. Chinese Physics B, 2021, 30, 117304.	0.7	0
1229	Phase transition-induced superstructures of $\hat{I}^2$ -Sn films with atomic-scale thickness*. Chinese Physics B, 2021, 30, 096804.	0.7	0
1230	Oxygenation of Janus group III monochalcogenides: First principles insights into $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle \text{GaIn} \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \text{X} \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \text{mathvariant="normal"} \rangle \text{O} \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle ( \langle \text{mml:math} \rangle \text{Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 622 Td} ( \langle \text{mml:math} \rangle \text{ )$ 2021, 104, .	1.1	37
1231	Two-dimensional quantum dots for biological applications. Nano Research, 2021, 14, 3820-3839.	5.8	50
1232	2D Pentagonal Pd $\epsilon$ -Based Janus Transition Metal Dichalcogenides for Photocatalytic Water Splitting. Physica Status Solidi - Rapid Research Letters, 2022, 16, 2100344.	1.2	17
1233	First-Principles Study of Linear and Nonlinear Optical Properties of Multi-Layered Borophene. Computation, 2021, 9, 101.	1.0	11
1234	Navigating recent advances in monoelemental materials (Xenes)-fundamental to biomedical applications. Progress in Solid State Chemistry, 2021, 63, 100326.	3.9	20
1235	New Two-Dimensional Wide Band Gap Hydrocarbon Insulator by Hydrogenation of a Biphenylene Sheet. Journal of Physical Chemistry Letters, 2021, 12, 8889-8896.	2.1	26
1236	Large contribution of quasi-acoustic shear phonon modes to thermal conductivity in novel monolayer Ga <sub>2</sub> O <sub>3</sub> . Journal of Applied Physics, 2021, 130, .	1.1	5
1237	Ultraviolet photodetector based on p-borophene/n-ZnO heterojunction. Nanotechnology, 2021, 32, 505606.	1.3	18
1238	First $\epsilon$ -Principles Study of the Electronic and Optical Properties of Bi <sub>2</sub> Se <sub>3</sub> /MoSe <sub>2</sub> Heterojunction. Physica Status Solidi (B): Basic Research, 2021, 258, 2100403.	0.7	5
1239	Performance improvement of $\hat{I}^3$ borophene in nitrogen fixation using single $\epsilon$ atom anchoring: A first $\epsilon$ principles study. Applied Surface Science, 2021, 560, 149667.	3.1	11
1240	Review of transition-metal diboride thin films. Vacuum, 2022, 196, 110567.	1.6	48
1241	High uptake and fixation ability of BC monolayer for CO and NO toxic gases: a computational analysis. Journal of Materials Science, 2021, 56, 18566-18580.	1.7	0
1242	A comparative DFT study of the effect of doping atoms of groups III, IV, and V on the electronic properties of phosphorene. Structural Chemistry, 2022, 33, 131-145.	1.0	0
1243	On the sensing performance enhancement in SPR-based Biosensor using specific two-dimensional materials (Borophene and Antimonene). Optical Materials, 2021, 119, 111355.	1.7	26
1244	Hydrogen storage capacity of Li-decorated borophene and pristine graphene slit pores: A combined ab initio and quantum-thermodynamic study. Applied Surface Science, 2021, 562, 150019.	3.1	15

#	ARTICLE	IF	CITATIONS
1245	Effects of the V and P doping on the electronic and magnetic properties of the monolayer ZrS <sub>2</sub> . Thin Solid Films, 2021, 735, 138875.	0.8	3
1246	MoS <sub>2</sub> based nanocomposites: An excellent material for energy and environmental applications. Journal of Environmental Chemical Engineering, 2021, 9, 105836.	3.3	54
1247	Can borophenes with Dirac cone be promising electrodes for supercapacitors. Applied Surface Science, 2021, 562, 150154.	3.1	7
1248	Magnetic polaritons assisted effective excitation of multi-order anisotropic borophene surface plasmons in the infrared region. Results in Physics, 2021, 29, 104780.	2.0	9
1249	Freestanding Silver-Doped Zinc Oxide 2D Crystals Synthesized by a Surface Energy-Controlled Hydrothermal Strategy. ACS Applied Nano Materials, 2021, 4, 10534-10544.	2.4	6
1250	Enhanced properties of covalently coupled borophene-graphene layers through fluorination and hydrogenation. Applied Surface Science, 2021, 562, 150150.	3.1	17
1251	Thermo-mechanical properties of nitrogenated holey graphene (C <sub>2</sub> N): A comparison of machine-learning-based and classical interatomic potentials. International Journal of Heat and Mass Transfer, 2021, 178, 121589.	2.5	22
1252	Formation of ordered B structure on W(100). Surface Science, 2021, 713, 121906.	0.8	7
1253	Spin transport properties in TM-doped B <sub>38</sub> fullerene/borophene junctions. Physica B: Condensed Matter, 2021, 621, 413284.	1.3	3
1254	Fabrication of 2D titanium carbide MXene/Au nanorods as a nanosensor platform for sensitive SERS detection. Ceramics International, 2021, 47, 30082-30090.	2.3	15
1255	The effect of edges hydrogenation and adsorption of Co and Mn atoms on spin transport properties of borophene Nanoribbons. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 273, 115391.	1.7	15
1256	Half-metallicity and Curie temperature enhancement of CrI <sub>3</sub> through boron atoms adsorption. Superlattices and Microstructures, 2021, 159, 107054.	1.4	7
1257	Two-dimensional coordination polymers containing permethylated motifs - promising candidates for 2D emerging materials. Structural, behavioral and functional particularities. Reactive and Functional Polymers, 2021, 168, 105039.	2.0	4
1258	Exploring tensile piezoelectricity and bending flexoelectricity of diamane monolayers by machine learning. Carbon, 2021, 185, 558-567.	5.4	13
1259	Strain-engineering of anisotropic behavior in the electrical and optical properties of graphene-like borophene hydride, a DFT calculation. Computational Materials Science, 2021, 200, 110778.	1.4	9
1260	The elemental 2D materials beyond graphene potentially used as hazardous gas sensors for environmental protection. Journal of Hazardous Materials, 2022, 423, 127148.	6.5	27
1261	Evaluation of mechanical properties of borophene nanotube by molecular dynamics simulation. AIP Conference Proceedings, 2021, , .	0.3	1
1262	Nanomaterials: a review of synthesis methods, properties, recent progress, and challenges. Materials Advances, 2021, 2, 1821-1871.	2.6	1,049

#	ARTICLE	IF	CITATIONS
1263	Prediction of unexpected B <sub>n</sub> P <sub>n</sub> structures: promising materials for non-linear optical devices and photocatalytic activities. <i>Nanoscale Advances</i> , 2021, 3, 2846-2861.	2.2	9
1264	First-principles investigation of electronic, mechanical and thermoelectric properties of graphene-like XBi (X = Si, Ge, Sn) monolayers. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 12471-12478.	1.3	16
1265	Large piezoelectric and thermal expansion coefficients with negative Poisson's ratio in strain-modulated tellurene. <i>Nanoscale Advances</i> , 2021, 3, 3279-3287.	2.2	7
1266	Interface chemistry of two-dimensional heterostructures – fundamentals to applications. <i>Chemical Society Reviews</i> , 2021, 50, 4684-4729.	18.7	152
1267	Effective Transmission Modulation at Telecommunication Wavelengths through Continuous Metal Films Using Coupling between Borophene Plasmons and Magnetic Polaritons. <i>Advanced Optical Materials</i> , 2021, 9, 2001809.	3.6	18
1268	Nanoscale Probing of Image-Potential States and Electron Transfer Doping in Borophene Polymorphs. <i>Nano Letters</i> , 2021, 21, 1169-1174.	4.5	20
1269	Tellurium, the Forgotten Element: A Review of the Properties, Processes, and Biomedical Applications of the Bulk and Nanoscale Metalloid. , 2020, , 723-783.		6
1271	Electron-Phonon Coupling in Two-Dimensional Superconductors: Doped Graphene and Phosphorene. <i>Carbon Nanostructures</i> , 2017, , 31-45.	0.1	5
1272	Borophene-graphene heterostructure: Preparation and ultrasensitive humidity sensing. <i>Nano Research</i> , 2021, 14, 2337.	5.8	60
1273	One-step environmentally friendly exfoliation and functionalization of hexagonal boron nitride by $\beta$ -cyclodextrin-assisted ball milling. <i>Ceramics International</i> , 2020, 46, 21084-21089.	2.3	22
1274	Quantum spin Hall effect, thermoelectric performance, and optical properties of XBi (X=As, Y) monolayers. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020, 122, 114199.	1.3	4
1275	GGA and Meta-GGA study of electronic, optical and thermoelectric properties of fluorinated borophene. <i>Superlattices and Microstructures</i> , 2020, 143, 106553.	1.4	7
1277	Organic Gas Sensing Performance of the Borophene van der Waals Heterostructure. <i>Journal of Physical Chemistry C</i> , 2021, 125, 427-435.	1.5	30
1278	A Practical Criterion for Screening Stable Boron Nanostructures. <i>Journal of Physical Chemistry C</i> , 2017, 121, 11950-11955.	1.5	13
1279	Fully Boron-Sheet-Based Field Effect Transistors from First-Principles: Inverse Design of Semiconducting Boron Sheets. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 576-584.	2.1	14
1280	High-Performance Borophene/Graphene Heterostructure Anode of Lithium-Ion Batteries Achieved via Controlled Interlayer Spacing. <i>ACS Applied Energy Materials</i> , 2020, 3, 11699-11705.	2.5	33
1281	Atom-thin 'borophene' joins 2D materials club. <i>Nature</i> , 0, , .	13.7	2
1282	Na <sub>2</sub> C monolayer: a novel 2p Dirac half-metal with multiple symmetry-protected Dirac cones. <i>Nanoscale</i> , 2018, 10, 13645-13651.	2.8	38

#	ARTICLE	IF	CITATIONS
1283	Semiconducting phase in borophene: role of defect and strain. Journal Physics D: Applied Physics, 2017, 50, 405103.	1.3	17
1284	Charge-induced high-performance actuation of borophene. Journal Physics D: Applied Physics, 2021, 54, 105504.	1.3	8
1285	Optical scanning tunneling microscopy based chemical imaging and spectroscopy. Journal of Physics Condensed Matter, 2020, 32, 463001.	0.7	17
1286	Unraveling the effect of the defect and adsorbate on the magnetic properties of $\sqrt{3} \times \sqrt{3}$ borophene nanoribbons: an in-silico study. Physica Scripta, 2021, 96, 015812.	1.2	4
1287	Two ultra-stable novel allotropes of tellurium few-layers*. Chinese Physics B, 2020, 29, 097103.	0.7	5
1288	Lattice thermal conductivity of $\sqrt{2} \times \sqrt{2}$ and $\sqrt{3} \times \sqrt{3}$ borophene*. Chinese Physics B, 2020, 29, 126503.	0.7	24
1289	Thallene: graphene-like honeycomb lattice of Tl atoms frozen on single-layer NiSi <sub>2</sub> . 2D Materials, 2020, 7, 045026.	2.0	17
1290	A systematical ab-initio review of promising 2D MXene monolayers towards Li-ion battery applications. JPhys Energy, 2020, 2, 032006.	2.3	34
1291	$\sqrt{3} \times \sqrt{3}$ CoB monolayer: A robust two-dimensional ferromagnet. Physical Review B, 2019, 99, .	0.9	113
1292	Synthesis of borophene nanoribbons on Ag(110) surface. Physical Review Materials, 2017, 1, .	0.9	4
1293	Effective model for the electronic and optical properties of stanene. Physical Review Materials, 2017, 1, .	0.9	89
1294	One-dimensional phosphorus chain and two-dimensional blue phosphorene grown on Au(111) by molecular-beam epitaxy. Physical Review Materials, 2017, 1, .	0.9	4
1295	Twelve inequivalent Dirac cones in two-dimensional $\sqrt{2} \times \sqrt{2}$ ZrB <sub>2</sub> monolayer. Physical Review Materials, 2018, 2, .	0.9	31
1296	Electronic structures of iMAX phases and their two-dimensional derivatives: A family of piezoelectric materials. Physical Review Materials, 2018, 2, .	0.9	24
1297	Two-dimensional silicon boride on $\sqrt{2} \times \sqrt{2}$ ZrB <sub>2</sub> monolayer. Physical Review Materials, 2019, 3, .	0.9	29
1298	Semimetallicity of free-standing hydrogenated monolayer boron from $\sqrt{2} \times \sqrt{2}$ MgB <sub>2</sub> monolayer. Physical Review Materials, 2019, 3, .	0.9	18
1299	Hexagonal supertetrahedral boron: A topological metal with multiple spin-orbit-free emergent fermions. Physical Review Materials, 2019, 3, .	0.9	5
1300	Tuning hydrogen adsorption and electronic properties from graphene to fluorographene. Physical Review Materials, 2020, 4, .	0.9	5



#	ARTICLE	IF	CITATIONS
1301	First-principles prediction of two-dimensional copper borides. <i>Physical Review Materials</i> , 2020, 4, .	0.9	8
1302	Probing quantum criticality using nonlinear Hall effect in a metallic Dirac system. <i>Physical Review Research</i> , 2020, 2, .	1.3	39
1303	All-optical signal processing in few-layer bismuthene coated microfiber: towards applications in optical fiber systems. <i>Optics Express</i> , 2019, 27, 16798.	1.7	24
1304	Anisotropic localized surface plasmons in borophene. <i>Optics Express</i> , 2020, 28, 16725.	1.7	40
1306	Advances in photonics of recently developed Xenex. <i>Nanophotonics</i> , 2020, 9, 1621-1649.	2.9	11
1307	Stabilization and Metallic to Semiconducting Transition in 2D Boron Sheet. <i>Engineered Science</i> , 2018, , .	1.2	2
1308	Exploration of Free Energy Surface and Thermal Effects on Relative Population and Infrared Spectrum of the Be <sub>6</sub> B <sub>11</sub> Fluxional Cluster. <i>Materials</i> , 2021, 14, 112.	1.3	10
1309	Two-Dimensional Borophene: Properties, Fabrication, and Promising Applications. <i>Research</i> , 2020, 2020, 2624617.	2.8	93
1310	Electronic structure, phonons, and high-temperature phonon-mediated superconductivity in lithium-intercalated diamond-like boron compounds. <i>Applied Physics Express</i> , 2020, 13, 083003.	1.1	3
1311	Tailoring the d-band center by borophene subunits in chromic diboride toward the hydrogen evolution reaction. <i>Inorganic Chemistry Frontiers</i> , 2021, 8, 5130-5138.	3.0	5
1312	Hydrogenated Borophene as a Promising Two-Dimensional Semiconductor for Nanoscale Field-Effect Transistors: A Computational Study. <i>ACS Applied Nano Materials</i> , 2021, 4, 11931-11937.	2.4	7
1313	Synthesis of emerging two-dimensional (2D) materials – Advances, challenges and prospects. <i>FlatChem</i> , 2021, 30, 100305.	2.8	65
1314	Two-Dimensional TeB Structures with Anisotropic Carrier Mobility and Tunable Bandgap. <i>Molecules</i> , 2021, 26, 6404.	1.7	0
1315	Electron-phonon coupling in lightly n-doped 1T monolayers of PdSTe and PdSeTe: A rigid band approximation approach. <i>Physica B: Condensed Matter</i> , 2021, 625, 413480.	1.3	0
1316	Construction and application of bioinspired nanochannels based on two-dimensional materials. <i>Chinese Chemical Letters</i> , 2022, 33, 2291-2300.	4.8	28
1317	Structures, Mechanics, and Electronics of Borophanes. <i>Journal of Physical Chemistry C</i> , 2021, 125, 22917-22928.	1.5	4
1318	Experimental Realization and Phase Engineering of a Two-Dimensional SnSb Binary Honeycomb Lattice. <i>ACS Nano</i> , 2021, 15, 16335-16343.	7.3	5
1319	Heterointerface Engineering in Electromagnetic Absorbers: New Insights and Opportunities. <i>Advanced Materials</i> , 2022, 34, e2106195.	11.1	307

#	ARTICLE	IF	CITATIONS
1320	Elemental 2D Materials: Solution-Processed Synthesis and Applications in Electrochemical Ammonia Production. <i>Advanced Functional Materials</i> , 2022, 32, 2107280.	7.8	20
1321	Atomic Level Insights into Metal Halide Perovskite Materials by Scanning Tunneling Microscopy and Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	3
1322	Atomic level insights into metal halide perovskite materials by scanning tunneling microscopy and spectroscopy. <i>Angewandte Chemie</i> , 2022, 134, e202112352.	1.6	0
1323	Silicene in the Flatland. <i>Carbon Nanostructures</i> , 2017, , 137-152.	0.1	1
1324	Preparation, structure configuration, physical properties and applications of borophene and two-dimensional alkaline-earth metal boride nanomaterials. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2017, 66, 217702.	0.2	4
1326	Computational Materials Discovery Using Evolutionary Algorithms. , 2018, , 15-65.		0
1327	Lattice Mismatch Pattern and the Dirac Point of a Monolayer Borophene. <i>Vacuum and Surface Science</i> , 2018, 61, 712-715.	0.0	0
1328	Electrical Conduction in Curved Hexagonal Borophane. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
1329	Chapter 2. Two-dimensional Layered Materials for High-performance Lithium-ion Batteries. <i>RSC Smart Materials</i> , 2019, , 39-70.	0.1	0
1330	Triangular Potential Effects on the Fermi Velocity Renormalization in 8-Pmmn Borophene. <i>Journal of Boron</i> , 0, , .	0.0	1
1331	Structural, Electronic and Optical Properties of Pristine and Doped B16 Nanocluster: A DFT Study. , 2019, , .		0
1333	Toxic Gases on $\hat{1}^{2}12$ Borophene: the Selective Adsorption. <i>VNU Journal of Science Mathematics - Physics</i> , 2020, 36, .	0.0	3
1335	Scalable Production of Freestanding Few-Layer $\hat{1}^{2}12$ -Borophene Single Crystalline Sheets as Efficient Electrocatalysts for Lithium-Sulfur Batteries. <i>ACS Nano</i> , 2021, 15, 17327-17336.	7.3	40
1336	Viable substrates for the honeycomb-borophene growth. <i>Physical Review Materials</i> , 2021, 5, .	0.9	4
1337	Emerging 2D-Nanostructured materials for electrochemical and sensing Application-A review. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 1371-1389.	3.8	34
1338	Borophene gas sensor. <i>Nano Research</i> , 2022, 15, 2537-2544.	5.8	53
1339	Effects of hydrogen/halogen "edge termination on structural, electronic, and optical properties of planar silicene nanoribbons SiNRs. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2022, 136, 115046.	1.3	5
1340	Research progress of monolayer two-dimensional atomic crystal materials grown by molecular beam epitaxy in ultra-high vacuum conditions. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2020, 69, 118101.	0.2	5

#	ARTICLE	IF	CITATIONS
1341	Designing xenes with two-dimensional triangular lattice. <i>Physical Review Materials</i> , 2020, 4, .	0.9	2
1342	Quantum transport along the armchair and zigzag edges of $\hat{1}^2_{12}$ -borophene nanoribbons in the presence of a Zeeman magnetic field and dilute charged impurities. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 26285-26295.	1.3	0
1343	Prediction of bimetal embedded in two-dimensional materials for CO <sub>2</sub> reduction electrocatalysis with a new integrated descriptor. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 26241-26249.	1.3	3
1344	First-principles study of the electronic and magnetic properties of monolayer CrOBr. <i>Solid State Communications</i> , 2022, 341, 114559.	0.9	6
1345	Super-planckian thermal radiation in borophene sheets. <i>International Journal of Heat and Mass Transfer</i> , 2022, 183, 122140.	2.5	26
1346	Extended anisotropic phonon dispersion and optical properties of two-dimensional ternary SnS <sub>2</sub> . <i>Inorganic Chemistry Frontiers</i> , 2022, 9, 294-301.	3.0	5
1347	A study on the multiferroic properties of semi-hydrogenated X <sub>2</sub> H (X = C, Si, and Ge) monolayer films. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 25817-25823.	1.3	5
1348	Structural, optical and magnetic properties of B <sub>8</sub> , FeB <sub>8</sub> , CoB <sub>8</sub> , NiB <sub>8</sub> nanoclusters: A DFT study. , 2020, , .		0
1349	The grain boundary effect on mechanical and electronic transport properties of a striped borophene. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 21844-21850.	1.3	7
1351	Borophenes made easy. <i>Science Advances</i> , 2021, 7, eabk1490.	4.7	31
1352	Borophene: Two-dimensional Boron Monolayer: Synthesis, Properties, and Potential Applications. <i>Chemical Reviews</i> , 2022, 122, 1000-1051.	23.0	106
1353	Large-Scale Layer-by-Layer Synthesis of Borophene on Ru(0001). <i>Chemistry of Materials</i> , 2021, 33, 8838-8843.	3.2	21
1354	Scalably Nanomanufactured Atomically Thin Materials-Based Wearable Health Sensors. <i>Small Structures</i> , 2022, 3, 2100120.	6.9	16
1355	Investigation of vacancy defects and substitutional doping in AlSb monolayer with double layer honeycomb structure: a first-principles calculation. <i>Journal of Physics Condensed Matter</i> , 2022, 34, 065701.	0.7	18
1356	Ultra-low lattice thermal conductivity and promising thermoelectric figure of merit in borophene via chlorination. <i>Nano Research</i> , 2022, 15, 3804-3811.	5.8	24
1357	Triclinic boron nanosheets high-efficient electrocatalysts for water splitting. <i>Nanotechnology</i> , 2022, 33, 075601.	1.3	9
1358	First-principles study of borophene/phosphorene heterojunction as anode material for lithium-ion batteries. <i>Nanotechnology</i> , 2022, 33, 075403.	1.3	2
1359	3- <i>X</i> Structural Model and Common Characteristics of Anomalous Thermal Transport: The Case of Two-Dimensional Boron Carbides. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 10975-10980.	2.1	10

#	ARTICLE	IF	CITATIONS
1360	Anisotropic and gate-tunable valley filtering based on 8-Pmmn borophene. <i>Nanotechnology</i> , 2021, 32, 025205.	1.3	12
1361	First principles study of post-boron carbide phases with icosahedra broken. <i>Chinese Physics B</i> , 2020, 29, 103102.	0.7	1
1362	Anisotropic transport in tellurene FETs. <i>Micro and Nano Letters</i> , 2020, 15, 959-963.	0.6	1
1364	Borophenes: Insights and Predictions From Computational Analyses. , 2021, , 27-49.		1
1366	Quantum transport: general concepts. , 0, , 91-117.		1
1367	Flexible electronics based on 2D transition metal dichalcogenides. <i>Journal of Materials Chemistry A</i> , 2021, 10, 89-121.	5.2	66
1368	Passivated 2D Janus borophene as unique Dirac anodes for Na- and K-ion batteries: A first-principle investigation. <i>Applied Surface Science</i> , 2022, 578, 151994.	3.1	12
1370	Higher-order topological insulators on porous network models. <i>Physical Review B</i> , 2021, 104, .	1.1	4
1371	First-Principles Density Functional Theory Study on Graphene and Borophene Nanopores for Individual Identification of DNA Nucleotides. <i>ACS Applied Nano Materials</i> , 0, , .	2.4	14
1372	Intrinsic half-metallic properties of MnHm (M: Fe, V, Co, and Cr) in various space groups: A first-principles study. <i>Journal of Magnetism and Magnetic Materials</i> , 2022, 547, 168758.	1.0	6
1373	Chemistry, Functionalization, and Applications of Recent Monoelemental Two-Dimensional Materials and Their Heterostructures. <i>Chemical Reviews</i> , 2022, 122, 1127-1207.	23.0	103
1374	Oxygen atom adsorption on borophene doped with aluminum, argentine and aurum: A density functional study. <i>Materials Today Communications</i> , 2022, 30, 103036.	0.9	0
1375	Abnormal thermal conductivity enhancement in covalently bonded bilayer borophene allotrope. <i>Nano Research</i> , 2022, 15, 3818-3824.	5.8	19
1377	Step-Edge Epitaxy for Borophene Growth on Insulators. <i>ACS Nano</i> , 2021, 15, 18347-18353.	7.3	19
1378	Isotope Effect of Hydrogen Functionalization in Layered Germanane: Implications for Germanane-Based Optoelectronics. <i>ACS Applied Nano Materials</i> , 2021, 4, 13708-13715.	2.4	6
1379	Low-dimensional non-metal catalysts: principles for regulating p-orbital-dominated reactivity. <i>Npj Computational Materials</i> , 2021, 7, .	3.5	41
1380	Conversion of 2D MXene to Multi- $\epsilon$ -Dimensional GerMXene Superlattice Heterostructure. <i>Advanced Functional Materials</i> , 2022, 32, 2108495.	7.8	9
1381	Structure of porous two-dimensional boron crystals. <i>Physical Review B</i> , 2021, 104, .	1.1	4

#	ARTICLE	IF	CITATIONS
1382	Inorganic gas sensing performance of $\sqrt{3}$ -borophene and the van der Waals heterostructure. Applied Surface Science, 2022, 581, 151906.	3.1	18
1383	C-doping Anisotropy Effects on Borophene Electronic Transport. Journal of Physics Condensed Matter, 2021, , .	0.7	1
1384	Tailoring linear and nonlinear surface plasmon response in borophene nanostructure. Journal of Optics (United Kingdom), 0, , .	1.0	0
1385	Synthesis of bilayer borophene. Nature Chemistry, 2022, 14, 25-31.	6.6	105
1386	Excellent HER and OER Catalyzing Performance of Se Vacancies in Defects Engineered PtSe <sub>2</sub> : From Simulation to Experiment. Advanced Energy Materials, 2022, 12, 2102359.	10.2	59
1387	Quantum transmission through the n-p-n heterojunction of massive 8-Pmmn borophene. Journal of Physics Condensed Matter, 2022, 34, 085401.	0.7	2
1388	Prediction of superconductivity in bilayer borophenes. RSC Advances, 2021, 11, 40220-40227.	1.7	9
1389	Anisotropic Kubo conductivity of electric field-induced monolayer $\sqrt{2} \times \sqrt{2}$ -borophene. RSC Advances, 2021, 12, 648-654.	1.7	6
1390	Anisotropic nodal loop in NiB <sub>2</sub> monolayer with nonsymmorphic configuration. Nanoscale, 2022, 14, 1264-1270.	2.8	4
1391	Expanded spherical trihedral metallo-borospherenes of transition-metal doped boron clusters: TM <sub>3</sub> B <sub>15</sub> q (TM = Zr, Hf; q = 1, 0, +1). Results in Physics, 2022, 33, 105214.	2.0	4
1392	An ab initio study of the interaction of graphene and silicene with one-, two-, and three-layer planar silicon carbide. Physica E: Low-Dimensional Systems and Nanostructures, 2022, 138, 115120.	1.3	3
1393	Synthesis of borophene on quartz towards hydroelectric generators. Journal of Materials Chemistry A, 2022, 10, 8218-8226.	5.2	16
1394	Stability and electronic properties of gallene. Nanoscale Advances, 2022, 4, 1408-1413.	2.2	6
1395	An <i>ab initio</i> study of two-dimensional anisotropic monolayers ScXY (X = S and Se; Y = Cl and Br) for photocatalytic water splitting applications with high carrier mobilities. Physical Chemistry Chemical Physics, 2022, 24, 3770-3779.	1.3	11
1396	Valley-dependent time evolution of coherent electron states in tilted anisotropic Dirac materials. Physical Review B, 2022, 105, .	1.1	9
1397	Micrometre-scale single-crystalline borophene on a square-lattice Cu(100) surface. Nature Chemistry, 2022, 14, 377-383.	6.6	28
1398	Doping of 3d Transition Metals on Monolayer of Graphene and Borophene. International Journal of Recent Technology and Engineering, 2022, 10, 41-47.	0.2	0
1399	Borophene as a rising star in materials chemistry: synthesis, properties and applications in analytical science and energy devices. New Journal of Chemistry, 2022, 46, 4514-4533.	1.4	15

#	ARTICLE	IF	CITATIONS
1400	Non-metal boron atoms on a CuB <sub>12</sub> monolayer as efficient catalytic sites for urea production. <i>Chemical Science</i> , 2022, 13, 1342-1354.	3.7	34
1401	Permeability of boron- and nitrogen-doped graphene nanoflakes for protium/deuterium ions. <i>RSC Advances</i> , 2022, 12, 3883-3891.	1.7	0
1402	Structural transformations in boron clusters induced by metal doping. <i>Chemical Society Reviews</i> , 2022, 51, 1098-1123.	18.7	47
1403	A perfect match between borophene and aluminium in the AlB <sub>3</sub> heterostructure with covalent Al-B bonds, multiple Dirac points and a high Fermi velocity. <i>Chemical Science</i> , 2022, 13, 1016-1022.	3.7	5
1404	Photoexfoliation Synthesis of 2D Materials. , 2022, 4, 263-270.		16
1405	Probing the Nature of the Transition-Metal-Boron Bonds and Novel Aromaticity in Small Metal-Doped Boron Clusters Using Photoelectron Spectroscopy. <i>Annual Review of Physical Chemistry</i> , 2022, 73, 233-253.	4.8	14
1406	First-Principles Calculations for the Impact of Hydrogenation on the Electron Behavior and Stability of Borophene Nanosheets: Implications for Boron 2D Electronics. <i>ACS Applied Nano Materials</i> , 2022, 5, 1419-1425.	2.4	2
1407	Anisotropic Low-Dimensional Materials for Polarization-Sensitive Photodetectors: From Materials to Devices. <i>Advanced Optical Materials</i> , 2022, 10, .	3.6	42
1409	Borophene as an emerging 2D flatland for biomedical applications: current challenges and future prospects. <i>Journal of Materials Chemistry B</i> , 2022, 10, 1146-1175.	2.9	31
1410	A computational study on the potential application of carbon nitride nanosheets in Na-ion batteries. <i>Journal of Molecular Modeling</i> , 2022, 28, 40.	0.8	3
1411	High-throughput assessment of two-dimensional electrode materials for energy storage devices. <i>Cell Reports Physical Science</i> , 2022, 3, 100718.	2.8	10
1412	2D boron nanosheet architectonics: opening new territories by smart functionalization. <i>Journal of Materials Chemistry A</i> , 2022, 10, 2736-2750.	5.2	12
1413	Substitutional transition metal doping in MoSi <sub>2</sub> N <sub>4</sub> monolayer: structural, electronic and magnetic properties. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 3035-3042.	1.3	10
1414	Spin transport characteristics and photoelectric properties of magnetic semiconductor NiBr <sub>2</sub> monolayer. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2022, .	0.2	2
1415	Transition from metal to semiconductor by semi-hydrogenation of borophene. <i>Physical Review Materials</i> , 2022, 6, .	0.9	14
1416	Borophane Polymorphs. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 1107-1113.	2.1	12
1417	Structural, electronic, and transport properties of quintuple atomic Janus monolayers $Ga_2S_2X_2$ ( $Tj$ )		40
1418	Designing and optimizing $\hat{1}^2$ -borophene organic gas sensor: A theoretical study. <i>Surface Science</i> , 2022, 719, 122030.	0.8	8

#	ARTICLE	IF	CITATIONS
1419	AuB <sub>8</sub> <sup>+</sup> : an Au <sup>+</sup> borozene complex. Chemical Communications, 2022, 58, 3134-3137.	2.2	6
1420	Construction of novel two-dimensional materials and heterostructures in ultra-high vacuum. Wuli Xuebao/Acta Physica Sinica, 2022, .	0.2	0
1421	Few-layer Mg-deficient borophene nanosheets: I <sub>2</sub> oxidation and ultrasonic delamination from MgB <sub>2</sub> . Nanoscale, 2022, 14, 4195-4203.	2.8	3
1422	Planar Networks of Boron Triangles: Analogies to Benzene and Other Planar Aromatic Hydrocarbons. Journal of Physical Chemistry A, 2022, 126, 901-909.	1.1	1
1423	Electronic structures and optical properties of monolayer borophenes. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2022, 272, 121014.	2.0	6
1424	A strategic review of MXenes as emergent building blocks for future two-dimensional materials: recent progress and perspectives. Journal of Materials Chemistry C, 2022, 10, 4096-4123.	2.7	18
1425	Exploring the structure and electronic properties of germanium doped boron clusters using density functional theory based global optimization method. New Journal of Chemistry, 2022, 46, 6244-6254.	1.4	1
1426	Formation of stable polonium monolayers with tunable semiconducting properties driven by strong quantum size effects. Physical Chemistry Chemical Physics, 2022, 24, 7512-7520.	1.3	0
1427	Polyhedral Metallaboranes and Metallacarboranes. , 2022, , 263-369.		17
1428	Direct Z-scheme WTe <sub>2</sub> /InSe van der Waals heterostructure for overall water splitting. Catalysis Science and Technology, 2022, 12, 3272-3280.	2.1	17
1429	Metal oxide-carbon composites and their applications in optoelectronics and electrochemical energy devices. , 2022, , 309-339.		2
1430	Introduction: basic concept of boron and its physical and chemical properties. , 2022, , 1-57.		4
1431	Defects in two-dimensional elemental materials beyond graphene. , 2022, , 43-88.		1
1432	Scalable Synthesis of Hydroxyl-Functionalized Boron Nanosheets for High Ion-Conductive Solid-State Electrolyte Application. Chemical Communications, 2022, , .	2.2	0
1433	Nanovehicles and boron clusters. , 2022, , 291-319.		3
1434	Intrinsic Ferromagnetic Janus Cr <sub>2</sub> pas Monolayer with High Curie Temperature and Controllable Magnetic Anisotropy. SSRN Electronic Journal, 0, , .	0.4	0
1435	Pristine and Defective 2D Borophene/Graphene Heterostructure as the Potential Anode of Lithium-ion Batteries. Advanced Materials Interfaces, 2022, 9, .	1.9	14
1436	THE RISE OF BOROPHENE AND BOROPHENE NANORIBBONS: A POTENTIAL QUANTUM ELECTRONICS MATERIAL. Surface Review and Letters, 2022, 29, .	0.5	1

#	ARTICLE	IF	CITATIONS
1437	Liquid crystalline 2D borophene oxide for inorganic optical devices. <i>Nature Communications</i> , 2022, 13, 1037.	5.8	12
1438	Schottky and Ohmic Contacts at $\hat{\pm}$ -Tellurene/2D Metal Interfaces. <i>ACS Applied Electronic Materials</i> , 2022, 4, 1082-1088.	2.0	12
1439	Strain-tuned mechanical, electronic, and optoelectronic properties of two-dimensional transition metal sulfides ZrS <sub>2</sub> : a first-principles study. <i>Journal of Molecular Modeling</i> , 2022, 28, 63.	0.8	5
1440	Evidence of sp <sup>2</sup> -like Hybridization of Silicon Valence Orbitals in Thin and Thick Si Grown on $\hat{\pm}$ -Phase Si(111)- $\sqrt{3} \times \sqrt{3}$ -Bi. <i>Materials</i> , 2022, 15, 1730.	1.3	4
1441	Effect of Borophene and Graphene on the Elastic Modulus of PEDOT:PSS Film—A Finite Element Study. <i>Condensed Matter</i> , 2022, 7, 22.	0.8	7
1442	Temperature-Dependent Growth and Evolution of Silicene on Au Ultrathin Films—LEEM and LEED Studies. <i>Materials</i> , 2022, 15, 1610.	1.3	6
1443	In-plane elastic properties of raw and doped graphene-like BSi: a first principle study. <i>Journal of Materials Science</i> , 2022, 57, 5050-5060.	1.7	2
1444	Computational Search and Stability Analysis of Two-Dimensional Tin Oxides. <i>Journal of Physical Chemistry C</i> , 2022, 126, 4647-4654.	1.5	0
1445	Recent Advances in Design Strategies and Multifunctionality of Flexible Electromagnetic Interference Shielding Materials. <i>Nano-Micro Letters</i> , 2022, 14, 80.	14.4	159
1446	Borophene and Pristine Graphene 2D Sheets as Potential Surfaces for the Adsorption of Electron-Rich and Electron-Deficient $\pi$ -Systems: A Comparative DFT Study. <i>Nanomaterials</i> , 2022, 12, 1028.	1.9	7
1447	Prediction of freestanding semiconducting bilayer borophenes. <i>Nano Research</i> , 2022, 15, 5752-5757.	5.8	15
1448	Superhard boron suboxide (B <sub>6</sub> O): Crystal structure, synthesis, properties, applications, and materials based thereon. <i>Mendeleev Communications</i> , 2022, 32, 152-163.	0.6	3
1449	Synthesis and solar blind photosensitivity of crystalline boron nanowires. <i>Nanotechnology</i> , 2022, 33, 235601.	1.3	4
1450	In-situ STS studies and first principles calculations on bare and Sn adsorbed UHV exfoliated WS <sub>2</sub> layers. <i>IOP Conference Series: Materials Science and Engineering</i> , 2022, 1221, 012046.	0.3	2
1451	Review—Towards 5th Generation AI and IoT Driven Sustainable Intelligent Sensors Based on 2D MXenes and Borophene. , 2022, 1, 013601.		238
1452	Mini band gap generation in magnetic beta-borophene: effects of optical phonon interaction. <i>Journal Physics D: Applied Physics</i> , 2022, 55, 255302.	1.3	5
1453	Probing borophene oxidation at the atomic scale. <i>Nanotechnology</i> , 2022, 33, 235702.	1.3	7
1454	Hydrogen storage on superalkali NLi <sub>4</sub> decorated $\hat{\pm}$ <sup>2</sup> -borophene: A first principles insights. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 14637-14645.	3.8	12



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1455	Monte Carlo Study of Dielectric Properties of Borophene Superlattices. <i>Journal of Inorganic and Organometallic Polymers and Materials</i> , 2022, 32, 1868-1877.	1.9	2
1456	Bilayer borophene synthesized on Ag(111) film: Physical mechanism and applications for optical sensor and thermoelectric devices. <i>Materials Today Physics</i> , 2022, 23, 100652.	2.9	15
1457	Quasi-Freestanding Bilayer Borophene on Ag(111). <i>Nano Letters</i> , 2022, 22, 3488-3494.	4.5	31
1458	Electronic Structures of Polymorphic Layers of Borophane. <i>Molecules</i> , 2022, 27, 1808.	1.7	8
1459	Monolayer, Bilayer, and Bulk BSi as Potential Anode Materials of Li-ion Batteries. <i>ChemPhysChem</i> , 2022, 23, .	1.0	4
1460	Thermal plasma synthesized nano-powders of (LaCe)B6 starting from oxide-based precursors and its field electron emission performance. <i>Advanced Powder Technology</i> , 2022, 33, 103526.	2.0	2
1461	Effects of Mechanical Strain on Electronic Properties of Phosphorene Structure in the Presence of Spin-Orbit Coupling. <i>ECS Journal of Solid State Science and Technology</i> , 2022, 11, 041004.	0.9	3
1462	First principles study of Li adsorption properties of a Borophene based hybrid 2D material B5Se. <i>Applied Surface Science Advances</i> , 2022, 8, 100218.	2.9	1
1463	Chemically identifying single adatoms with single-bond sensitivity during oxidation reactions of borophene. <i>Nature Communications</i> , 2022, 13, 1796.	5.8	18
1464	Transport and confinement in bilayer chiral borophene. <i>2D Materials</i> , 2022, 9, 025031.	2.0	5
1465	Fabrication of Zn-Ti layered double oxide nanosheets with ZnO/ZnTiO3 heterojunction for enhanced photocatalytic degradation of MO, RhB and MB. <i>Journal of Molecular Liquids</i> , 2022, 353, 118794.	2.3	22
1466	Layer structured materials for ambient nitrogen fixation. <i>Coordination Chemistry Reviews</i> , 2022, 460, 214468.	9.5	28
1467	Tensile characteristics of boron nanotubes by using reactive molecular dynamics simulations. <i>Computational Materials Science</i> , 2022, 209, 111368.	1.4	3
1468	2D Janus and non-Janus diamanes with an in-plane negative Poisson's ratio for energy applications. <i>Materials Today Advances</i> , 2022, 14, 100225.	2.5	10
1469	Borophene pressure sensing for electronic skin and human-machine interface. <i>Nano Energy</i> , 2022, 97, 107189.	8.2	49
1470	Study of the structural stability and electronic properties of the C-doped boron nanomaterials. <i>Solid State Communications</i> , 2022, 350, 114773.	0.9	0
1471	An emerging direct monolayer $\hat{\Gamma}$ -AIP3: High stability, desirable carrier mobility, NO <sub>2</sub> -sensitive sensing performance, and superior catalytic properties toward the nitrogen reduction reaction. <i>Applied Surface Science</i> , 2022, 591, 153191.	3.1	11
1472	Electronic properties of Borophene/InSe van der Waals heterostructures. <i>Materials Science in Semiconductor Processing</i> , 2022, 146, 106673.	1.9	6



#	ARTICLE	IF	CITATIONS
1491	A Multi-Layered Borophene-Silica-Silver Based Refractive Index Sensor for Biosensing Applications Operated at the Infrared Frequency Spectrum. <i>Photonics</i> , 2022, 9, 279.	0.9	3
1492	Phase diagrams and magnetization curves of a borophene lattice including metastable and unstable states: mean-field and effective-field theories. <i>Thin Solid Films</i> , 2022, , 139255.	0.8	0
1493	Hydrogen storage on flat land materials, opportunities, and challenges: A review study. <i>Journal of the Chinese Chemical Society</i> , 2022, 69, 663-680.	0.8	8
1494	First-principles prediction of strain-induced Dirac semimetal state and negative Poisson's ratio in TiZrB <sub>4</sub> monolayer. <i>Computational Condensed Matter</i> , 2022, 31, e00679.	0.9	3
1495	Monoelemental two-dimensional boron nanomaterials beyond theoretical simulations: From experimental preparation, functionalized modification to practical applications. <i>Advances in Colloid and Interface Science</i> , 2022, 304, 102669.	7.0	6
1496	Klein tunneling and ballistic transport in graphene and related materials. , 0, , 118-142.		0
1497	Quantum transport in disordered graphene-based materials. , 0, , 143-218.		0
1498	Ab initio and multiscale quantum transport in graphene-based materials. , 0, , 232-299.		0
1499	Electronic structure calculations: the density functional theory (DFT). , 0, , 314-331.		0
1500	Electronic structure calculations: the many-body perturbation theory (MBPT). , 0, , 332-337.		0
1501	Green's functions and ab initio quantum transport in the Landauer-Büttiker formalism. , 0, , 338-357.		0
1502	Structures and chemical bonding of boron-based B <sub>12</sub> O and B <sub>11</sub> Au clusters. A counterexample in boronyl chemistry. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 10952-10961.	1.3	3
1503	Intriguing interfacial characteristics of the CS contact with MX <sub>2</sub> (M = Mo, W; X = S, Se). <i>Tj ETQq0 0 0 rgBT /Overlock 10 Tf</i>	1.9	1
1504	Exploring the emerging applications of the advanced 2-dimensional material borophene with its unique properties. <i>RSC Advances</i> , 2022, 12, 12166-12192.	1.7	19
1505	Quantum-coupled borophene-based heterolayers for excitonic and molecular sensing applications. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 12816-12826.	1.3	17
1506	Experimental synthesis of borophene. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2022, .	0.2	1
1507	The anisotropic plasmon dispersion and damping in multilayer 8- <i>i&gt;Pmmn&lt;/i&gt; borophene structures. <i>Chinese Physics B</i>, 0, , .</i>	0.7	0
1508	Theoretical study of transition metal doped $\hat{\pm}$ -borophene nanosheet as promising electrocatalyst for electrochemical reduction of N <sub>2</sub> . <i>Computational and Theoretical Chemistry</i> , 2022, 1213, 113732.	1.1	8

#	ARTICLE	IF	CITATIONS
1509	Macroscopic Single-Phase Monolayer Borophene on Arbitrary Substrates. ACS Applied Materials & Interfaces, 2022, 14, 21727-21737.	4.0	11
1510	Global Minima Search for Sodium- and Magnesium-Adsorbed Polymorphic Borophene. Journal of Physical Chemistry C, 2022, 126, 8605-8614.	1.5	5
1511	Morphotaxy of Layered van der Waals Materials. ACS Nano, 2022, 16, 7144-7167.	7.3	8
1512	2D MBenes: A Novel Member in the Flatland. Advanced Materials, 2022, 34, e2108840.	11.1	54
1513	Tunable narrow transparency windows induced by the coupled quasi-guided modes in borophene plasmonic nanostructure. Journal Physics D: Applied Physics, 0, , .	1.3	0
1514	Interfacial contact and electronic properties in the heterojunction based on black phosphorus and borophene. Computational Materials Science, 2022, 210, 111463.	1.4	2
1515	Modulating spintronic properties of Nitrogen passivated borophene nanoribbons. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2022, 281, 115744.	1.7	6
1516	Flexible 3D porous boron nitride interconnected network as a high-performance Li-and Na-ion battery electrodes. Electrochimica Acta, 2022, 421, 140491.	2.6	9
1517	Electronic structures and magnetic properties of 3d transition metal doped monolayer RhI3. Chemical Physics Letters, 2022, 799, 139643.	1.2	1
1518	The structural, mechanical, and electronic properties of LiAlB <sub>4</sub> under pressure from first principles. Physica Status Solidi C: Current Topics in Solid State Physics, 2017, 14, 1700080.	0.8	0
1519	Characterizations of two-dimensional materials with cryogenic ultrahigh vacuum near-field optical microscopy in the visible range. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2022, 40, .	0.9	4
1520	Theoretical Prediction of Graphene-like 2D Uranyl Material with p-Orbital Antiferromagnetism. Chemical Science, 0, , .	3.7	3
1521	Super Material Borophene: Next Generation of Graphene. Asian Journal of Chemistry, 2022, 34, 1313-1332.	0.1	0
1522	Compression-induced crimping of boron nanotubes from borophenes: a DFT study. Physical Chemistry Chemical Physics, 2022, 24, 14566-14572.	1.3	2
1523	A Simple Grinding Method for Preparing Ultra-Thin Boron Nanosheets. Nanomaterials, 2022, 12, 1784.	1.9	0
1525	A family of superconducting boron crystals made of stacked bilayer borophenes. Nanoscale, 2022, 14, 9754-9761.	2.8	5
1526	Unique Functions of Hydrogen Boride Sheets. Nihon Kessho Gakkaishi, 2022, 64, 156-159.	0.0	0
1527	Design of monoelemental based two dimensional nanoarchitectures for therapeutic, chemical sensing and in vitro diagnosis applications: A case of borophene. Journal of Molecular Structure, 2022, 1265, 133387.	1.8	5

#	ARTICLE	IF	CITATIONS
1528	First-Principles Study of Electronic and Optical Properties of Tri-Layered van der Waals Heterostructures Based on Blue Phosphorus and Zinc Oxide. <i>Journal of Composites Science</i> , 2022, 6, 163.	1.4	0
1529	Spin-transport through Van der Waals Heterojunctions Based on 2D-Ferromagnet and Transition Metal Dichalcogenides: A Study from First-Principles Calculations. <i>Advanced Theory and Simulations</i> , 2022, 5, .	1.3	2
1530	Intrinsic ferromagnetic Janus Cr2PAs monolayer with controllable magnetic anisotropy. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2022, 444, 128239.	0.9	4
1531	Unified model for plasmon-induced transparency with direct and indirect coupling in borophene-integrated metamaterials. <i>Optics Express</i> , 2022, 30, 21966.	1.7	5
1532	Probing copper-boron interactions in the Cu2B8 bimetallic cluster. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2022, 40, .	0.9	8
1533	Recent advances in metal-free catalysts for the remediation of antibiotics, antibiotic resistant bacteria (ARB), and antibiotic resistant genes (ARGs). <i>Journal of Materials Chemistry A</i> , 2022, 10, 15235-15266.	5.2	19
1534	Structures, and electronic and spectral properties of single-atom transition metal-doped boron clusters MB <sub>24</sub> <sup>+</sup> (M = Sc, Ti, V, Cr, Mn, Fe, Co, and Ni). <i>RSC Advances</i> , 2022, 12, 16706-16716.	1.7	7
1535	Applications of nanomaterials in corrosion inhibitors. , 2022, , 411-426.		0
1536	Boron nanostructure formation on Mo(112) surface. <i>Surface Science</i> , 2022, 724, 122145.	0.8	5
1537	Oxygen-Induced Dissociation of a Single Water Molecule in Confined 2D Layers: A Semiempirical study. <i>ChemPhysChem</i> , 0, , .	1.0	2
1538	Regulation of Electronic Structures to Boost Efficient Nitrogen Fixation: Synergistic Effects between Transition Metals and Boron Nanotubes. <i>ACS Applied Materials &amp; Interfaces</i> , 0, , .	4.0	1
1539	Novel Van Der Waals Heterostructures Based on Borophene, Graphene-like GaN and ZnO for Nanoelectronics: A First Principles Study. <i>Materials</i> , 2022, 15, 4084.	1.3	9
1540	A first principle study on sensing properties of quasi-planer born (B36 borophene) towards COS, SO2, H2S and CS2 gases. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2022, 143, 115364.	1.3	3
1541	First-principle investigation of CO, CH4, and CO2 adsorption on Cr-doped graphene-like hexagonal borophene. <i>Journal of Molecular Modeling</i> , 2022, 28, .	0.8	6
1542	Boron-pnictogens: Highly anisotropic two-dimensional semiconductors for nanoelectronics and optoelectronics. <i>Physical Review Materials</i> , 2022, 6, .	0.9	1
1543	Achieving High-Temperature Ferromagnetism by Means of Magnetic Ion Dimerization in the Graphene-like Mn <sub>2</sub> N <sub>6</sub> C <sub>6</sub> Monolayer. <i>Journal of Physical Chemistry C</i> , 2022, 126, 10139-10144.	1.5	7
1544	Spin-polarized electrons in atomic layer materials formed on solid surfaces. <i>Progress in Surface Science</i> , 2022, 97, 100665.	3.8	1
1545	AA-stacked borophene-graphene bilayer as an anode material for alkali-metal ion batteries with a superhigh capacity. <i>Chinese Physics B</i> , 2022, 31, 116302.	0.7	2

#	ARTICLE	IF	CITATIONS
1546	Particle Swarm Predictions of a SrB <sub>8</sub> Monolayer with 12-Fold Metal Coordination. Journal of the American Chemical Society, 2022, 144, 11120-11128.	6.6	12
1547	Resonant tunneling in disordered borophene nanoribbons with line defects. Npj Computational Materials, 2022, 8, .	3.5	3
1548	$\langle \text{mml:math} \text{xmlns:mml}=\text{"http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:msub} \langle \text{mml:mi} \text{NaNO} \langle \text{mml:mi} \rangle \langle \text{mml:mn} \rangle 3 \langle \text{mml:mn} \rangle \langle \text{mml:msub} \langle \text{mml:mi} \text{monolayer} \text{A stable graphenelike supersalt with strong four-phonon scattering and low lattice thermal conductivity insensitive to temperature. Physical Review Materials, 2022, 6, .$	0.9	8
1549	Investigation on micro-mechanism of strain-induced and defect-regulated negative Poisson's ratio of graphene. Materials Chemistry and Physics, 2022, 288, 126412.	2.0	5
1550	In-situ formation of Are-MXY (M = Mo, W; (X $\hat{a}$ %o Y) = S, Se, Te) van der Waals heterostructure. Journal of Solid State Chemistry, 2022, 313, 123284.	1.4	2
1551	Two-dimensional host materials for lithium-sulfur batteries: A review and perspective. Energy Storage Materials, 2022, 50, 696-717.	9.5	26
1552	Silicene. , 2022, , 1-25.		0
1553	Two-dimensional Si <sub>2</sub> S with a negative Poisson's ratio and promising optoelectronic properties. Nanoscale, 2022, 14, 10573-10580.	2.8	3
1554	Borophene. , 2022, , 73-106.		0
1555	Technical evolution for the identification of Xenes: from microscopy to spectroscopy. , 2022, , 225-254.		0
1556	Integration paths for Xenes. , 2022, , 405-438.		1
1557	MÃ¶bius-aromatic interlocked Mn <sub>2</sub> B <sub>10</sub> H <sub>10</sub> wheel to metal-doped boranaphthalene M <sub>2</sub> @B <sub>10</sub> H <sub>8</sub> and M <sub>2</sub> B <sub>5</sub> 2D-sheets (M = Mn and Fe): A Molecules to Materials continuum using DFT Study. Chemical Science, 0, ,	3.7	1
1558	One-dimensional excitons in long phosphorene atomic chains. Physical Review B, 2022, 105, .	1.1	3
1559	Structure of 3-Borophene Studied by Total-Reflection High-Energy Positron Diffraction (TRHEPD). Molecules, 2022, 27, 4219.	1.7	1
1560	Phase transition of layer-stacked borophene under pressure. Physical Review B, 2022, 105, .	1.1	5
1561	Single-Element 2D Materials beyond Graphene: Methods of Epitaxial Synthesis. Nanomaterials, 2022, 12, 2221.	1.9	15
1562	Elemental Two-Dimensional Materials for Li/Na-Ion Battery Anode Applications. Chemical Record, 2022, 22, .	2.9	10
1563	Straightforward strategy for selecting and tuning substrates for two-dimensional material epitaxy. Physical Review Materials, 2022, 6, .	0.9	3

#	ARTICLE	IF	CITATIONS
1564	Covalent and van der Waals interactions in a vertical heterostructure composed of boron and carbon. <i>Physical Review B</i> , 2022, 105, .	1.1	14
1565	Preparation and Characterization of Boron Monosulfide Nanosheets with Tunable Bandgaps. <i>Vacuum and Surface Science</i> , 2022, 65, 302-308.	0.0	0
1566	Rational design of intrinsic and defective BGe monolayer as the anode material for Li-ion batteries. <i>Journal of Solid State Chemistry</i> , 2022, 314, 123418.	1.4	6
1567	Magnetron sputtering and electron beam evaporation systems for pure boron thin film coatings. <i>Journal of Physics: Conference Series</i> , 2022, 2291, 012026.	0.3	0
1568	Anisotropic optical transitions of gated $\hat{I}^2$ borophene. <i>Journal Physics D: Applied Physics</i> , 2022, 55, 395301.	1.3	2
1569	Chemical insights into two-dimensional quantum materials. <i>Matter</i> , 2022, 5, 2168-2189.	5.0	2
1570	Angular shaped AIE generator based luminophores for mechanochromism: An explosive sensor. <i>Materials Today Communications</i> , 2022, 32, 104050.	0.9	0
1571	Microwave Synthesized 2D Gold and Its 2D-2D Hybrids. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 6487-6495.	2.1	14
1572	Experimental Realization of Atomic Monolayer $\text{Si}_9\text{C}_{15}$ . <i>Advanced Materials</i> , 2022, 34, .	11.1	11
1573	Scalable Production of Ultrathin Boron Nanosheets from a Low-Cost Precursor. <i>Advanced Materials Interfaces</i> , 2022, 9, .	1.9	14
1574	Transition metal dichalcogenides (TMDCs) heterostructures: Optoelectric properties. <i>Frontiers of Physics</i> , 2022, 17, .	2.4	25
1575	Modeling of a vertical tunneling transistor based on Gr-hBN/hBN/borophene heterostructure. <i>Journal of Applied Physics</i> , 2022, 132, 034302.	1.1	3
1576	Opposite surface stress induced the distinctly different contact behaviors of monolayer and bilayer borophene on Ag(1 1 1). <i>Applied Surface Science</i> , 2022, 601, 154093.	3.1	4
1577	White lead: A new naturally occurring 2D material. <i>Journal of Materials Research</i> , 0, , .	1.2	0
1578	Electronic Topological Transition of 2D Boron by the Ion Exchange Reaction. <i>Journal of Physical Chemistry C</i> , 0, , .	1.5	8
1579	Development of Precisely Controlled Structures Containing Main Group Elements for Preparing Superatoms. <i>Chemistry Letters</i> , 2022, 51, 966-970.	0.7	0
1580	Hydrogen dissociation in Li-decorated borophene and borophene hydride: An ab-initio study. <i>Applied Surface Science</i> , 2022, 603, 154323.	3.1	8
1581	Linear and nonlinear optical propagation in 2D materials. <i>URSI Radio Science Bulletin</i> , 2021, 2021, 19-37.	0.2	3

#	ARTICLE	IF	CITATIONS
1582	An electron counting formula to explain and to predict hydrogenated and metallated borophenes. Chemical Communications, 2022, 58, 9882-9885.	2.2	6
1583	Two-dimensional van der Waals: characterization and manipulation of superconductivity. Wuli Xuebao/Acta Physica Sinica, 2022, .	0.2	0
1584	A bottom-up approach from medium-sized bilayer boron nanoclusters to bilayer borophene nanomaterials. Nanoscale, 2022, 14, 11443-11451.	2.8	12
1585	Fully auxetic and multifunctional of two-dimensional $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mi} \rangle \hat{\Gamma} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ -GeS and $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mi} \rangle \hat{\Gamma} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ -GeSe. Physical Review B, 2022, 106, .	1.1	5
1586	Effects of edge defects on $\hat{\Gamma}^{212}$ borophene nanoribbon conductance. Physics Letters, Section A: General, Atomic and Solid State Physics, 2022, 451, 128388.	0.9	3
1587	Transport signatures of anisotropic tilted Dirac cones in 8-Pmmn borophene. European Physical Journal B, 2022, 95, .	0.6	1
1588	Active absorption modulation by employing strong coupling between magnetic plasmons and borophene surface plasmons in the telecommunication band. Journal of Applied Physics, 2022, 132, .	1.1	1
1589	Boron Clusters in Biomedical Applications: A Theoretical Viewpoint. , 0, , .		3
1590	Theoretical Progress of 2D Six-Membered Ring Inorganic Materials as Anodes for Non-Lithium Ion Batteries. Small, 2022, 18, .	5.2	6
1591	Nitrogen Electroreduction on Borophene-Supported Atomic and Diatomic Transition Metals: Stability, Activity and Selectivity Improvements via Defect-Engineering. ChemSusChem, 2022, 15, .	3.6	3
1592	Multi-Functional Potassium Ion Assists Ammonium Vanadium Oxide Cathode for High-Performance Aqueous Zinc-Ion Batteries. Batteries, 2022, 8, 84.	2.1	3
1593	Enhanced confinement of infrared surface plasmon polaritons in borophene waveguides. Journal of Optics (United Kingdom), 2022, 24, 095004.	1.0	0
1594	Electronic properties of borophene based heterojunctions with MoS <sub>2</sub> and WSe <sub>2</sub> . Chemical Physics, 2022, 562, 111666.	0.9	3
1595	Enhancement in the hydrogen storage capability of borophene through yttrium doping: A theoretical study. Journal of Energy Storage, 2022, 55, 105500.	3.9	9
1596	Optical spectra of bilayer borophene synthesized on Ag(1 1 1) film. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2022, 282, 121711.	2.0	8
1597	Vacancy-engineered nodal-line semimetals. Scientific Reports, 2022, 12, .	1.6	1
1598	Fe@ $\Gamma$ -borophene as a promising catalyst for CO oxidation reaction: A first-principles study. Frontiers in Chemistry, 0, 10, .	1.8	2
1599	Computational Studies of Super-B as Anodes for AM (Li, Na, and K) Ion Batteries. Journal of the Electrochemical Society, 2022, 169, 090514.	1.3	4



#	ARTICLE	IF	CITATIONS
1600	2D boron-nitride featuring B4 tetrahedros: An efficient photocatalyst for water splitting. Molecular Catalysis, 2022, 531, 112662.	1.0	0
1601	Bilayer borophene prevails over monolayer counterpart. Nano Today, 2022, 46, 101608.	6.2	4
1602	TMB2C (TM=ATi, V): 2D transition metal borocarbide monolayer with intriguing electronic, magnetic and electrochemical properties. Applied Surface Science, 2022, 605, 154692.	3.1	7
1603	Hydrogen passivated $\langle \text{mml:math xmlns:mml= http://www.w3.org/1998/Math/MathML altimg= s111.svg display="inline" id="d1e548" \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle \hat{1}^2 \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 12 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 15 \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 154825$ nanoribbon: A propitious one-dimensional metallic anode for sodium-ion rechargeable batteries. Applied Surface Science, 2022, 606, 154825.		
1604	The structure and electronic properties of the MoSe <sub>2</sub> /PtS <sub>2</sub> van der Waals heterostructure. Physical Chemistry Chemical Physics, 2022, 24, 19853-19864.	1.3	2
1607	Borophene-Based Mixed-Dimensional Van Der Waals Heterojunctions for High-Performance Self-Powered Photodetector. SSRN Electronic Journal, 0, , .	0.4	0
1608	Lithium stabilizes square-two-dimensional metal sheets: a computational exploration. Nanoscale, 2022, 14, 11770-11778.	2.8	0
1609	The structural, electronic and optical properties of four $\hat{1}\pm$ -Se-based heterostructures with hyperbolic characteristics. Physical Chemistry Chemical Physics, 2022, 24, 21674-21687.	1.3	1
1610	Giant in-plane optical and electronic anisotropy of tellurene: a quantitative exploration. Nanoscale, 2022, 14, 12238-12246.	2.8	7
1611	Quantum Dots: Applications in Environmental Remediation. , 2022, , 1-22.		0
1612	Several semiconducting two-dimensional silicon nanosheets assembled from zigzag silicene nanoribbons. Nanoscale, 2022, 14, 14038-14045.	2.8	2
1613	A two-dimensional Be <sub>2</sub> Au monolayer with planar hexacoordinate s-block metal atoms: a superconducting global minimum Dirac material with two perfect Dirac node-loops. Chemical Science, 2022, 13, 11099-11109.	3.7	5
1614	Identification of DNA nucleotides by conductance and tunnelling current variation through borophene nanogaps. Physical Chemistry Chemical Physics, 2022, 24, 21427-21439.	1.3	3
1615	Quantum transport properties of bilayer borophene nanoribbons. Wuli Xuebao/Acta Physica Sinica, 2022, .	0.2	0
1616	Van der Waals imprinting of black-phosphorus-like binary alloyed monolayers with tunable band gaps and moiré superstructures. Physical Review B, 2022, 106, .	1.1	3
1617	High Pressure Study of New Type of MAX Phases: Hf <sub>2</sub> AB <sub>2</sub> (A=In, Sn). Physica Status Solidi (B): Basic Research, 0, , 2200102.	0.7	1
1618	A Two-Dimensional Borophene Supercapacitor. , 2022, 4, 1929-1936.		18
1619	Freestanding $\hat{1}\pm$ -rhombohedral borophene nanosheets: preparation and memory device application. Nanotechnology, 2022, 33, 505601.	1.3	3

#	ARTICLE	IF	CITATIONS
1620	The marriage of Xenex and Hydrogels: Fundamentals, Applications, and Outlook. Innovation(China), 2022, , 100327.	5.2	5
1621	Optical and thermoelectric properties of non-janus CuI and AgI, and Janus $\text{Cu}_2\text{Ag}$ monolayers by many-body perturbation theory. Physical Review B, 2022, 106, .	1.1	5
1622	Sumanene Monolayer of Pure Carbon: A Two-Dimensional Kagome Analogy Lattice with Desirable Band Gap, Ultrahigh Carrier Mobility, and Strong Exciton Binding Energy. Small, 2022, 18, .	5.2	5
1623	Electronic Transport Properties and Nanodevice Designs for Monolayer $\text{MoSiP}_4$ . Physical Review Applied, 2022, 18, .	3.1	3
1624	Adsorption Behavior of Toxic Carbon Dichalcogenides ( $\text{CX}_2$ ; X = O, S, or Se) on $\hat{1}^212$ Borophene and Pristine Graphene Sheets: A DFT Study. Nanomaterials, 2022, 12, 3411.	1.9	4
1625	Metallic B2C3P Monolayer as Li-Ion Battery Materials: A First-Principles Study. Processes, 2022, 10, 1809.	1.3	7
1626	2D Xenex: Optical and Optoelectronic Properties and Applications in Photonic Devices. Advanced Functional Materials, 2022, 32, .	7.8	12
1627	Bottom up approach of metal assisted electrochemical exfoliation of boron towards borophene. Scientific Reports, 2022, 12, .	1.6	10
1628	Thermal rectification in ultra-narrow hydrogen functionalized graphene: a non-equilibrium molecular dynamics study. Journal of Molecular Modeling, 2022, 28, .	0.8	3
1629	Topological and quantum stability of low-dimensional crystalline lattices with multiple nonequivalent sublattices*. New Journal of Physics, 2022, 24, 103015.	1.2	8
1630	Prediction of single-atom-thick transition metal nitride $\text{CrN}_4$ with a square-planar network and high-temperature ferromagnetism. Physical Review B, 2022, 106, .	2.8	12
1631	Borophene reinforcing copper matrix composites: Preparation and mechanical properties. Journal of Alloys and Compounds, 2023, 930, 167370.	2.8	12
1632	Novel two-dimensional PdSe phase: A puckered material with excellent electronic and optical properties. Frontiers of Physics, 2022, 17, .	2.4	4
1633	Experimental Realization of Semiconducting Monolayer $\text{Si}_2\text{Te}_2$ Films. Advanced Functional Materials, 2022, 32, .	7.8	6
1634	Theoretical study of the line defect in $\hat{1}^3$ -borophene: structures, electronic properties, direct-current and alternating-current transport properties. Applied Surface Science, 2023, 608, 155033.	3.1	3
1635	Li-decorated borophene-graphene heterostructure under gas adsorption. Journal of Physics and Chemistry of Solids, 2022, 171, 111033.	1.9	6
1636	Signatures of Lifshitz transition in the optical conductivity of two-dimensional tilted Dirac materials. Physical Review B, 2022, 106, .	1.1	8
1637	Heterogeneous catalytic ozonation by amorphous boron for degradation of atrazine in water. Chinese Chemical Letters, 2023, 34, 107876.	4.8	4

#	ARTICLE	IF	CITATIONS
1638	Two-dimensional materials for electrocatalysis and energy storage applications. Inorganic Chemistry Frontiers, 2022, 9, 6008-6046.	3.0	9
1639	Effect of defects on a nano-borophene structure consisting of mixed spins $S=2$ and $S=5/2$ : Monte Carlo simulations. Indian Journal of Physics, 2023, 97, 767-777.	0.9	11
1640	Electron-Beam Synthesis and Modification and Properties of Boron Coatings on Alloy Surfaces. Ceramics, 2022, 5, 706-720.	1.0	4
1641	Tuning Band Gaps in Twisted Bilayer Borophene. Journal of Physical Chemistry C, 2022, 126, 17769-17776.	1.5	4
1642	Arsenic Monolayers Formed by Zero-Dimensional Tetrahedral Clusters and One-Dimensional Armchair Nanochains. ACS Nano, 2022, 16, 17087-17096.	7.3	2
1643	Substrate-Mediated Borophene Polymorphs through Hydrogenation of Two-Dimensional Boron Sheets. Journal of Physical Chemistry Letters, 2022, 13, 10222-10229.	2.1	3
1644	Theoretical exploration of mechanical and superconducting properties of two-dimensional Cairo penta- $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mi} \rangle \text{BP} \langle \text{mml:mi} \rangle \langle \text{mml:mn} \rangle 2 \langle \text{mml:mn} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mn} \rangle$ : A first-principles study. Physical Review Materials, 2022, 6, .	0.9	0
1645	Intrinsic and engineered properties of black phosphorus. Materials Today Physics, 2022, 28, 100895.	2.9	9
1646	Electron delocalization in clusters. , 2023, , 19-39.		0
1647	First-principles prediction of the missed Pmmn phase for a GaTe monolayer as a new two-dimensional semiconductor. Scripta Materialia, 2023, 223, 115073.	2.6	10
1648	Anomalous strain-dependent charge density in honeycomb borophene. Computational Materials Science, 2023, 216, 111838.	1.4	0
1649	First-principles investigate on the electronic structure and magnetic properties of 3d transition metal doped honeycomb InS monolayer. Applied Surface Science, 2023, 608, 155240.	3.1	7
1650	Half-metallicity and perfect spin-filtering effect based on vacancy interference in boron-phosphide nanoribbon: A first-principle study. Applied Surface Science, 2023, 610, 155475.	3.1	0
1651	Catalytic properties of borophene/ $\text{MoS}_2$ heterojunctions for hydrogen evolution reaction under different stacking conditions. Journal of Materials Chemistry A, 2022, 10, 24866-24876.	5.2	70
1652	Induced circular dichroism of achiral dielectric elliptical hole arrays with a monolayer borophene film. Physical Chemistry Chemical Physics, 2022, 24, 28362-28370.	1.3	4
1653	Epitaxial growth of elemental 2D materials. , 2022, , .		0
1654	Dimer-hydrogen adsorption process on borophene $\sqrt{2} \times \sqrt{2}$ surfaces for hydrogen storage application. AIP Conference Proceedings, 2022, , .	0.3	0
1655	Plasmonic features of a hybrid system comprising borophene and aluminium. Computational Materials Science, 2023, 217, 111893.	1.4	1

#	ARTICLE	IF	CITATIONS
1656	Light-induced tumor theranostics based on chemical-exfoliated borophene. Light: Science and Applications, 2022, 11, .	7.7	7
1657	Borophene-based mixed-dimensional van der waals heterojunctions for high-performance self-powered photodetector. Applied Surface Science, 2023, 611, 155668.	3.1	5
1658	Realization of Ultrahigh Strain Modulation in Two-dimensional $\text{In}_2\text{Se}_3$ Layers. Advanced Electronic Materials, 2023, 9, .	2.6	2
1659	Properties of Nanomaterials. , 2023, , 47-59.		0
1660	Layer-Contacted Graphene-Like BN/Ultrathin $\text{Bi}_2\text{O}_3/\text{Br}$ Stacking for Boosting Photocatalytic Molecular Oxygen Activation. Transactions of Tianjin University, 2023, 29, 235-245.	3.3	2
1661	Evolution of Low-Dimensional Phosphorus Allotropes on Ag(111). Chemistry of Materials, 2022, 34, 10651-10658.	3.2	3
1662	DFT+U study on the magnetic properties of 3d transition metal doped $\text{In}_2$ borophene. Physica E: Low-Dimensional Systems and Nanostructures, 2023, 147, 115576.	1.3	2
1663	Solid phase crystallization of amorphous silicon at the two-dimensional limit. Nanoscale Advances, 2023, 5, 668-674.	2.2	0
1664	Hydrogenated/Fluorinated Phase Borophene Nanoribbons as Nano-Interconnects. IEEE Nanotechnology Magazine, 2022, 21, 801-809.	1.1	0
1665	A novel highly stable two-dimensional boron phase with promising potentials in energy fields. Journal of Materials Chemistry A, 2023, 11, 828-837.	5.2	2
1666	Theoretical design of two-dimensional $\text{AMInP}_2\text{X}_3\text{Y}_3$ ( $\text{AM} = \text{Li, Na}$ ) Tj ETQq0 0 0 rgBT /Overlock 1 570-577.	2.6	2
1667	A plier-shaped binary molecular wheel $\text{B}_7\text{Mg}_4$ cluster: hybrid in-plane heptacoordination, double $\pi$ aromaticity, and electronic transmutation. New Journal of Chemistry, 0, , .	1.4	0
1668	Quantum capacitance of multi-layered $\text{In}_6$ borophene: A DFT study. Electrochimica Acta, 2023, 439, 141589.	2.6	10
1669	Insights into the regulation of energy storage behaviors of antimonene in aqueous electrolytes. Electrochimica Acta, 2023, 439, 141585.	2.6	2
1670	Two-dimensional $\text{Be}_2\text{Al}$ and $\text{Be}_2\text{Ga}$ monolayer: anti-van Hove singularities, planar hexacoordinate bonding and superconductivity. Physical Chemistry Chemical Physics, 2023, 25, 1105-1113.	1.3	1
1671	Effects of tilted Dirac cones and in-plane electric field on the valley-dependent magneto-optical absorption spectra in monolayer $\text{Pmmn}$ borophene. Physics Letters, Section A: General, Atomic and Solid State Physics, 2023, 457, 128578.	0.9	1
1672	Systematic investigation of structure and electronic properties of Cs doped anionic Bn clusters. Computational Materials Science, 2023, 218, 111931.	1.4	0
1673	Ultra-stable metallic freestanding multilayer borophene with tunable work function. Applied Surface Science, 2023, 612, 155842.	3.1	1

#	ARTICLE	IF	CITATIONS
1674	An investigation of halogen induced improvement of $\text{h}^{12}$ borophene for Na/Li storage by density functional theory. <i>Journal of Molecular Graphics and Modelling</i> , 2023, 119, 108373.	1.3	7
1675	Buckling in novel graphene-like thoriumene and uraniumene monolayers: Electronic, mechanical, and optical properties from first-principles calculations. <i>Materials Today Communications</i> , 2023, 34, 105075.	0.9	0
1676	$\text{Be}_3\text{B}_{11}$ cluster: a dynamically fluxional beryllio-borospherene. <i>Physical Chemistry Chemical Physics</i> , 2023, 25, 2846-2852.	1.3	3
1677	Multielectron reaction of $\text{AlCl}_3$ in borophene for rechargeable aluminum batteries. <i>Energy Material Advances</i> , 2022, 2022, .	4.7	10
1678	Work Function Modification of Borophene by Barium Decoration Towards Room Temperature $\text{NO}_2$ Gas Sensor. , 2022, , .	0.2	0
1679	Work Function Modification of Borophene by Barium Decoration Towards Room Temperature $\text{NO}_2$ Gas Sensor. , 2022, , .		1
1680	Growing borophene on metal substrates: A theoretical study of the role of oxygen on Al(111). <i>Physical Review Materials</i> , 2022, 6, .	0.9	3
1681	Borophene-ZnO heterostructures: Preparation and application as broadband photonic nonvolatile memory. <i>Nano Research</i> , 2023, 16, 5826-5833.	5.8	8
1682	Room Temperature Metal-Catalyzed Ultrafast Gasification of Ultrathin Boron Flakes. <i>Advanced Functional Materials</i> , 0, , 2210729.	7.8	0
1683	Crystalline BC <sub>2</sub> N quantum dots. <i>Nano Research</i> , 2023, 16, 7837-7843.	5.8	6
1684	Beta-borophene under the circularly polarized radiation: polaritonic and polaronic dynamic band structure. <i>European Physical Journal Plus</i> , 2022, 137, .	1.2	4
1686	Quasi-planar Co atom-doped boron cluster: $\text{CoB}_{192}$ . <i>Journal of Molecular Modeling</i> , 2023, 29, .	0.8	0
1687	Floquet engineering of tilted and gapped Dirac bandstructure in $1T'\text{-MoSS}_2$ . <i>Scientific Reports</i> , 2022, 12, .	1.6	5
1689	Numerical Investigation and Response Surface Optimization of the Effective Modulus and Electrical and Thermal Conductivities of the Borophene Nanoplatelet-Reinforced PEDOT:PSS Nanocomposite for Energy Storage Application. <i>ACS Omega</i> , 2022, 7, 48447-48466.	1.6	2
1690	Electronic level modelling of graphene-borophene lateral heterostructures as anodes in Li-ion batteries. <i>Applied Surface Science</i> , 2023, 614, 156227.	3.1	2
1691	Porous-Induced Performance Enhancement of Flat Boron Sheets for Lithium-Ion Batteries. <i>Journal of Physical Chemistry C</i> , 2022, 126, 21542-21549.	1.5	1
1692	Ab Initio Study of High-Capacity Hydrogen Storage in Lithium-Shrouded Honeycomb Borophene Oxide Nanosheet. <i>Journal of Physical Chemistry C</i> , 2022, 126, 20762-20772.	1.5	2
1693	On-Surface Synthesis and Evolution of Self-Assembled Poly( <i>p</i> -phenylene) Chains on Ag(111): A Joint Experimental and Theoretical Study. <i>Journal of Physical Chemistry C</i> , 2023, 127, 393-402.	1.5	1

#	ARTICLE	IF	CITATIONS
1694	A scheme to fabricate magnetic graphene-like cobalt nitride $\text{CoN}_4$ monolayer proposed by first-principles calculations. Applied Physics Express, 2023, 16, 015505.	1.1	0
1695	Introduction to Nanotechnology. , 2023, , 1-17.		0
1696	Effects of Electric Field and External Magnetic Field on the Electronic and Thermoelectric Properties of the h-BAs Monolayer and Bilayer: Tight-Binding Approach. ECS Journal of Solid State Science and Technology, 2022, 11, 123008.	0.9	1
1697	A Rising 2D Star: Novel MBenes with Excellent Performance in Energy Conversion and Storage. Nano-Micro Letters, 2023, 15, .	14.4	29
1698	High-Throughput Computational Screening of Two-Dimensional Semiconductors. Journal of Physical Chemistry Letters, 2022, 13, 11581-11594.	2.1	51
1699	Recent Advances in Surface Modifications of Elemental Two-Dimensional Materials: Structures, Properties, and Applications. Molecules, 2023, 28, 200.	1.7	6
1700	Band Gap Opening in Borophene/GaN and Borophene/ZnO Van der Waals Heterostructures Using Axial Deformation: First-Principles Study. Materials, 2022, 15, 8921.	1.3	2
1701	Borophene-based materials for energy, sensors and information storage applications. , 2023, 2, e9120051.		42
1702	2D Ladder Polyborane: An Ideal Dirac Semimetal with a Multi-Field-Tunable Band Gap. ACS Nano, 2023, 17, 1638-1645.	7.3	3
1703	TMB <sub>12</sub> : a newly designed 2D transition-metal boride for spintronics and electrochemical catalyst applications. Nanoscale, 2023, 15, 2079-2086.	2.8	6
1704	The rise of two-dimensional tellurium for next-generation electronics and optoelectronics. Frontiers of Physics, 2023, 18, .	2.4	7
1705	Discovery of Clustered-P1 Borophene and Its Application as the Lightest High-Performance Transistor. ACS Applied Materials & Interfaces, 2023, 15, 3182-3191.	4.0	8
1706	Structural Evolution and Electronic Properties of Selenium-Doped Boron Clusters $\text{SeBnO}_n$ ( $n = 3-16$ ). Molecules, 2023, 28, 357.	1.7	4
1707	Valley-polarized and supercollimated electronic transport in an 8-Pmmn borophene superlattice. New Journal of Physics, 2023, 25, 013020.	1.2	3
1708	Synthesis of Two-Dimensional Metal, Metal Oxide and Metal Hydroxide Nanomaterials for Biosensing. Environmental Chemistry for A Sustainable World, 2023, , 161-185.	0.3	0
1709	Electric field modulated valley- and spin-dependent electron retroreflection and Klein tunneling in a tilted p-n junction of monolayer borophene. Physical Review B, 2023, 107, .	1.1	2
1710	High temperature phases of borophene: borophene glass and liquid. Nanoscale Horizons, 2023, 8, 353-360.	4.1	3
1711	Metal halide HgI <sub>2</sub> monolayer with auxetic property and photocatalysis application. Computational Materials Science, 2023, 219, 112007.	1.4	1

#	ARTICLE	IF	CITATIONS
1712	Computational screening of two-dimensional substrates for stabilizing honeycomb borophene. Applied Surface Science, 2023, 615, 156388.	3.1	3
1713	Ab Initio Investigation of Boron- and Nitrogen-Doped Penta-graphene in the Presence of a Vacancy Defect. Journal of Electronic Materials, 0, , .	1.0	0
1714	High-temperature ferromagnetism and strong $\pi$ -conjugation feature in two-dimensional manganese tetranitride. Chinese Physics B, 0, , .	0.7	0
1715	Nanoconnect design based on edge fluorinated/hydrogenated zigzag borophene nanoribbons: an $ab\ initio$ analysis. Physical Chemistry Chemical Physics, 2023, 25, 5122-5129.	1.3	2
1716	A theoretical study on the line defects in $\Gamma^2_{12}$ -borophene: enhanced direct-current and alternating-current conductances. Physical Chemistry Chemical Physics, 0, , .	1.3	0
1717	High-Throughput DFT-Based Discovery of Next Generation Two-Dimensional (2D) Superconductors. Nano Letters, 2023, 23, 969-978.	4.5	12
1718	First Theoretical Realization of a Stable Two-Dimensional Boron Fullerene Network. Applied Sciences (Switzerland), 2023, 13, 1672.	1.3	1
1719	Pd nanoparticles-decorated borophene nanosheets for intrinsic polarization-induced visible light photocatalysis. Catalysis Science and Technology, 2023, 13, 1558-1570.	2.1	6
1720	Intercalation Engineering of 2D Materials at Macroscale for Smart Human-Machine Interface and Double-Layer to Faradaic Charge Storage for Ions Separation. Advanced Materials Interfaces, 2023, 10, .	1.9	4
1721	Far-field thermal properties of $\Gamma^2_{12}$ borophene under an external electric field. Physical Chemistry Chemical Physics, 2023, 25, 5694-5700.	1.3	3
1722	Exploring 2D materials at surfaces through synchrotron-based core-level photoelectron spectroscopy. Surface Science Reports, 2023, 78, 100586.	3.8	1
1723	A Review on the Materials and Applications of Nanophotonics. , 2023, , 116-140.		1
1724	Tight-Binding Model of $\Gamma^3$ and $\Gamma^2_{12}$ Structures of Borophene. Journal of Electronic Materials, 2023, 52, 2544-2552.	1.0	2
1725	Gas Sensors Based on Borophene Nanoribbon Edge-Terminated by Fluorine. Journal of Electronic Materials, 2023, 52, 2359-2371.	1.0	3
1726	Lateral Heterostructures of Graphene and h-BN with Atomic Lattice Coherence and Tunable Rotational Order. Small, 0, , 2207217.	5.2	0
1727	Borophene molecular plasmons. Journal of Physics and Chemistry of Solids, 2023, 176, 111267.	1.9	0
1728	Kubo conductivity in phosphorene. Journal of Physics and Chemistry of Solids, 2023, 176, 111257.	1.9	1
1729	Investigation on electrochemical performance of striped, $\Gamma^2_{12}$ and $\Gamma^3$ Borophene as anode materials for lithium-ion batteries. Journal of Molecular Graphics and Modelling, 2023, 120, 108423.	1.3	14

#	ARTICLE	IF	CITATIONS
1730	Atomically thin metallic Si and Ge allotropes with high Fermi velocities. Physical Review B, 2023, 107, .	1.1	2

1731	Chemical Bonding and Dynamic Structural Fluxionality of a Boron-Based Na <sub>5</sub> B <sub>7</sub> Sandwich Cluster. Molecules, 2023, 28, 3276.	1.7	0
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1732	Atomic-scale friction of black phosphorus/degraded Cu substrate: A route to robust superlubricity obtained by the critical load. Applied Surface Science, 2023, 619, 156749.	3.1	2
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1733

First-principles prediction of two-dimensional Janus  $\chi$ - $\text{Mn}_2\text{X}$  ( $\chi = \text{Si}, \text{Ge}$ )

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#	ARTICLE	IF	CITATIONS
1748	Thermal Stability and Sublimation of Two-Dimensional Co <sub>9</sub> Se <sub>8</sub> Nanosheets for Ultrathin and Flexible Nanoelectronic Devices. ACS Applied Nano Materials, 2023, 6, 2421-2428.	2.4	0
1749	$\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mi mathvariant="normal"} \rangle \text{Si} \langle \text{mml:mn} \rangle 9 \langle \text{mml:mn} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mi mathvariant="normal"} \rangle \text{C} \langle \text{mml:mn} \rangle 15 \langle \text{mml:mn} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:math} \rangle$ monolayer: A silicon carbide allotrope with remarkable physical properties. Physical Review B, 2023, 107, .	1.1	7
1750	Theoretical Study on Zigzag Boron Nitride Nanowires. ChemPhysChem, 2023, 24, .	1.0	2
1751	First-principles study of the physical properties of Ti <sub>2</sub> SnX (X: C, N) based 211-MAX phases. Chemical Physics, 2023, 568, 111850.	0.9	4
1752	Unlocking the potential of hexagonal boron sheets: Giant improvements in thermal conductivity and mechanics through molybdenum intercalation. Materials Today Physics, 2023, 32, 101012.	2.9	2
1753	Highly efficient, remarkable sensor activity and energy storage properties of MXenes and borophene nanomaterials. Progress in Solid State Chemistry, 2023, 70, 100392.	3.9	5
1754	Non-toxic precursor for chemical vapor deposition of borophene on Cu(111) surface. Materials Chemistry and Physics, 2023, 299, 127527.	2.0	2
1755	Two-Dimensional Semiconductors with High Intrinsic Carrier Mobility at Room Temperature. Physical Review Letters, 2023, 130, .	2.9	15
1756	Geometric and electronic diversity of metal doped boron clusters. Journal of Physics Condensed Matter, 2023, 35, 183002.	0.7	4
1757	Experimental evidence of surface copper boride. Nano Research, 2023, 16, 9602-9607.	5.8	6
1758	Catalytic CO Oxidation by Single Atom Catalysts of Transition Metal-doped $\text{I}^3$ -Borophene: A First Principles Study. Chemistry Letters, 2023, 52, 249-253.	0.7	1
1759	Environmentally sustainable implementations of two-dimensional nanomaterials. Frontiers in Chemistry, 0, 11, .	1.8	4
1760	2D material-based sensing devices: an update. Journal of Materials Chemistry A, 2023, 11, 6016-6063.	5.2	16
1761	Selective binding and periodic arrangement of magic boron clusters on monolayer borophene. Proceedings of the National Academy of Sciences of the United States of America, 2023, 120, .	3.3	2
1762	First-principles calculations of electron-phonon coupling in NaSnSb: buckling and pressurization. Superconductor Science and Technology, 2023, 36, 055002.	1.8	0
1763	Chemical Vapor Deposition Growth of Few-Layer $\text{I}^{12}$ -Borophane on Copper Foils toward Broadband Photodetection. ACS Applied Materials & Interfaces, 0, , .	4.0	3
1764	Perfect Narrow-Band Absorber of Monolayer Borophene in All-Dielectric Grating Based on Quasi-Bound State in the Continuum. Annalen Der Physik, 2023, 535, .	0.9	2
1765	Stability and electronic properties of hydrogenated $\langle \text{scp} \rangle \text{C}_3\text{B} \langle \text{scp} \rangle$ structure. International Journal of Quantum Chemistry, 2023, 123, .	1.0	0

#	ARTICLE	IF	CITATIONS
1766	Superior Thermoelectric Properties of Twisted Angle Superlattice Borophene Induced by Interlayer Electrons Transport. Small, 2023, 19, .	5.2	16
1767	Epitaxial growth of borophene on substrates. Progress in Surface Science, 2023, 98, 100704.	3.8	4
1768	Promising transition metal decorated borophene catalyst for water splitting. RSC Advances, 2023, 13, 9678-9685.	1.7	5
1769	Prediction of two stable freestanding borophenes: Structure, electronic properties, and superconductivity. Physical Review Materials, 2023, 7, .	0.9	5
1770	Accelerated Synthesis of Borophane (HB) Sheets through HCl-Assisted Ion-Exchange Reaction with YCrB4. Molecules, 2023, 28, 2985.	1.7	4
1772	Theory of sigma bond resonance in flat boron materials. Nature Communications, 2023, 14, .	5.8	1
1773	Emerging Versatile Two-Dimensional MoSi <sub>2</sub> N <sub>4</sub> Family. Advanced Functional Materials, 2023, 33, .	7.8	27
1774	Recent progress in energy, environment, and electronic applications of MXene nanomaterials. Nanoscale, 2023, 15, 9891-9926.	2.8	16
1775	Polygonal tessellations as predictive models of molecular monolayers. Proceedings of the National Academy of Sciences of the United States of America, 2023, 120, .	3.3	2
1776	Recent advances, properties, fabrication and opportunities in two-dimensional materials for their potential sustainable applications. Energy Storage Materials, 2023, 59, 102780.	9.5	12
1777	Graphene: A Graphene Allotrope with Desirable Auxeticity and Dirac Cone. Advanced Theory and Simulations, 0, .	1.3	0
1778	Promising M <sub>2</sub> CO <sub>2</sub> /MoX <sub>2</sub> (M = Hf, Zr; X = S, Se, Te) Heterostructures for Multifunctional Solar Energy Applications. Molecules, 2023, 28, 3525.	1.7	3
1779	Quo Vadis, Borophene?. Nano Today, 2023, 50, 101856.	6.2	1
1780	Prediction of gas adsorption on borophene: A density functional theory study. Solid State Communications, 2023, 368, 115174.	0.9	1
1781	Emerging monoelemental 2D materials (Xenes) for biosensor applications. Nano Research, 2023, 16, 7030-7052.	5.8	3
1782	Theoretical and molecular dynamics studies on the negative Poisson's ratio of graphene regulated by epoxy groups. Diamond and Related Materials, 2023, 136, 109955.	1.8	0
1783	Lattice thermal conductivity and Young's modulus of XN <sub>4</sub> (X = Be, Mg and Pt) 2D materials using machine learning interatomic potentials. Physical Chemistry Chemical Physics, 2023, 25, 12923-12933.	1.3	3
1791	Quantum Dots: Applications in Environmental Remediation. , 2023, , 1245-1266.		0

#	ARTICLE	IF	CITATIONS
1792	Evolution of borophene as a smart 2-dimensional material for biomedical applications. AIP Conference Proceedings, 2023, , .	0.3	0
1799	Dirac materials beyond graphene. , 2024, , 329-343.		0
1802	Carbon-/boron-/nitrogen-substituted germaneness. , 2023, , 113-172.		0
1842	Surface-functionalized boron nanosheets and their assembled suprastructures with unprecedented proton-transport properties. Chemical Communications, 0, , .	2.2	0
1843	Green Functional Nanomaterials: Synthesis and Application. , 2023, , 45-65.		0
1863	Structural and electronic properties of borophene and BC <sub>3</sub> over H-diamond (100). , 2023, , .		0
1917	Establishment and Research of a Janus SbBiSi <sub>2</sub> Monolayer Structure Model. , 2023, , .		0
1936	Sonochemically synthesized hydride-stabilized boron nanosheets <i>via</i> radical-assisted oxidative exfoliation for energy storage applications. Chemical Communications, 0, , .	2.2	0
1939	Prediction of 2D group-11 chalcogenides: insights into novel auxetic M <sub>2</sub> X (M = Cu, Ag, Au;) Tj ETQq0 0.0 rgBT /Qverlock 10	1.3	0
2004	Borophene nanomaterials: synthesis and applications in biosensors. Materials Advances, 2024, 5, 1803-1816.	2.6	0
2020	Stacking engineering in layered homostructures: transitioning from 2D to 3D architectures. Physical Chemistry Chemical Physics, 2024, 26, 7988-8012.	1.3	0
2041	Growth of 2D boron materials. , 2024, , 921-960.		0