

Two-dimensional multiferroics in monolayer group IV

2D Materials

4, 015042

DOI: [10.1088/2053-1583/4/1/015042](https://doi.org/10.1088/2053-1583/4/1/015042)

Citation Report

#	ARTICLE	IF	CITATIONS
1	Heterostructures containing dichalcogenides-new materials with predictable nanoarchitectures and novel emergent properties. Semiconductor Science and Technology, 2017, 32, 093004.	1.0	26
2	Monolayer AgBiP ₂ Se ₆ : an atomically thin ferroelectric semiconductor with out-plane polarization. Nanoscale, 2017, 9, 8427-8434.	2.8	97
3	Electronic and optical properties of strained graphene and other strained 2D materials: a review. Reports on Progress in Physics, 2017, 80, 096501.	8.1	383
4	Design of new photovoltaic systems based on two-dimensional group-IV monochalcogenides for high performance solar cells. Journal of Materials Chemistry A, 2017, 5, 24145-24152.	5.2	64
5	Two-dimensional square buckled Rashba lead chalcogenides. Physical Review B, 2017, 96, .	1.1	29
6	Promising ferroelectricity in 2D group IV tellurides: a first-principles study. Applied Physics Letters, 2017, 111, .	1.5	106
7	Out-of-Plane Piezoelectricity and Ferroelectricity in Layered In_2Se_3 Nanoflakes. Nano Letters, 2017, 17, 5508-5513.	4.5	567
8	Large Bulk Photovoltaic Effect and Spontaneous Polarization of Single-Layer Monochalcogenides. Physical Review Letters, 2017, 119, 067402.	2.9	182
9	Two-dimensional hyperferroelectric metals: A different route to ferromagnetic-ferroelectric multiferroics. Physical Review B, 2017, 96, .	1.1	113
10	Giant Optical Second Harmonic Generation in Two-Dimensional Multiferroics. Nano Letters, 2017, 17, 5027-5034.	4.5	137
11	Photostrictive Two-Dimensional Materials in the Monochalcogenide Family. Physical Review Letters, 2017, 118, 227401.	2.9	70
12	First-principles study on the electronic, optical, and transport properties of monolayer In_2S_3 - and In_2Se_3 -GeSe. Physical Review B, 2017, 96, .	1.1	81
13	A controllable robust multiferroic GaTeCl monolayer with colossal 2D ferroelectricity and desirable multifunctionality. Nanoscale, 2018, 10, 5990-5996.	2.8	59
14	Ferroelectric engineering of two-dimensional group-IV monochalcogenides: The effects of alloying and strain. Journal of Materiomics, 2018, 4, 139-143.	2.8	21
15	Allotropes of Phosphorus with Remarkable Stability and Intrinsic Piezoelectricity. Physical Review Applied, 2018, 9, .	1.5	16
16	Piezoelectric properties in two-dimensional materials: Simulations and experiments. Materials Today, 2018, 21, 611-630.	8.3	219
17	Tunable ferroelectricity and anisotropic electric transport in monolayer In_2S_3 -GeSe. Physical Review B, 2018, 97, .	1.1	72
18	Tuning the ferroelectric-to-paraelectric transition temperature and dipole orientation of group-IV monochalcogenide monolayers. Physical Review B, 2018, 97, .	1.1	79

#	ARTICLE	IF	CITATIONS
19	Defects controlled hole doping and multivalley transport in SnSe single crystals. <i>Nature Communications</i> , 2018, 9, 47.	5.8	95
20	The rise of two-dimensional van der Waals ferroelectrics. <i>Wiley Interdisciplinary Reviews: Computational Molecular Science</i> , 2018, 8, e1365.	6.2	127
21	Computational design and property predictions for two-dimensional nanostructures. <i>Materials Today</i> , 2018, 21, 391-418.	8.3	78
22	Robust ferroelectricity in two-dimensional SbN and BiP. <i>Nanoscale</i> , 2018, 10, 7984-7990.	2.8	82
23	Unconventional two-dimensional germanium dichalcogenides. <i>Nanoscale</i> , 2018, 10, 7363-7368.	2.8	26
24	Electrically tunable polarizer based on 2D orthorhombic ferrovalley materials. <i>2D Materials</i> , 2018, 5, 011001.	2.0	46
25	A two-dimensional tetragonal yttrium nitride monolayer: a ferroelastic semiconductor with switchable anisotropic properties. <i>Nanoscale</i> , 2018, 10, 215-221.	2.8	62
26	Contacts to solution-synthesized SnS nanoribbons: dependence of barrier height on metal work function. <i>Nanoscale</i> , 2018, 10, 319-327.	2.8	25
27	Water Splits To Degrade Two-Dimensional Group-IV Monochalcogenides in Nanoseconds. <i>ACS Central Science</i> , 2018, 4, 1436-1446.	5.3	53
28	Magnetic impurity bands in GaS : Towards understanding the anomalous spin-glass transition. <i>Physical Review B</i> , 2018, 98, .	1.1	3
29	Observation of Novel Multifunctionalities in Monolayer CdO. <i>Advanced Theory and Simulations</i> , 2018, 1, 1800107.	1.3	11
30	Room-temperature ferroelectricity and a switchable diode effect in two-dimensional In_2Se_3 thin layers. <i>Nanoscale</i> , 2018, 10, 14885-14892.	2.8	173
31	Ferroelectric Field-Effect Transistors Based on MoS_2 and CuInP_2S_6 Two-Dimensional van der Waals Heterostructure. <i>ACS Nano</i> , 2018, 12, 6700-6705.	7.3	246
32	Strain-induced gauge and Rashba fields in ferroelectric Rashba lead chalcogenide PbX monolayers ($\text{Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 217 Td}$). <i>Physical Review B</i> , 2018, 98, .	1.1	3
33	Two-dimensional multiferroic semiconductors with coexisting ferroelectricity and ferromagnetism. <i>Applied Physics Letters</i> , 2018, 113, .	1.5	114
34	Room temperature in-plane ferroelectricity in van der Waals In_2Se_3 . <i>Science Advances</i> , 2018, 4, eaar7720.	4.7	224
35	Switchable Rashba effect by dipole moment switching in an Ag_2Te monolayer. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 385502.	0.7	4
36	Two-dimensional ferroelastic topological insulators in single-layer Janus transition metal dichalcogenides MSSe . <i>Physical Review B</i> , 2018, 98, .	1.4	68

#	ARTICLE	IF	CITATIONS
37	Growth Mechanisms of Anisotropic Layered Group IV Chalcogenides on van der Waals Substrates for Energy Conversion Applications. ACS Applied Nano Materials, 2018, 1, 3026-3034.	2.4	43
38	Dirac Nodes and Magnetic Order in M ₂ X ₂ Transition-Metal Chalcogenides. Physica Status Solidi - Rapid Research Letters, 2018, 12, 1800181.	1.2	4
39	Ferrocicity-driven nonlinear photocurrent switching in time-reversal invariant ferroic materials. Science Advances, 2019, 5, eaav9743.	4.7	62
40	Two-Dimensional van der Waals Materials with Aligned In-Plane Polarization and Large Piezoelectric Effect for Self-Powered Piezoelectric Sensors. Nano Letters, 2019, 19, 5410-5416.	4.5	132
41	Gate-Tunable In-Plane Ferroelectricity in Few-Layer SnS. Nano Letters, 2019, 19, 5109-5117.	4.5	129
42	Two-Dimensional Ferroics and Multiferroics: Platforms for New Physics and Applications. Journal of Physical Chemistry Letters, 2019, 10, 6634-6649.	2.1	95
43	Diisopropylammonium Bromide Based Two-Dimensional Ferroelectric Monolayer Molecular Crystal with Large In-Plane Spontaneous Polarization. Journal of the American Chemical Society, 2019, 141, 1452-1456.	6.6	10
44	Spectroscopic properties of few-layer tin chalcogenides. JPhys Materials, 2019, 2, 044005.	1.8	12
45	Unconventional inner-TL electric polarization in TL-LaOBi ₂ with ultrahigh carrier mobility. Nanoscale, 2019, 11, 18436-18443.	2.8	9
46	Recent Advances in Graphene-like 2D Materials for Spintronics Applications. Chemistry of Materials, 2019, 31, 8260-8285.	3.2	119
47	Enhanced photocatalytic activity for water splitting of blue-phase GeS and GeSe monolayers <i>via</i> biaxial straining. Nanoscale, 2019, 11, 2335-2342.	2.8	80
48	Two-dimensional SnSe/GeSe van der Waals heterostructure with strain-tunable electronic and optical properties. Journal of Physics and Chemistry of Solids, 2019, 131, 223-229.	1.9	20
49	Tunable electronic structure and magnetic anisotropy of two dimensional van der Waals GeS/FeCl ₂ multiferroic heterostructures. Journal of Materials Chemistry C, 2019, 7, 2049-2058.	2.7	28
50	Discovery of a ferroelastic topological insulator in a two-dimensional tetragonal lattice. Physical Chemistry Chemical Physics, 2019, 21, 5165-5169.	1.3	5
51	Intrinsic multiferroicity in two-dimensional VOCl ₂ monolayers. Nanoscale, 2019, 11, 1103-1110.	2.8	62
52	Tunable Electronic Properties and Giant Spontaneous Polarization in Graphene/Monolayer GeS van der Waals Heterostructure. Physica Status Solidi (B): Basic Research, 2019, 256, 1900194.	0.7	6
53	Two-Dimensional Ferroelectric Tunnel Junction: The Case of Monolayer In:SnSe/SnSe/Sb:SnSe Homostructure. ACS Applied Electronic Materials, 2019, 1, 1133-1140.	2.0	69
54	Multiferroicity in atomic van der Waals heterostructures. Nature Communications, 2019, 10, 2657.	5.8	224

#	ARTICLE	IF	CITATIONS
55	Robust two-dimensional ferroelectricity in single-layer $\hat{\Gamma}^3$ -SbP and $\hat{\Gamma}^3$ -SbAs. <i>Nanoscale</i> , 2019, 11, 11864-11871.	2.8	27
56	Substrate effects on the in-plane ferroelectric polarization of two-dimensional SnTe. <i>Physical Review B</i> , 2019, 99, .	1.1	17
57	Effect of point defects on electronic and magnetic properties of single-layer SiO. <i>Philosophical Magazine</i> , 2019, 99, 2340-2353.	0.7	3
58	Niobium oxide dihalides NbOX ₂ : a new family of two-dimensional van der Waals layered materials with intrinsic ferroelectricity and antiferroelectricity. <i>Nanoscale Horizons</i> , 2019, 4, 1113-1123.	4.1	43
59	Nanoparticle-Templated Thickness Controlled Growth, Thermal Stability, and Decomposition of Ultrathin Tin Sulfide Plates. <i>Chemistry of Materials</i> , 2019, 31, 2563-2570.	3.2	16
60	Black phosphorus and its isoelectronic materials. <i>Nature Reviews Physics</i> , 2019, 1, 306-317.	11.9	196
61	Evolution of elastic moduli through a two-dimensional structural transformation. <i>Physical Review B</i> , 2019, 99, .	1.1	12
62	The growth and phase distribution of ultrathin SnTe on graphene. <i>APL Materials</i> , 2019, 7, .	2.2	11
63	First-Principles Calculations of Angular and Strain Dependence on Effective Masses of Two-Dimensional Phosphorene Analogues (Monolayer I_{\pm} -Phase Group-IV Monochalcogenides MX). <i>Molecules</i> , 2019, 24, 639.	1.7	13
64	Exotic nanoparticles of group IV monochalcogenides. <i>Solid State Communications</i> , 2019, 295, 38-42.	0.9	2
65	In-Plane Ferroelectric Tunnel Junction. <i>Physical Review Applied</i> , 2019, 11, .	1.5	34
66	Strain-Tunable Electronic and Optical Properties of Monolayer Germanium Monosulfide: Ab-Initio Study. <i>Journal of Electronic Materials</i> , 2019, 48, 2902-2909.	1.0	14
67	Two-dimensional magnetic crystals and emergent heterostructure devices. <i>Science</i> , 2019, 363, .	6.0	1,039
68	Injection current in ferroelectric group-IV monochalcogenide monolayers. <i>Physical Review B</i> , 2019, 100, .	1.1	19
69	Nonvolatile Balanced Ternary Memory Based on The Multiferroelectric Material GeSnTe ₂ . <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 7470-7474.	2.1	6
70	Layer-Dependent Properties of Ultrathin GeS Nanosheets and Application in UV-Vis Photodetectors. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 47197-47206.	4.0	35
71	The emerging ferroic orderings in two dimensions. <i>Science China Information Sciences</i> , 2019, 62, 1.	2.7	8
72	Mechanically-Controllable Strong 2D Ferroelectricity and Optical Properties of Semiconducting BiN Monolayer. <i>ACS Applied Nano Materials</i> , 2019, 2, 58-63.	2.4	14

#	ARTICLE	IF	CITATIONS
73	Progress and prospects in low-dimensional multiferroic materials. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2019, 9, e1409.	6.2	53
74	Systematic investigation of electrical contact barriers between different electrode metals and layered GeSe. Applied Physics Letters, 2019, 114, 013505.	1.5	4
75	Ultrafast Zero-Bias Surface Photocurrent in Germanium Selenide: Promise for Terahertz Devices and Photovoltaics. ACS Applied Materials & Interfaces, 2019, 11, 5492-5498.	4.0	20
76	Unique mechanical responses of layered phosphorus-like group-IV monochalcogenides. Journal of Applied Physics, 2019, 125, 082519.	1.1	8
77	Enhanced Spontaneous Polarization in Ultrathin SnTe Films with Layered Antipolar Structure. Advanced Materials, 2019, 31, e1804428.	11.1	88
78	Two-Dimensional Magnets: Forgotten History and Recent Progress towards Spintronic Applications. Advanced Functional Materials, 2020, 30, 1901414.	7.8	135
79	Two-Dimensional Ferroelastic Semiconductors in Nb ₂ SiTe ₄ and Nb ₂ GeTe ₄ with Promising Electronic Properties. Journal of Physical Chemistry Letters, 2020, 11, 497-503.	2.1	37
80	Artificial Multiferroics and Enhanced Magnetoelectric Effect in van der Waals Heterostructures. ACS Applied Materials & Interfaces, 2020, 12, 6243-6249.	4.0	81
81	Tuning ferroelectricity by charge doping in two-dimensional SnSe. Journal of Applied Physics, 2020, 127, 014101.	1.1	12
82	Strain Engineering for 2D Ferroelectricity in Lead Chalcogenides. Advanced Electronic Materials, 2020, 6, 1900932.	2.6	17
83	Ultrahigh-strain ferroelasticity in two-dimensional honeycomb monolayers: from covalent to metallic bonding. Science Bulletin, 2020, 65, 147-152.	4.3	21
84	Recent Progress in Two-Dimensional Ferroelectric Materials. Advanced Electronic Materials, 2020, 6, 1900818.	2.6	236
85	Tunable ferroelectricity and antiferromagnetism <i>via</i> ferroelastic switching in an FeOOH monolayer. Journal of Materials Chemistry C, 2020, 8, 13982-13989.	2.7	18
86	Î-CS: A Direct-Band-Gap Semiconductor Combining Auxeticity, Ferroelasticity, and Potential for High-Efficiency Solar Cells. Physical Review Applied, 2020, 14, .	1.5	69
87	A 2D-SnSe film with ferroelectricity and its bio-realistic synapse application. Nanoscale, 2020, 12, 21913-21922.	2.8	28
88	Strain tunable ferroelectricity of SnSe/SnTe van der Waals heterostructures. Superlattices and Microstructures, 2020, 148, 106728.	1.4	6
89	Micrometer-scale monolayer SnS growth by physical vapor deposition. Nanoscale, 2020, 12, 23274-23281.	2.8	21
90	Two-dimensional polar metal of a PbTe monolayer by electrostatic doping. Nanoscale Horizons, 2020, 5, 1400-1406.	4.1	16

#	ARTICLE	IF	CITATIONS
91	Controllable magnetism driven by carrier confinement and ferroelectric polarization in a two-dimensional heterostructure. <i>Journal of Materials Chemistry C</i> , 2020, 8, 17342-17348.	2.7	7
92	Prediction of Intrinsic Ferroelectricity and Large Piezoelectricity in Monolayer Arsenic Chalcogenides. <i>Nano Letters</i> , 2020, 20, 8346-8352.	4.5	28
93	Electric field control of molecular magnetic state by two-dimensional ferroelectric heterostructure engineering. <i>Applied Physics Letters</i> , 2020, 117, .	1.5	12
94	Liquidâ€Metal Synthesized Ultrathin SnS Layers for Highâ€Performance Broadband Photodetectors. <i>Advanced Materials</i> , 2020, 32, e2004247.	11.1	66
95	Empowering 2D nanoelectronics via ferroelectricity. <i>Applied Physics Letters</i> , 2020, 117, .	1.5	34
96	Recent Advances in 2D Metal Monochalcogenides. <i>Advanced Science</i> , 2020, 7, 2001655.	5.6	58
97	Surface Passivation by Excess Sulfur for Controlled Synthesis of Large, Thin SnS Flakes. <i>Chemistry of Materials</i> , 2020, 32, 8034-8042.	3.2	28
98	Microscopic Manipulation of Ferroelectric Domains in SnSe Monolayers at Room Temperature. <i>Nano Letters</i> , 2020, 20, 6590-6597.	4.5	136
99	Growth and Interlayer Engineering of 2D Layered Semiconductors for Future Electronics. <i>ACS Nano</i> , 2020, 14, 16266-16300.	7.3	30
100	First-principles prediction of a room-temperature ferromagnetic and ferroelastic 2D multiferroic MnNX (X = F, Cl, Br, and I). <i>Nanoscale</i> , 2020, 12, 24237-24243.	2.8	19
101	Theory of finite-temperature two-dimensional structural transformations in group-IV monochalcogenide monolayers. <i>Physical Review B</i> , 2020, 101, .	1.1	19
102	An ultrathin two-dimensional vertical ferroelectric tunneling junction based on CuInP₂S₆ monolayer. <i>Nanoscale</i> , 2020, 12, 12522-12530.	2.8	40
103	Discovery of multiferroics with tunable magnetism in two-dimensional lead oxide. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	24
104	Purely in-plane ferroelectricity in monolayer SnS at room temperature. <i>Nature Communications</i> , 2020, 11, 2428.	5.8	214
105	Strongly Correlated Molecular Magnet with Curie Temperature above 60 K. <i>Matter</i> , 2020, 2, 1639-1650.	5.0	6
106	A new family of two-dimensional ferroelastic semiconductors with negative Poisson's ratios. <i>Nanoscale</i> , 2020, 12, 14150-14159.	2.8	21
107	Changes of Structure and Bonding with Thickness in Chalcogenide Thin Films. <i>Advanced Materials</i> , 2020, 32, e2001033.	11.1	19
108	Ferroelectricity and multiferroicity in two-dimensional Sc₂P₂Se₆ and ScCrP₂Se₆ monolayers. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 7489-7496.	1.3	17

#	ARTICLE	IF	CITATIONS
109	Multiferroic hydrogenated graphene bilayer. Physical Chemistry Chemical Physics, 2020, 22, 7962-7968.	1.3	0
110	From bulk to molecularly thin hybrid perovskites. Nature Reviews Materials, 2020, 5, 482-500.	23.3	164
111	Prediction of two-dimensional antiferromagnetic ferroelasticity in an AgF ₂ monolayer. Nanoscale Horizons, 2020, 5, 1386-1393.	4.1	45
112	Experimental formation of monolayer group-IV monochalcogenides. Journal of Applied Physics, 2020, 127, .	1.1	29
113	van der Waals force layered multiferroic hybrid perovskite (CH ₃ NH ₃) ₂ CuCl ₄ single crystals. Physical Chemistry Chemical Physics, 2020, 22, 4235-4239.	1.3	19
114	Two-dimensional ferrovalley materials. , 2020, , 65-93.		3
115	Design of a multifunctional polar metal via first-principles high-throughput structure screening. Communications Materials, 2020, 1, .	2.9	65
116	Emergence of the giant out-of-plane Rashba effect and tunable nanoscale persistent spin helix in ferroelectric SnTe thin films. Applied Physics Letters, 2020, 116, .	1.5	38
117	One-dimensional flat bands in twisted bilayer germanium selenide. Nature Communications, 2020, 11, 1124.	5.8	80
118	Electronic Band Structure of In-Plane Ferroelectric van der Waals In_2Se_3 . ACS Applied Electronic Materials, 2020, 2, 213-219.	2.0	26
119	Intrinsic piezoelectricity of monolayer group IV-V MX ₂ : SiP ₂ , SiAs ₂ , GeP ₂ , and GeAs ₂ . Applied Physics Letters, 2020, 116, .	1.5	30
120	Two-dimensional materials for energy conversion and storage. Progress in Materials Science, 2020, 111, 100637.	16.0	134
121	Sub-Angstrom Characterization of the Structural Origin for High In-Plane Anisotropy in 2D GeS ₂ . ACS Nano, 2020, 14, 4456-4462.	7.3	25
122	Prediction of room-temperature multiferroicity in strained MoCr ₂ S ₆ monolayer. Journal of Applied Physics, 2020, 127, 155302.	1.1	4
123	Group-IV monochalcogenides GeS, GeSe, SnS, SnSe. , 2020, , 119-151.		7
124	Ferromagnetic and ferroelectric two-dimensional materials for memory application. Nano Research, 2021, 14, 1802-1813.	5.8	32
125	Two-dimensional vanadium tetrafluoride with antiferromagnetic ferroelasticity and bidirectional negative Poisson's ratio. Journal of Materials Chemistry C, 2021, 9, 95-100.	2.7	18
126	2D Polarized Materials: Ferromagnetic, Ferrovalley, Ferroelectric Materials, and Related Heterostructures. Advanced Materials, 2021, 33, e2004469.	11.1	45

#	ARTICLE	IF	CITATIONS
127	Direction-control of anisotropic electronic properties via ferroelasticity in two-dimensional multiferroic semiconductor XOB _r (X = Atc, Ru). <i>Chemical Physics Letters</i> , 2021, 763, 138163.	1.2	4
128	Large family of two-dimensional ferroelectric metals discovered via machine learning. <i>Science Bulletin</i> , 2021, 66, 233-242.	4.3	40
129	Solution-processed two-dimensional materials for next-generation photovoltaics. <i>Chemical Society Reviews</i> , 2021, 50, 11870-11965.	18.7	96
130	Structure and properties of 2D materials in general and their importance to energy storage. , 2021, , 11-75.		0
131	Flexible ferroelasticity in monolayer PdS ₂ : a DFT study. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 10551-10559.	1.3	7
132	Single-Layer Bi: A Multifunctional Semiconductor with Ferroelectricity, Ultrahigh Carrier Mobility, and Negative Poisson's Ratio. <i>Physical Review Applied</i> , 2021, 15, .	1.5	3
133	In-plane ferroelectricity in few-layered GeS and its van der Waals ferroelectric diodes. <i>Nanoscale</i> , 2021, 13, 16122-16130.	2.8	15
134	Optical properties of orthorhombic germanium selenide: an anisotropic layered semiconductor promising for optoelectronic applications. <i>Journal of Materials Chemistry C</i> , 2021, 9, 14838-14847.	2.7	9
135	Bias-tunable two-dimensional magnetic and topological materials. <i>Nanoscale</i> , 2021, 13, 12513-12520.	2.8	1
136	A two-dimensional ferroelectric ferromagnetic half semiconductor in a VOF monolayer. <i>Journal of Materials Chemistry C</i> , 2021, 9, 9130-9136.	2.7	20
137	Dimension effect on ferroelectricity: a first-principles study on GeS nanoribbons. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 18863-18868.	1.3	3
138	Decoupled strain response of ferroic properties in a multiferroic VOCl_2 monolayer. <i>Physical Review B</i> , 2021, 103, .	1.1	9
139	Polymorphism in Post-Dichalcogenide Two-Dimensional Materials. <i>Chemical Reviews</i> , 2021, 121, 2713-2775.	23.0	64
140	<i>Colloquium</i> : Physical properties of group-IV monochalcogenide monolayers. <i>Reviews of Modern Physics</i> , 2021, 93, .	16.4	87
141	Multiferroicity of Non-Janus MXY (X = Se/S, Y = Te/Se) Monolayers with Giant In-Plane Ferroelectricity. <i>Journal of Physical Chemistry C</i> , 2021, 125, 7458-7465.	1.5	4
142	Phase transitions in 2D materials. <i>Nature Reviews Materials</i> , 2021, 6, 829-846.	23.3	205
143	The atlas of ferroicity in two-dimensional MGeX ₃ family: Room-temperature ferromagnetic half metals and unexpected ferroelectricity and ferroelasticity. <i>Nano Research</i> , 2021, 14, 4732-4739.	5.8	17
144	First-principles calculations of interface engineering for 2D In_2Se_3 -based van der Waals multiferroic heterojunctions. <i>Applied Surface Science</i> , 2021, 545, 149024.	3.1	28

#	ARTICLE	IF	CITATIONS
145	Few-layer tin sulfide (SnS): Controlled synthesis, thickness dependent vibrational properties, and ferroelectricity. <i>Nano Today</i> , 2021, 37, 101082.	6.2	34
146	Ferroelastic-ferroelectric multiferroics in a bilayer lattice. <i>Physical Review B</i> , 2021, 103, .	1.1	31
147	Intrinsic triferroicity in a two-dimensional lattice. <i>Physical Review B</i> , 2021, 103, .	1.1	22
148	Computational design of two-dimensional magnetic materials. <i>Wiley Interdisciplinary Reviews: Computational Molecular Science</i> , 2022, 12, e1545.	6.2	12
149	Two-Dimensional van der Waals Ferroelectrics: Scientific and Technological Opportunities. <i>ACS Nano</i> , 2021, 15, 9229-9237.	7.3	93
150	Controllable vdW Contacts between the Ferroelectric In ₂ Se ₃ Monolayer and Two-Dimensional Metals. <i>Journal of Physical Chemistry C</i> , 2021, 125, 10738-10746.	1.5	21
151	Designing multifunctional two-dimensional layered transition metal phosphorous chalcogenides. <i>Physical Review Materials</i> , 2021, 5, .	0.9	11
152	Pure bulk orbital and spin photocurrent in two-dimensional ferroelectric materials. <i>Npj Computational Materials</i> , 2021, 7, .	3.5	34
153	Prediction of monoclinic single-layer Janus $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mi} \rangle \text{Ga} \langle \text{mml:mi} \rangle \langle \text{mml:mn} \rangle 2 \langle \text{mml:mn} \rangle \langle \text{mml:math} \rangle = S \rangle \langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mi} \rangle X \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle = S \rangle \text{Tj ETQd 0 0 rgBT /Overlo$	1.1	12
154	Thermal diffusivity and its lower bound in orthorhombic SnSe. <i>Physical Review B</i> , 2021, 104, .	1.1	4
155	Recent progress on 2D ferroelectric and multiferroic materials, challenges, and opportunity. <i>Emergent Materials</i> , 2021, 4, 847-863.	3.2	30
156	Photoactive electrically switchable van der Waals semiconductor NbOI ₂ . <i>Applied Physics Letters</i> , 2021, 119, .	1.5	10
157	Concurrence of negative in-plane piezoelectricity and photocatalytic properties in 2D ScAgP ₂ S ₆ monolayers. <i>Journal of Physics Condensed Matter</i> , 2021, 33, 375301.	0.7	2
158	Vortex-Oriented Ferroelectric Domains in SnTe/PbTe Monolayer Lateral Heterostructures. <i>Advanced Materials</i> , 2021, 33, e2102267.	11.1	11
159	Anisotropic to Isotropic Transition in Monolayer Group-IV Tellurides. <i>Materials</i> , 2021, 14, 4495.	1.3	4
160	Purely one-dimensional ferroelectricity and antiferroelectricity from van der Waals niobium oxide trihalides. <i>Npj Computational Materials</i> , 2021, 7, .	3.5	14
161	Thickness-dependent Raman active modes of SnS thin films. <i>AIP Advances</i> , 2021, 11, .	0.6	4
162	Efficient and Anisotropic Second Harmonic Generation in Few-Layer SnS Film. <i>Advanced Optical Materials</i> , 2021, 9, 2101200.	3.6	24

#	ARTICLE	IF	CITATIONS
163	Two-Dimensional Auxetic GeSe ₂ Material with Ferroelasticity and Flexoelectricity. Journal of Physical Chemistry C, 2021, 125, 19666-19672.	1.5	9
164	Raman Spectra of Bulk and Few-Layer GeSe From First-Principles Calculations. Frontiers in Materials, 2021, 8, .	1.2	4
165	One-Dimensional Flat Bands and Anisotropic Moiré Excitons in Twisted Tin Sulfide Bilayers. Chemistry of Materials, 2021, 33, 7432-7440.	3.2	6
166	Theoretical study on two dimensional group IV-VI ternary compounds with large in-plane spontaneous polarization. Computational Materials Science, 2021, 198, 110688.	1.4	4
167	Switchable electric polarization of phosphorene in mixed dimensional van der Waals heterostructure. Applied Surface Science, 2021, 563, 150276.	3.1	3
168	Interface-induced transition from Schottky-to-Ohmic contact in Sc ₂ CO ₂ -based multiferroic heterojunctions. Physical Chemistry Chemical Physics, 2021, 23, 827-833.	1.3	8
169	Terahertz optics-driven phase transition in two-dimensional multiferroics. Npj 2D Materials and Applications, 2021, 5, .	3.9	16
170	Ferroelectric control of electron half-metallicity in A -type antiferromagnets and its application to nonvolatile memory devices. Physical Review B, 2020, 102, .	1.1	23
171	Group-IV monochalcogenide monolayers: Two-dimensional ferroelectrics with weak intralayer bonds and a phosphorenelike monolayer dissociation energy. Physical Review Materials, 2019, 3, .	0.9	19
172	Alloy engineered germanium monochalcogenide with tunable bandgap for broadband optoelectrical applications. Physical Review Materials, 2020, 4, .	0.9	5
173	Two-dimensional ferroelasticity and ferroelastic strain controllable anisotropic transport properties in CuTe monolayer. Nanoscale, 2021, 13, 19012-19022.	2.8	4
174	Ferroelectric Controlled Spin Texture in Two-Dimensional NbOI ₂ Monolayer. Chinese Physics Letters, 2021, 38, 087702.	1.3	7
175	Ferroelectric and Room-Temperature Ferromagnetic Semiconductors in the 2D M _I Ge ₂ X ₆ Family: First-Principles and Machine Learning Investigations. Journal of Physical Chemistry Letters, 2021, 12, 10040-10051.	2.1	15
176	Rippling Ferroic Phase Transition and Domain Switching In 2D Materials. Advanced Materials, 2021, 33, e2103469.	11.1	14
177	Research progress of low-dimensional ferroelectric materials. Wuli Xuebao/Acta Physica Sinica, 2018, 67, 157701.	0.2	11
178	Nonlinear Optical and Photocurrent Responses in 2D Materials and Topological Materials. , 2020, , .		0
179	Recent research progress of two-dimensional intrinsic ferroelectrics and their multiferroic coupling. Wuli Xuebao/Acta Physica Sinica, 2020, 69, 217710.	0.2	6
180	Trends of complete anion substitution on electronic, ferroelectric, and optoelectronic properties of BiFeX ₃ (X = O, S, Se, and Te). AIP Advances, 2021, 11, 115108.	0.6	0

#	ARTICLE	IF	CITATIONS
181	Tuning the carrier type and density of monolayer tin selenide via organic molecular doping. Journal of Physics Condensed Matter, 2022, 34, 085001.	0.7	1
182	Enhanced in-plane ferroelectricity, antiferroelectricity, and unconventional 2D emergent fermions in quadruple-layer XSbO_2 (X = Li, Na). Nanoscale, 2021, 13, 19172-19180.	2.8	5
183	Opportunities in electrically tunable 2D materials beyond graphene: Recent progress and future outlook. Applied Physics Reviews, 2021, 8, .	5.5	26
184	Two-dimensional multiferroics. Nanoscale, 2021, 13, 19324-19340.	2.8	32
185	First-principles study of electric field and strain modulation in GaS-BSe vdW heterostructured bilayer for bandstructure engineering. Materials Chemistry and Physics, 2022, 277, 125615.	2.0	6
186	Tuning the magnetic anisotropy of transition-metal atoms on two-dimensional In_2Se_3 substrate via ferroelectric polarization switching. Applied Surface Science, 2022, 580, 152311.	3.1	4
187	Electric-Field-Induced Room-Temperature Antiferroelectric-Ferroelectric Phase Transition in van der Waals Layered GeSe. ACS Nano, 2022, 16, 1308-1317.	7.3	30
188	Stacking Engineered Room Temperature Ferroelectricity in Twisted Germanium Sulfide Nanowires. Advanced Electronic Materials, 2022, 8, .	2.6	4
189	Effects of strain and electric field on electronic and optical properties of monolayer $\text{I}_3\text{-GeX}$ (X = Te , Sb , Bi). Applied Physics Letters, 2022, 121, 162401.	3.1	17
190	Tuning valley splitting and magnetic anisotropy of multiferroic CuM_2S_4 ($\text{M} = \text{Mn}, \text{Fe}$). Applied Physics Letters, 2022, 121, 162401.	3.1	17

#	ARTICLE	IF	CITATIONS
199	Nonlinear Optical Imaging of In-plane Anisotropy in Two-Dimensional SnS. <i>Advanced Optical Materials</i> , 2022, 10, .	3.6	7
200	Data-driven discovery of high performance layered van der Waals piezoelectric NbOI ₂ . <i>Nature Communications</i> , 2022, 13, 1884.	5.8	22
201	Linear dichroism and polarization controllable persistent spin helix in two-dimensional ferroelectric ZrOI ₂ monolayer. <i>Nano Research</i> , 2022, 15, 6779-6789.	5.8	7
202	Discovery of Robust Ferroelectricity in 2D Defective Semiconductor $\hat{\Gamma}$ -Ga ₂ Se ₃ . <i>Small</i> , 2022, 18, e2105599.	5.2	21
203	The effect of vacancies on the magnetic and optical properties of monolayer alpha lead oxide ($\hat{\Gamma}$ -PbO): A density functional theory study. <i>Superlattices and Microstructures</i> , 2021, , 107125.	1.4	3
204	Doped 2D SnS materials derived from liquid metal-solution for tunable optoelectronic devices. <i>Nanoscale</i> , 2022, 14, 6802-6810.	2.8	17
205	Flexoelectric effect induced p-n homojunction in monolayer GeSe. <i>2D Materials</i> , 2022, 9, 035005.	2.0	11
206	Anisotropic terahertz optostriction in group-IV monochalcogenide compounds. <i>Physical Review B</i> , 2022, 105, .	1.1	1
207	Two-Dimensional Multiferroic $\hat{\Gamma}$ -PbO Monolayer with a Large In-Plane Negative Poisson's Ratio. <i>ACS Applied Electronic Materials</i> , 0, , .	2.0	3
208	Electromechanical response of stacked h-BN layers: A computational study. <i>Diamond and Related Materials</i> , 2022, , 109126.	1.8	1
209	Prediction of two-dimensional monolayer C ₂ O ₂ Fe with chiral magnetic and ferroelectric orders. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 16827-16835.	1.3	2
210	Computational studies on magnetism and ferroelectricity. <i>Chinese Physics B</i> , 0, , .	0.7	3
211	Large piezoelectric response in ferroelectric/multiferroelectric metal oxyhalide MOX ₂ (M = Ti, V and X = F, Cl and Br) monolayers. <i>Nanoscale</i> , 2022, 14, 11676-11683.	2.8	7
212	Doping effect in the In ₂ Se ₃ monolayer and the ferroelectricity of nanoribbons. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2022, .	0.2	0
213	Strain engineering and hydrogen effect for two-dimensional ferroelectricity in monolayer group-IV monochalcogenides MX (M = Sn, Ge; X = Se, Te, S). <i>Chinese Physics B</i> , 2023, 32, 036802.	0.7	1
214	Emergent Phenomena in Magnetic Two-Dimensional Materials and van der Waals Heterostructures. <i>ACS Applied Electronic Materials</i> , 2022, 4, 3278-3302.	2.0	26
215	Ferroelectricity induced by the absorption of water molecules on double helix SnIP. <i>Chinese Physics B</i> , 2023, 32, 037701.	0.7	2
216	Investigation of Electronic Properties and Dielectric Response of Two-Dimensional Germanium Selenide with Puckered and Buckled Structures. <i>Journal of Electronic Materials</i> , 2022, 51, 6275-6285.	1.0	3

#	ARTICLE	IF	CITATIONS
217	Tri-MX: New group-IV monochalcogenide monolayers with excellent piezoelectricity and special optical properties. <i>Applied Surface Science</i> , 2022, 602, 154391.	3.1	4
218	Ferroelectric domain wall in two-dimensional GeS. <i>Journal of Applied Physics</i> , 2022, 132, 074302.	1.1	2
219	Large linear and nonlinear electro-optic coefficients in two-dimensional ferroelectrics. <i>Physical Review B</i> , 2022, 106, .	1.1	1
220	Polarization switching induced by domain wall sliding in two-dimensional ferroelectric monochalcogenides. <i>2D Materials</i> , 2023, 10, 015001.	2.0	3
221	Stability of Strained Stanene Compared to That of Graphene. <i>Materials</i> , 2022, 15, 5900.	1.3	4
222	Size-dependent ferroic phase transformations in GeSe nanoribbons. <i>Applied Physics Letters</i> , 2022, 121, .	1.5	6
223	Slippery Paraelectric Transition-Metal Dichalcogenide Bilayers. <i>Nano Letters</i> , 2022, 22, 7984-7991.	4.5	8
224	Dynamical Response of Nonlinear Optical Anisotropy in a Tin Sulfide Crystal under Ultrafast Photoexcitation. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 9355-9362.	2.1	4
225	Third-Order Optical Nonlinearities of Two-dimensional SnS under Irradiation: Implications for Space Use. <i>Journal of Materials Chemistry C</i> , 0, , .	2.7	5
226	Unusual electric polarization behavior in elemental quasi-two-dimensional allotropes of selenium. <i>Physical Review Materials</i> , 2022, 6, .	0.9	1
227	Two-dimensional multiferroic material of metallic p-doped SnSe. <i>Nature Communications</i> , 2022, 13, .	5.8	27
228	High-Throughput Inverse Design for 2D Ferroelectric Rashba Semiconductors. <i>Journal of the American Chemical Society</i> , 2022, 144, 20035-20046.	6.6	5
229	Ferroelectricity and nanotube-induced synthesis of one-dimensional group-IV monochalcogenide nanowires. <i>Applied Surface Science</i> , 2023, 608, 155160.	3.1	4
230	Topological defects and their induced metallicity in monolayer semiconducting $\hat{1}^3$ -phase group IV monochalcogenides. <i>Science China Materials</i> , 0, , .	3.5	0
231	Unexpected spontaneous symmetry breaking and diverse ferroicity in two-dimensional mono-metal phosphorus chalcogenides. <i>Nanoscale</i> , 0, , .	2.8	0
232	InBi: A Ferroelastic Monolayer with Strain Tunable Spin-Orbit Dirac Points and Carrier Self-Doping Effect. <i>ACS Nano</i> , 2022, 16, 21546-21554.	7.3	7
233	Stacking Fault Induced Symmetry Breaking in van der Waals Nanowires. <i>ACS Nano</i> , 2022, 16, 21199-21207.	7.3	5
234	Designing two-dimensional ferroelectric materials from phosphorus-analogue structures. <i>Nano Research</i> , 2023, 16, 5834-5842.	5.8	1

#	ARTICLE	IF	CITATIONS
235	Wavelength dependence of polarization-resolved second harmonic generation from ferroelectric SnS few layers. <i>2D Materials</i> , 2023, 10, 015022.	2.0	4
236	Tunable polarized terahertz wave generation induced by spontaneous polarization-dependent ultrafast shift current from vertically grown ferroelectric SnS. <i>Physical Review B</i> , 2022, 106, .	1.1	3
237	Multiferroic monolayers VOX (X = Cl, Br, I): tunable ferromagnetism via charge doping and ferroelastic switching. <i>Chinese Physics B</i> , 0, , .	0.7	0
238	Two-Dimensional Ferroelasticity and Domain-Wall Flexoelectricity in HgX ₂ (X = Br or I) Monolayers. <i>Journal of Physical Chemistry Letters</i> , 2023, 14, 420-429.	2.1	2
239	Ferro-piezoelectricity in emerging Janus monolayer BMX ₂ (M = Ga, In and X = S, Se): <i>ab initio</i> investigations. <i>Nanoscale Advances</i> , 2023, 5, 1425-1432.	2.2	5
240	Optical properties and polaritons of low symmetry 2D materials. , 2023, 2, R03.		11
241	Double resonant tunable second harmonic generation in two-dimensional layered materials through band nesting. <i>Physical Review B</i> , 2023, 107, .	1.1	1
242	A universal growth method for high-quality phase-engineered germanium chalcogenide nanosheets. <i>Nanoscale</i> , 2023, 15, 4438-4447.	2.8	0
243	Competition between Stepwise Polarization Switching and Chirality Coupling in Ferroelectric GeS Nanotubes. <i>Chinese Physics Letters</i> , 2023, 40, 047701.	1.3	1
244	Giant Nonlinear Optical Response via Coherent Stacking of In-plane Ferroelectric Layers. <i>Advanced Materials</i> , 2023, 35, .	11.1	8
245	Two-dimensional ferroelectrics from high throughput computational screening. <i>Npj Computational Materials</i> , 2023, 9, .	3.5	12
252	Research progress on 2D ferroelectric and ferrovalley materials and their neuromorphic application. <i>Science China: Physics, Mechanics and Astronomy</i> , 2023, 66, .	2.0	3