

# Piezoelectricity of single-atomic-layer MoS<sub>2</sub> for energy

Nature

514, 470-474

DOI: [10.1038/nature13792](https://doi.org/10.1038/nature13792)

Citation Report

#	ARTICLE	IF	CITATIONS
7	Ab initio simulation of single- and few-layer $\text{MoS}_2$ transistors: Effect of electron-phonon scattering. <i>Physical Review B</i> , 2015, 92, .	1.1	85
8	Enhanced piezoelectricity and modified dielectric screening of two-dimensional group-IV monochalcogenides. <i>Physical Review B</i> , 2015, 92, .	1.1	179
9	Unified treatment of coupled optical and acoustic phonons in piezoelectric cubic materials. <i>Physical Review B</i> , 2015, 92, .	1.1	7
10	Multiferroic property of colloidal crystals with three-dimensional solid-solid phase transitions. <i>Europhysics Letters</i> , 2015, 111, 47004.	0.7	0
11	Theory of strain in single-layer transition metal dichalcogenides. <i>Physical Review B</i> , 2015, 92, .	1.1	138
12	Novel Two-Dimensional Mechano-Electric Generators and Sensors Based on Transition Metal Dichalcogenides. <i>Scientific Reports</i> , 2015, 5, 12854.	1.6	21
13	Phase engineering of monolayer transition-metal dichalcogenide through coupled electron doping and lattice deformation. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	33
14	Strain-dependent damping in nanomechanical resonators from thin $\text{MoS}_2$ crystals. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	23
15	Giant piezoelectricity of monolayer group IV monochalcogenides: $\text{SnSe}$ , $\text{SnS}$ , $\text{GeSe}$ , and $\text{GeS}$ . <i>Applied Physics Letters</i> , 2015, 107, .	1.5	569
16	Piezotronic transistors in nonlinear circuit: Model and simulation. <i>Science China Technological Sciences</i> , 2015, 58, 1348-1354.	2.0	3
17	Large-scale Growth of Two-Dimensional $\text{SnS}_2$ Crystals Driven by Screw Dislocations and Application to Photodetectors. <i>Advanced Functional Materials</i> , 2015, 25, 4255-4261.	7.8	184
18	Lateral Built-in Potential of Monolayer $\text{MoS}_2$ $\text{WS}_2$ In-plane Heterostructures by a Shortcut Growth Strategy. <i>Advanced Materials</i> , 2015, 27, 6431-6437.	11.1	191
20	Two-Dimensional Transition Metal Dichalcogenides in Biosystems. <i>Advanced Functional Materials</i> , 2015, 25, 5086-5099.	7.8	306
21	Field-Effect Transistors Based on Amorphous Black Phosphorus Ultrathin Films by Pulsed Laser Deposition. <i>Advanced Materials</i> , 2015, 27, 3748-3754.	11.1	274
22	Recent Advancements in Nanogenerators for Energy Harvesting. <i>Small</i> , 2015, 11, 5611-5628.	5.2	74
23	Temperature Dependence of the Piezophototronic Effect in $\text{CdS}$ Nanowires. <i>Advanced Functional Materials</i> , 2015, 25, 5277-5284.	7.8	50
24	Ultrasensitive Thin-Film-Based $\text{Al}_x\text{Ga}_{1-x}\text{N}$ Piezotronic Strain Sensors via Alloying-Enhanced Piezoelectric Potential. <i>Advanced Materials</i> , 2015, 27, 6289-6295.	11.1	30
25	Electronic Tuning of 2D $\text{MoS}_2$ through Surface Functionalization. <i>Advanced Materials</i> , 2015, 27, 6225-6229.	11.1	194

#	ARTICLE	IF	CITATIONS
26	Graphene-Containing Nanomaterials for Lithium-Ion Batteries. <i>Advanced Energy Materials</i> , 2015, 5, 1500400.	10.2	184
27	Revealing Optical Properties of Reduced-Dimensionality Materials at Relevant Length Scales. <i>Advanced Materials</i> , 2015, 27, 5693-5719.	11.1	29
28	Piezotronic Effect: An Emerging Mechanism for Sensing Applications. <i>Sensors</i> , 2015, 15, 22914-22940.	2.1	61
29	Nanoarchitectonics: a new materials horizon for nanotechnology. <i>Materials Horizons</i> , 2015, 2, 406-413.	6.4	270
30	Efficient Photoinduced Charge Accumulation in Reduced Graphene Oxide Coupled with Titania Nanosheets To Show Highly Enhanced and Persistent Conductance. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 11436-11443.	4.0	23
31	Flexible MoS <sub>2</sub> Field-Effect Transistors for Gate-Tunable Piezoresistive Strain Sensors. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 12850-12855.	4.0	127
32	Moving trajectory analysis and simulation in atomic friction for zigzag and armchair lattice orientation of MoS <sub>2</sub> . , 2015, , .		1
33	Nanotechnologies for biomedical science and translational medicine. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 14436-14443.	3.3	76
34	Piezoelectricity in two-dimensional group-III monochalcogenides. <i>Nano Research</i> , 2015, 8, 3796-3802.	5.8	219
35	A molybdenum disulfide piezoelectric strain gauge. , 2015, , .		0
36	Effect of number of layers upon piezoelectric behaviour of multi-walled boron nitride nanotubes. <i>Journal Physics D: Applied Physics</i> , 2015, 48, 495301.	1.3	15
37	Controlled Doping of Large-Area Trilayer MoS <sub>2</sub> with Molecular Reductants and Oxidants. <i>Advanced Materials</i> , 2015, 27, 1175-1181.	11.1	183
38	van der Waals Epitaxial Ultrathin Two-Dimensional Nonlayered Semiconductor for Highly Efficient Flexible Optoelectronic Devices. <i>Nano Letters</i> , 2015, 15, 1183-1189.	4.5	127
39	Piezoelectricity in Two-Dimensional Materials. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 4432-4434.	7.2	52
40	Step-Edge-Guided Nucleation and Growth of Aligned WSe <sub>2</sub> on Sapphire <i>via</i> a Layer-over-Layer Growth Mode. <i>ACS Nano</i> , 2015, 9, 8368-8375.	7.3	168
41	Modelling of stacked 2D materials and devices. <i>2D Materials</i> , 2015, 2, 032003.	2.0	59
42	High-Yield Exfoliation of Ultrathin Two-Dimensional Ternary Chalcogenide Nanosheets for Highly Sensitive and Selective Fluorescence DNA Sensors. <i>Journal of the American Chemical Society</i> , 2015, 137, 10430-10436.	6.6	214
43	Atomic-layer molybdenum sulfide optical modulator for visible coherent light. <i>Scientific Reports</i> , 2015, 5, 11342.	1.6	39

#	ARTICLE	IF	CITATIONS
44	Piezoresistivity and Strain-induced Band Gap Tuning in Atomically Thin MoS <sub>2</sub> . Nano Letters, 2015, 15, 5330-5335.	4.5	296
45	Solution processed flexible hybrid cell for concurrently scavenging solar and mechanical energies. Nano Energy, 2015, 16, 301-309.	8.2	45
46	Piezoelectric effect in chemical vapour deposition-grown atomic-monolayer triangular molybdenum disulfide piezotronics. Nature Communications, 2015, 6, 7430.	5.8	233
47	Two-dimensional MoS <sub>2</sub> : Properties, preparation, and applications. Journal of Materiomics, 2015, 1, 33-44.	2.8	597
48	Insight into structural, elastic, phonon, and thermodynamic properties of 1 $\pm$ -sulfur and energy-related sulfides: a comprehensive first-principles study. Journal of Materials Chemistry A, 2015, 3, 8002-8014.	5.2	33
49	Controlled synthesis of zinc cobalt sulfide nanostructures in oil phase and their potential applications in electrochemical energy storage. Journal of Materials Chemistry A, 2015, 3, 11462-11470.	5.2	113
50	Facile synthesis of boron- and nitride-doped MoS <sub>2</sub> nanosheets as fluorescent probes for the ultrafast, sensitive, and label-free detection of Hg <sup>2+</sup> . Analyst, The, 2015, 140, 4654-4661.	1.7	52
51	High-mobility three-atom-thick semiconducting films with wafer-scale homogeneity. Nature, 2015, 520, 656-660.	13.7	1,562
52	Hierarchical SnO <sub>2</sub> nanoflowers assembled by atomic thickness nanosheets as anode material for lithium ion battery. Science Bulletin, 2015, 60, 892-895.	4.3	35
53	Graphene-based nano-materials for lithium-sulfur battery and sodium-ion battery. Nano Energy, 2015, 15, 379-405.	8.2	210
54	Acoustic-Excitonic Coupling for Dynamic Photoluminescence Manipulation of Quasi-2D MoS <sub>2</sub> Nanoflakes. Advanced Optical Materials, 2015, 3, 888-894.	3.6	39
55	Single-electrode triboelectric nanogenerator for scavenging friction energy from rolling tires. Nano Energy, 2015, 15, 227-234.	8.2	151
56	Pushing the Envelope of <i>In Situ</i> Transmission Electron Microscopy. ACS Nano, 2015, 9, 4675-4685.	7.3	80
57	Facile scalable synthesis and superior lithium storage performance of ball-milled MoS <sub>2</sub> -graphite nanocomposites. Journal of Materials Chemistry A, 2015, 3, 10466-10470.	5.2	34
58	Tunable graphene/indium phosphide heterostructure solar cells. Nano Energy, 2015, 13, 509-517.	8.2	52
59	Light driven growth of silver nanoplatelets on 2D MoS <sub>2</sub> nanosheet templates. Journal of Materials Chemistry C, 2015, 3, 4771-4778.	2.7	32
60	Tunable Exfoliation of Synthetic Clays. Annual Review of Materials Research, 2015, 45, 129-151.	4.3	53
61	Tuning nonlinear optical absorption properties of WS <sub>2</sub> nanosheets. Nanoscale, 2015, 7, 17771-17777.	2.8	57

#	ARTICLE	IF	CITATIONS
62	Mechanical and Electrical Anisotropy of Few-Layer Black Phosphorus. ACS Nano, 2015, 9, 11362-11370.	7.3	247
63	Polar discontinuities and 1D interfaces in monolayered materials. Progress in Surface Science, 2015, 90, 444-463.	3.8	18
64	Monolayer-by-monolayer stacked pyramid-like MoS <sub>2</sub> nanodots on monolayered MoS <sub>2</sub> flakes with enhanced photoluminescence. Nanoscale, 2015, 7, 17468-17472.	2.8	11
65	Density functional studies on edge-contacted single-layer MoS <sub>2</sub> piezotronic transistors. Applied Physics Letters, 2015, 107, .	1.5	20
66	Emerging energy applications of two-dimensional layered transition metal dichalcogenides. Nano Energy, 2015, 18, 293-305.	8.2	236
67	Measurement of Lateral and Interfacial Thermal Conductivity of Single- and Bilayer MoS <sub>2</sub> and MoSe <sub>2</sub> Using Refined Optothermal Raman Technique. ACS Applied Materials & Interfaces, 2015, 7, 25923-25929.	4.0	275
68	Filling the Gaps between Graphene Oxide: A General Strategy toward Nanolayered Oxides. Advanced Functional Materials, 2015, 25, 5683-5690.	7.8	31
69	Two-dimensional silicon-carbon hybrids with a honeycomb lattice: New family for two-dimensional photovoltaic materials. Science China: Physics, Mechanics and Astronomy, 2015, 58, 1.	2.0	13
70	Recent Advances in Two-Dimensional Materials beyond Graphene. ACS Nano, 2015, 9, 11509-11539.	7.3	2,069
71	Nanoparticle monolayer-based flexible strain gauge with ultrafast dynamic response for acoustic vibration detection. Nano Research, 2015, 8, 2978-2987.	5.8	68
72	Visualizing nanoscale excitonic relaxation properties of disordered edges and grain boundaries in monolayer molybdenum disulfide. Nature Communications, 2015, 6, 7993.	5.8	204
73	Monolayer excitonic laser. Nature Photonics, 2015, 9, 733-737.	15.6	492
74	MoS <sub>2</sub> actuators: reversible mechanical responses of MoS <sub>2</sub> -polymer nanocomposites to photons. Nanotechnology, 2015, 26, 261001.	1.3	41
75	In-Plane Anisotropy in Mono- and Few-Layer ReS <sub>2</sub> Probed by Raman Spectroscopy and Scanning Transmission Electron Microscopy. Nano Letters, 2015, 15, 5667-5672.	4.5	406
76	<i>Ab Initio</i> Prediction of Piezoelectricity in Two-Dimensional Materials. ACS Nano, 2015, 9, 9885-9891.	7.3	445
77	Optical Control of Mechanical Mode-Coupling within a MoS <sub>2</sub> Resonator in the Strong-Coupling Regime. Nano Letters, 2015, 15, 6727-6731.	4.5	55
78	Flexoelectricity in two-dimensional crystalline and biological membranes. Nanoscale, 2015, 7, 16555-16570.	2.8	147
79	Promising Piezoelectric Performance of Single Layer Transition-Metal Dichalcogenides and Dioxides. Journal of Physical Chemistry C, 2015, 119, 23231-23237.	1.5	164

#	ARTICLE	IF	CITATIONS
80	Epitaxial Growth of Hetero-Nanostructures Based on Ultrathin Two-Dimensional Nanosheets. Journal of the American Chemical Society, 2015, 137, 12162-12174.	6.6	218
81	Two-dimensional transition metal dichalcogenides: Clusters, ribbons, sheets and more. Nano Today, 2015, 10, 559-592.	6.2	107
82	Strong Optical Absorption and Photocarrier Relaxation in 2-D Semiconductors. IEEE Journal of Quantum Electronics, 2015, 51, 1-6.	1.0	21
83	Piezotronic Effect in Strain-Gated Transistor of <i>a</i> -Axis GaN Nanobelt. ACS Nano, 2015, 9, 9822-9829.	7.3	43
84	Oxygen-Assisted Chemical Vapor Deposition Growth of Large Single-Crystal and High-Quality Monolayer MoS <sub>2</sub> . Journal of the American Chemical Society, 2015, 137, 15632-15635.	6.6	301
85	Electromechanical coupling and design considerations in single-layer MoS <sub>2</sub> suspended-channel transistors and resonators. Nanoscale, 2015, 7, 19921-19929.	2.8	15
86	2D crystals of transition metal dichalcogenide and their iontronic functionalities. 2D Materials, 2015, 2, 044004.	2.0	28
87	Now in two dimensions. Nature Nanotechnology, 2015, 10, 106-107.	15.6	20
88	Observation of piezoelectricity in free-standing monolayer MoS <sub>2</sub> . Nature Nanotechnology, 2015, 10, 151-155.	15.6	685
89	Environmental effects on nanogenerators. Nano Energy, 2015, 14, 49-61.	8.2	155
90	Highly efficient piezotronic strain sensors with symmetrical Schottky contacts on the monopolar surface of ZnO nanobelts. Nanoscale, 2015, 7, 1796-1801.	2.8	60
91	Epitaxial growth of few-layer MoS <sub>2</sub> (0001) on FeS <sub>2</sub> {100}. Chemical Communications, 2015, 51, 537-540.	2.2	9
92	Mechanical Properties and Applications of Two-Dimensional Materials. , 0, , .		10
93	Electronic Band Structure of Transition Metal Dichalcogenides from Ab Initio and Slater-Koster Tight-Binding Model. Applied Sciences (Switzerland), 2016, 6, 284.	1.3	56
94	Design, Assembly, and Fabrication of Two-Dimensional Nanomaterials into Functional Biomimetic Device Systems. , 0, , .		1
95	Three-dimensional nanotubes composed of carbon-anchored ultrathin MoS <sub>2</sub> nanosheets with enhanced lithium storage. Physical Chemistry Chemical Physics, 2016, 18, 19792-19797.	1.3	18
96	Flexible Nanogenerators for Energy Harvesting and Self-Powered Electronics. Advanced Materials, 2016, 28, 4283-4305.	11.1	1,438
97	A Transparent Antipeep Piezoelectric Nanogenerator to Harvest Tapping Energy on Screen. Small, 2016, 12, 1315-1321.	5.2	64

#	ARTICLE	IF	CITATIONS
98	Polymerâ€‘Metal Schottky Contact with Directâ€‘Current Outputs. <i>Advanced Materials</i> , 2016, 28, 1461-1466.	11.1	99
99	Recent Progress in Materials and Devices toward Printable and Flexible Sensors. <i>Advanced Materials</i> , 2016, 28, 4415-4440.	11.1	643
100	Lowâ€‘Temperature Solution Synthesis of Fewâ€‘Layer 1Tâ€‘ $\text{TaTe}_2$ MoTe <sub>2</sub> Nanostructures Exhibiting Lattice Compression. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 2830-2834.	7.2	84
101	Controlled Exfoliation of Layered Silicate Heterostructures into Bilayers and Their Conversion into Giant Janus Platelets. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 7398-7402.	7.2	27
102	Newborn 2D materials for flexible energy conversion and storage. <i>Science China Materials</i> , 2016, 59, 459-474.	3.5	57
103	Zener Tunneling and Photoresponse of a WS <sub>2</sub> /Si van der Waals Heterojunction. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 18375-18382.	4.0	101
104	Switchable polarization in an unzipped graphene oxide monolayer. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 20443-20449.	1.3	16
105	Reviewâ€‘Two-Dimensional Layered Materials for Energy Storage Applications. <i>ECS Journal of Solid State Science and Technology</i> , 2016, 5, Q3021-Q3025.	0.9	68
106	Highly Sensitive Detection of the Lattice Distortion in Single Bent ZnO Nanowires by Second-Harmonic Generation Microscopy. <i>ACS Photonics</i> , 2016, 3, 1308-1314.	3.2	26
107	MoS <sub>2</sub> Tribotronic Transistor for Smart Tactile Switch. <i>Advanced Functional Materials</i> , 2016, 26, 2104-2109.	7.8	96
108	Piezoâ€‘Catalytic Effect on the Enhancement of the Ultraâ€‘High Degradation Activity in the Dark by Singleâ€‘ and Fewâ€‘Layers MoS <sub>2</sub> Nanoflowers. <i>Advanced Materials</i> , 2016, 28, 3718-3725.	11.1	430
109	Influence of the oxide thickness of a SiO <sub>2</sub> /Si(001) substrate on the optical second harmonic intensity of few-layer MoSe <sub>2</sub> . <i>Japanese Journal of Applied Physics</i> , 2016, 55, 085801.	0.8	6
110	Probing crystallography-induced anisotropy and periodic property of atomic friction in MoS <sub>2</sub> via fast Fourier transform processing. , 2016, , .		1
111	Metal Induced Growth of Transition Metal Dichalcogenides at Controlled Locations. <i>Scientific Reports</i> , 2016, 6, 38394.	1.6	28
112	Bulk photovoltaic effect at infrared wavelength in strained Bi <sub>2</sub> Te <sub>3</sub> films. <i>APL Materials</i> , 2016, 4, .	2.2	9
113	Suppression of a Charge Density Wave in $[\text{SnSe}]_{1.15}[\text{VSe}_2]_1$ Ferecrystals Via Isoelectronic Doping with Ta. <i>Journal of Electronic Materials</i> , 2016, 45, 4898-4902.	1.0	5
114	Gentle transfer method for water- and acid/alkali-sensitive 2D materials for (S)TEM study. <i>APL Materials</i> , 2016, 4, .	2.2	12
115	Thermally activated trap charges responsible for hysteresis in multilayer MoS <sub>2</sub> field-effect transistors. <i>Applied Physics Letters</i> , 2016, 108, .	1.5	115

#	ARTICLE	IF	CITATIONS
116	Theoretical study on the top- and enclosed-contacted single-layer MoS <sub>2</sub> piezotronic transistors. Applied Physics Letters, 2016, 108, 181603.	1.5	11
117	Emergent spin-valley-orbital physics by spontaneous parity breaking. Journal of Physics Condensed Matter, 2016, 28, 395601.	0.7	48
118	Two dimensional WS <sub>2</sub> lateral heterojunctions by strain modulation. Applied Physics Letters, 2016, 108, 263104.	1.5	31
119	Emission energy, exciton dynamics and lasing properties of buckled CdS nanoribbons. Scientific Reports, 2016, 6, 26607.	1.6	6
120	Strain engineering in monolayer WS <sub>2</sub> , MoS <sub>2</sub> , and the WS <sub>2</sub> /MoS <sub>2</sub> heterostructure. Applied Physics Letters, 2016, 109, .	1.5	132
121	Synthesis of large monolayer single crystal MoS <sub>2</sub> nanosheets with uniform size through a double-tube technology. Applied Physics Letters, 2016, 109, .	1.5	31
122	Elastic behavior of Bi <sub>2</sub> Se <sub>3</sub> 2D nanosheets grown by van der Waals epitaxy. Applied Physics Letters, 2016, 109, .	1.5	24
123	Self-Limiting Layer Synthesis of Transition Metal Dichalcogenides. Scientific Reports, 2016, 6, 18754.	1.6	74
124	Nanoelectromechanical systems based on low dimensional nanomaterials: Beyond carbon nanotube and graphene nanomechanical resonators—a brief review. , 2016, , .		1
125	Size-effect in layered ferrielectric CuInP <sub>2</sub> S <sub>6</sub> . Applied Physics Letters, 2016, 109, .	1.5	66
126	Triggering piezoelectricity directly by heat to produce alternating electric voltage. Applied Physics Letters, 2016, 109, .	1.5	13
127	Phase engineering of MoS <sub>2</sub> through GaN/AlN substrate coupling and electron doping. Physical Chemistry Chemical Physics, 2016, 18, 33351-33356.	1.3	14
128	Intervalley scattering in MoS <sub>2</sub> imaged by two-photon photoemission with a high-harmonic probe. Applied Physics Letters, 2016, 109, .	1.5	61
129	Spatial/temporal photocurrent and electronic transport in monolayer molybdenum disulfide grown by chemical vapor deposition. Applied Physics Letters, 2016, 108, .	1.5	12
130	A Self-Limiting Electro-Ablation Technique for the Top-Down Synthesis of Large-Area Monolayer Flakes of 2D Materials. Scientific Reports, 2016, 6, 28195.	1.6	24
131	In situ fabrication and investigation of nanostructures and nanodevices with a microscope. Chemical Society Reviews, 2016, 45, 2694-2713.	18.7	30
132	Realization of a Piezophototronic Device Based on Reduced Graphene Oxide/MoS <sub>2</sub> Heterostructure. IEEE Electron Device Letters, 2016, 37, 677-680.	2.2	14
133	Strain Engineering for Transition Metal Dichalcogenides Based Field Effect Transistors. ACS Nano, 2016, 10, 4712-4718.	7.3	112



#	ARTICLE	IF	CITATIONS
134	Electric Field Induced Reversible Phase Transition in Li Doped Phosphorene: Shape Memory Effect and Superelasticity. <i>Journal of the American Chemical Society</i> , 2016, 138, 4772-4778.	6.6	26
135	Controlled growth of MoS <sub>2</sub> nanopetals and their hydrogen evolution performance. <i>RSC Advances</i> , 2016, 6, 18483-18489.	1.7	32
136	Enhanced quantum efficiency from a mosaic of two dimensional MoS <sub>2</sub> formed onto aminosilane functionalised substrates. <i>Nanoscale</i> , 2016, 8, 12258-12266.	2.8	18
137	Self-powered electronic-skin for detecting glucose level in body fluid basing on piezo-enzymatic-reaction coupling process. <i>Nano Energy</i> , 2016, 26, 148-156.	8.2	71
138	Piezoelectric Nanomaterials for Energy Harvesting. <i>Nanoscience and Technology</i> , 2016, , 193-213.	1.5	0
139	Soft, thin skin-mounted power management systems and their use in wireless thermography. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 6131-6136.	3.3	139
140	Controlled synthesis of high-quality crystals of monolayer MoS <sub>2</sub> for nanoelectronic device application. <i>Science China Materials</i> , 2016, 59, 182-190.	3.5	51
141	Enhanced performances of flexible ZnO/perovskite solar cells by piezo-phototronic effect. <i>Nano Energy</i> , 2016, 23, 27-33.	8.2	119
142	Bandgap Transition of 2H Transition Metal Dichalcogenides: Predictive Tuning via Inherent Interface Coupling and Strain. <i>Journal of Physical Chemistry C</i> , 2016, 120, 8927-8935.	1.5	31
143	Percolative switching in transition metal dichalcogenide field-effect transistors at room temperature. <i>Nanotechnology</i> , 2016, 27, 125706.	1.3	23
144	Density functional studies on wurtzite piezotronic transistors: influence of different semiconductors and metals on piezoelectric charge distribution and Schottky barrier. <i>Nanotechnology</i> , 2016, 27, 205204.	1.3	12
145	Theoretical Study of Triboelectric-Potential Gated/Driven Metal-Oxide-Semiconductor Field-Effect Transistor. <i>ACS Nano</i> , 2016, 10, 4395-4402.	7.3	36
146	Local optical absorption spectra of MoS <sub>2</sub> monolayers obtained using scanning near-field optical microscopy measurements. <i>Japanese Journal of Applied Physics</i> , 2016, 55, 038003.	0.8	16
147	MoS <sub>2</sub> Nanosheet Superstructures Based Polymer Composites for High-Dielectric and Electrical Energy Storage Applications. <i>Journal of Physical Chemistry C</i> , 2016, 120, 10206-10214.	1.5	111
148	Adsorption of gas molecules on Cu impurities embedded monolayer MoS <sub>2</sub> : A first-principles study. <i>Applied Surface Science</i> , 2016, 382, 280-287.	3.1	116
149	All-in-one energy harvesting and storage devices. <i>Journal of Materials Chemistry A</i> , 2016, 4, 7983-7999.	5.2	245
150	Singularity analysis of planar cracks in three-dimensional piezoelectric semiconductors via extended displacement discontinuity boundary integral equation method. <i>Engineering Analysis With Boundary Elements</i> , 2016, 67, 115-125.	2.0	32
151	Experimental study and modeling of atomic-scale friction in zigzag and armchair lattice orientations of MoS <sub>2</sub> . <i>Science and Technology of Advanced Materials</i> , 2016, 17, 189-199.	2.8	43

#	ARTICLE	IF	CITATIONS
152	Sensitive Electronic-Skin Strain Sensor Array Based on the Patterned Two-Dimensional $\text{In}_2\text{Se}_3$ . Chemistry of Materials, 2016, 28, 4278-4283.	3.2	146
153	Facile Preparation of Multifunctional $\text{WS}_2/\text{WO}_x$ Nanodots for Chelator-Free $^{89}\text{Zr}$ -Labeling and In Vivo PET Imaging. Small, 2016, 12, 5750-5758.	5.2	31
154	Self-Supported Construction of Three-Dimensional $\text{MoS}_2$ Hierarchical Nanospheres with Tunable High-Performance Microwave Absorption in Broadband. Journal of Physical Chemistry C, 2016, 120, 22019-22027.	1.5	163
155	Flexible and biocompatible polypropylene ferroelectret nanogenerator (FENG): On the path toward wearable devices powered by human motion. Nano Energy, 2016, 30, 649-657.	8.2	78
156	Simulation of Longitudinal Mode of Vibration in Piezoelectric Monolayer $\text{MoS}_2$ . Procedia Engineering, 2016, 144, 682-688.	1.2	4
157	Two-dimensional van der Waals nanosheet devices for future electronics and photonics. Nano Today, 2016, 11, 626-643.	6.2	71
158	Lateral Epitaxy of Atomically Sharp $\text{WSe}_2/\text{WS}_2$ Heterojunctions on Silicon Dioxide Substrates. Chemistry of Materials, 2016, 28, 7194-7197.	3.2	59
159	Growth parameter enhancement for $\text{MoS}_2$ thin films synthesized by pulsed laser deposition. Physica Status Solidi C: Current Topics in Solid State Physics, 2016, 13, 848-854.	0.8	9
160	Tuning two-dimensional nanomaterials by intercalation: materials, properties and applications. Chemical Society Reviews, 2016, 45, 6742-6765.	18.7	363
161	The Role of Excitons and Free Charges in the Excited-State Dynamics of Solution-Processed Few-Layer $\text{MoS}_2$ Nanoflakes. Journal of Physical Chemistry C, 2016, 120, 23286-23292.	1.5	34
162	In-Depth Insights into the Key Steps of Delamination of Charged 2D Nanomaterials. Langmuir, 2016, 32, 10582-10588.	1.6	73
163	Enhancing the sensitivity of graphene/polyurethane nanocomposite flexible piezo-resistive pressure sensors with magnetite nano-spacers. Carbon, 2016, 108, 450-460.	5.4	87
165	Emerging Applications of 2D TMDCs. Springer Series in Materials Science, 2016, , 473-512.	0.4	3
166	Piezophototronic Effect in Single-Atomic-Layer $\text{MoS}_2$ for Strain-Gated Flexible Optoelectronics. Advanced Materials, 2016, 28, 8463-8468.	11.1	187
167	Thickness-Dependent Binding Energy Shift in Few-Layer $\text{MoS}_2$ Grown by Chemical Vapor Deposition. ACS Applied Materials & Interfaces, 2016, 8, 22637-22646.	4.0	51
168	Recent Advances in Doping of Molybdenum Disulfide: Industrial Applications and Future Prospects. Advanced Materials, 2016, 28, 9024-9059.	11.1	189
169	Band Gap Engineering with Ultralarge Biaxial Strains in Suspended Monolayer $\text{MoS}_2$ . Nano Letters, 2016, 16, 5836-5841.	4.5	443
170	Tribotronic Enhanced Photoresponsivity of a $\text{MoS}_2$ Phototransistor. Advanced Science, 2016, 3, 1500419.	5.6	77

#	ARTICLE	IF	CITATIONS
171	Chemical Vapor Deposition of High-Quality Large-Sized MoS <sub>2</sub> Crystals on Silicon Dioxide Substrates. <i>Advanced Science</i> , 2016, 3, 1500033.	5.6	128
172	Scalable Patterning of MoS <sub>2</sub> Nanoribbons by Micromolding in Capillaries. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 20993-21001.	4.0	23
173	Distinctive in-Plane Cleavage Behaviors of Two-Dimensional Layered Materials. <i>ACS Nano</i> , 2016, 10, 8980-8988.	7.3	90
174	Colloidal Synthesis of Uniform-Sized Molybdenum Disulfide Nanosheets for Wafer-Scale Flexible Nonvolatile Memory. <i>Advanced Materials</i> , 2016, 28, 9326-9332.	11.1	151
175	Piezoelectric properties of monolayer II-VI group oxides by first-principles calculations. <i>Physica Status Solidi (B): Basic Research</i> , 2016, 253, 2534-2539.	0.7	43
176	Atomically phase-matched second-harmonic generation in a 2D crystal. <i>Light: Science and Applications</i> , 2016, 5, e16131-e16131.	7.7	165
177	Piezoelectricity in asymmetrically strained bilayer graphene. <i>2D Materials</i> , 2016, 3, 035015.	2.0	14
178	Piezoelectricity in planar boron nitride via a geometric phase. <i>Physical Review B</i> , 2016, 94, .	1.1	42
179	Oxygen-Incorporated MoS <sub>2</sub> Nanosheets with Expanded Interlayers for Hydrogen Evolution Reaction and Pseudocapacitor Applications. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 33681-33689.	4.0	94
180	Subatomic deformation driven by vertical piezoelectricity from CdS ultrathin films. <i>Science Advances</i> , 2016, 2, e1600209.	4.7	67
181	Structural model, size effect and nano-energy system design for more sustainable energy of solid state automotive battery. <i>Renewable and Sustainable Energy Reviews</i> , 2016, 65, 685-697.	8.2	11
182	Single-layer MoS <sub>2</sub> nanopores as nanopower generators. <i>Nature</i> , 2016, 536, 197-200.	13.7	830
183	Tight-binding approach to strain and curvature in monolayer transition-metal dichalcogenides. <i>Physical Review B</i> , 2016, 94, .	1.1	38
184	Improved Gate Dielectric Deposition and Enhanced Electrical Stability for Single-Layer MoS <sub>2</sub> MOSFET with an AlN Interfacial Layer. <i>Scientific Reports</i> , 2016, 6, 27676.	1.6	39
185	Low-symmetry two-dimensional materials for electronic and photonic applications. <i>Nano Today</i> , 2016, 11, 763-777.	6.2	113
186	A respiration-detective graphene oxide/lithium battery. <i>Journal of Materials Chemistry A</i> , 2016, 4, 19154-19159.	5.2	24
187	Static flexural modes and piezoelectricity in 2D and layered crystals. <i>Physica Status Solidi (B): Basic Research</i> , 2016, 253, 2311-2315.	0.7	5
188	Strain Relaxation of Monolayer WS <sub>2</sub> on Plastic Substrate. <i>Advanced Functional Materials</i> , 2016, 26, 8707-8714.	7.8	97

#	ARTICLE	IF	CITATIONS
189	Vapor-activated Power Generation on Conductive Polymer. <i>Advanced Functional Materials</i> , 2016, 26, 8784-8792.	7.8	110
190	Anomalous thermoelectricity in strained Bi <sub>2</sub> Te <sub>3</sub> films. <i>Scientific Reports</i> , 2016, 6, 32661.	1.6	11
191	Effect of Sulfur Evaporation Rate on Screw Dislocation Driven Growth of MoS <sub>2</sub> with High Atomic Step Density. <i>Crystal Growth and Design</i> , 2016, 16, 7145-7154.	1.4	38
192	Progress in piezo-phototronic effect enhanced photodetectors. <i>Journal of Materials Chemistry C</i> , 2016, 4, 11341-11354.	2.7	47
193	Piezotronics and piezo-phototronics for adaptive electronics and optoelectronics. <i>Nature Reviews Materials</i> , 2016, 1, .	23.3	438
194	Direct TEM observations of growth mechanisms of two-dimensional MoS <sub>2</sub> flakes. <i>Nature Communications</i> , 2016, 7, 12206.	5.8	179
195	Ultrathin, transferred layers of thermally grown silicon dioxide as biofluid barriers for biointegrated flexible electronic systems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 11682-11687.	3.3	175
196	Modulation of electrical potential and conductivity in an atomic-layer semiconductor heterojunction. <i>Scientific Reports</i> , 2016, 6, 31223.	1.6	44
197	Outputting Olfactory Bionic Electric Impulse by PANI/PTFE/PANI Sandwich Nanostructures and their Application as Flexible, Smelling Electronic Skin. <i>Advanced Functional Materials</i> , 2016, 26, 3128-3138.	7.8	102
198	Ferroelectrically Gated Atomically Thin Transition-Metal Dichalcogenides as Nonvolatile Memory. <i>Advanced Materials</i> , 2016, 28, 2923-2930.	11.1	134
199	p-type MoS <sub>2</sub> and n-type ZnO Diode and Its Performance Enhancement by the Piezophototronic Effect. <i>Advanced Materials</i> , 2016, 28, 3391-3398.	11.1	143
200	Mechanical Modulation of a Hybrid Graphene-Microfiber Structure. <i>Advanced Optical Materials</i> , 2016, 4, 853-857.	3.6	16
201	Robust Thin Films-Based Triboelectric Nanogenerator Arrays for Harvesting Bidirectional Wind Energy. <i>Advanced Energy Materials</i> , 2016, 6, 1501799.	10.2	136
202	MoS <sub>2</sub> -Based Tactile Sensor for Electronic Skin Applications. <i>Advanced Materials</i> , 2016, 28, 2556-2562.	11.1	351
203	Reversible Control of In-Plane Elastic Stress Tensor in Nanomembranes. <i>Advanced Optical Materials</i> , 2016, 4, 682-687.	3.6	23
204	Low-temperature Solution Synthesis of Few-layer 1T-MoTe <sub>2</sub> Nanostructures Exhibiting Lattice Compression. <i>Angewandte Chemie</i> , 2016, 128, 2880-2884.	1.6	22
205	Piezoelectric-conductor iterative method for analysis of cracks in piezoelectric semiconductors via the finite element method. <i>Engineering Fracture Mechanics</i> , 2016, 165, 183-196.	2.0	45
206	Interlayer Coupling in Twisted WSe <sub>2</sub> /WS <sub>2</sub> Bilayer Heterostructures Revealed by Optical Spectroscopy. <i>ACS Nano</i> , 2016, 10, 6612-6622.	7.3	249

#	ARTICLE	IF	CITATIONS
207	First principles kinetic Monte Carlo study on the growth patterns of WSe <sub>2</sub> monolayer. 2D Materials, 2016, 3, 025029.	2.0	59
208	Large-Scale Synthesis and Systematic Photoluminescence Properties of Monolayer MoS <sub>2</sub> on Fused Silica. ACS Applied Materials & Interfaces, 2016, 8, 18570-18576.	4.0	26
209	Third order nonlinear optical response exhibited by mono- and few-layers of WS <sub>2</sub> . 2D Materials, 2016, 3, 021005.	2.0	46
210	Large-Area Deposition of MoS <sub>2</sub> by Pulsed Laser Deposition with <i>In Situ</i> Thickness Control. ACS Nano, 2016, 10, 6054-6061.	7.3	202
211	Peculiar Piezoelectric Properties of Soft Two-Dimensional Materials. Journal of Physical Chemistry C, 2016, 120, 13948-13953.	1.5	50
212	Nanoporous two-dimensional MoS <sub>2</sub> membranes for fast saline solution purification. Physical Chemistry Chemical Physics, 2016, 18, 22210-22216.	1.3	68
213	Molybdenum disulfide quantum dots: synthesis and applications. RSC Advances, 2016, 6, 65670-65682.	1.7	91
214	Gate-Free Controlled Multibit Memories Based on Individual ZnO:In Micro/Nanowire Back-to-Back Diodes. Advanced Electronic Materials, 2016, 2, 1500395.	2.6	7
215	Controlled Exfoliation of Layered Silicate Heterostructures into Bilayers and Their Conversion into Giant Janus Platelets. Angewandte Chemie, 2016, 128, 7524-7528.	1.6	8
216	Intercalation in two-dimensional transition metal chalcogenides. Inorganic Chemistry Frontiers, 2016, 3, 452-463.	3.0	181
217	Fully integrated wearable sensor arrays for multiplexed in situ perspiration analysis. Nature, 2016, 529, 509-514.	13.7	3,508
218	Novel effects of strains in graphene and other two dimensional materials. Physics Reports, 2016, 617, 1-54.	10.3	315
219	Uniform, large-area self-limiting layer synthesis of tungsten diselenide. 2D Materials, 2016, 3, 014004.	2.0	40
220	Theoretical study on two-dimensional MoS <sub>2</sub> piezoelectric nanogenerators. Nano Research, 2016, 9, 800-807.	5.8	85
221	Modeling and Simulation of a Lithium Manganese Oxide/Activated Carbon Asymmetric Supercapacitor. Journal of Electronic Materials, 2016, 45, 515-526.	1.0	19
222	Biosensors Based on Two-Dimensional MoS <sub>2</sub> . ACS Sensors, 2016, 1, 5-16.	4.0	310
223	Ballistic transport in single-layer MoS <sub>2</sub> piezotronic transistors. Nano Research, 2016, 9, 282-290.	5.8	17
224	Structural Phase Transitions by Design in Monolayer Alloys. ACS Nano, 2016, 10, 289-297.	7.3	109

#	ARTICLE	IF	CITATIONS
225	Superconductivity protected by spin-valley locking in ion-gated MoS <sub>2</sub> . Nature Physics, 2016, 12, 144-149.	6.5	419
226	A polarizing situation: Taking an in-plane perspective for next-generation near-field studies. Frontiers of Physics, 2016, 11, 1.	2.4	8
227	Visualizing the Motion of Graphene Nanodrums. Nano Letters, 2016, 16, 2768-2773.	4.5	74
228	Monolayer MoS <sub>2</sub> /GaAs heterostructure self-driven photodetector with extremely high detectivity. Nano Energy, 2016, 23, 89-96.	8.2	138
229	Piezoelectricity of Functionalized Graphene: A Quantum-Mechanical Rationalization. Journal of Physical Chemistry C, 2016, 120, 7795-7803.	1.5	26
230	Two-dimensional layered MoS <sub>2</sub> : rational design, properties and electrochemical applications. Energy and Environmental Science, 2016, 9, 1190-1209.	15.6	532
231	Mesoporous transition metal dichalcogenide ME <sub>2</sub> (M = Mo, W; E = S, Se) with 2-D layered crystallinity as anode materials for lithium ion batteries. RSC Advances, 2016, 6, 14253-14260.	1.7	52
232	Large-quantity and continuous preparation of two-dimensional nanosheets. Nanoscale, 2016, 8, 5407-5411.	2.8	52
233	An experimental study: Role of different ambient on sulfurization of MoO <sub>3</sub> into MoS <sub>2</sub> . Journal of Alloys and Compounds, 2016, 671, 440-445.	2.8	23
234	Coordination Programming of Two-Dimensional Metal Complex Frameworks. Langmuir, 2016, 32, 2527-2538.	1.6	79
235	Directional dependent piezoelectric effect in CVD grown monolayer MoS <sub>2</sub> for flexible piezoelectric nanogenerators. Nano Energy, 2016, 22, 483-489.	8.2	197
236	Bending Two-Dimensional Materials To Control Charge Localization and Fermi-Level Shift. Nano Letters, 2016, 16, 2444-2449.	4.5	74
237	Applications of piezoresponse force microscopy in materials research: from inorganic ferroelectrics to biopiezoelectrics and beyond. International Materials Reviews, 2016, 61, 46-70.	9.4	80
238	Layer-by-layer thinning of two-dimensional MoS <sub>2</sub> films by using a focused ion beam. Nanoscale, 2016, 8, 4107-4112.	2.8	33
239	Acoustically-Driven Trion and Exciton Modulation in Piezoelectric Two-Dimensional MoS <sub>2</sub> . Nano Letters, 2016, 16, 849-855.	4.5	91
240	Exciton and piezoelectricity in insulating 2-dimensional boron carbide. Ceramics International, 2016, 42, 4026-4032.	2.3	5
241	Strain-Gated Field Effect Transistor of a MoS <sub>2</sub> -ZnO 2D-1D Hybrid Structure. ACS Nano, 2016, 10, 1546-1551.	7.3	80
242	Moving graphene devices from lab to market: advanced graphene-coated nanoprobe. Nanoscale, 2016, 8, 8466-8473.	2.8	31

#	ARTICLE	IF	CITATIONS
243	Force and Strain. , 2016, , 413-428.		4
244	Topochemical molten salt synthesis for functional perovskite compounds. Chemical Science, 2016, 7, 855-865.	3.7	65
245	Synthesis of graphene and related two-dimensional materials for bioelectronics devices. Biosensors and Bioelectronics, 2017, 89, 28-42.	5.3	54
246	Nucleic acid-functionalized transition metal nanosheets for biosensing applications. Biosensors and Bioelectronics, 2017, 89, 201-211.	5.3	62
247	Flexible, Cuttable, and Self-Waterproof Bending Strain Sensors Using Microcracked Gold Nanofilms@Paper Substrate. ACS Applied Materials & Interfaces, 2017, 9, 4151-4158.	4.0	107
248	A flexible p-CuO/n-MoS <sub>2</sub> heterojunction photodetector with enhanced photoresponse by the piezo-phototronic effect. Materials Horizons, 2017, 4, 274-280.	6.4	128
249	Substrate induced changes in atomically thin 2-dimensional semiconductors: Fundamentals, engineering, and applications. Applied Physics Reviews, 2017, 4, 011301.	5.5	97
250	Coral-Shaped MoS <sub>2</sub> Decorated with Graphene Quantum Dots Performing as a Highly Active Electrocatalyst for Hydrogen Evolution Reaction. ACS Applied Materials & Interfaces, 2017, 9, 3653-3660.	4.0	98
251	Epitaxial Stitching and Stacking Growth of Atomically Thin Transition-Metal Dichalcogenides (TMDCs) Heterojunctions. Advanced Functional Materials, 2017, 27, 1603884.	7.8	73
252	High-performance piezo-phototronic solar cell based on two-dimensional materials. Nano Energy, 2017, 32, 448-453.	8.2	67
253	Recent development of two-dimensional transition metal dichalcogenides and their applications. Materials Today, 2017, 20, 116-130.	8.3	1,852
254	Water-evaporation-induced electricity with nanostructured carbon materials. Nature Nanotechnology, 2017, 12, 317-321.	15.6	747
255	Flexible piezoelectric nanogenerators based on a transferred ZnO nanorod/Si micro-pillar array. Nanotechnology, 2017, 28, 095401.	1.3	20
256	Strain engineering of Schottky barriers in single- and few-layer MoS <sub>2</sub> vertical devices. 2D Materials, 2017, 4, 021006.	2.0	54
257	A permittivity regulating strategy to achieve high-performance electromagnetic wave absorbers with compatibility of impedance matching and energy conservation. New Journal of Chemistry, 2017, 41, 1259-1266.	1.4	155
258	Layer Dependence and Light Tuning Surface Potential of 2D MoS <sub>2</sub> on Various Substrates. Small, 2017, 13, 1603103.	5.2	58
259	Two-dimensional multiferroics in monolayer group IV monochalcogenides. 2D Materials, 2017, 4, 015042.	2.0	275
260	Piezoelectricity in two-dimensional group III-V buckled honeycomb monolayers. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1600412.	1.2	45

#	ARTICLE	IF	CITATIONS
261	Investigating fold structures of 2D materials by quantitative transmission electron microscopy. <i>Micron</i> , 2017, 95, 16-22.	1.1	2
262	Theoretical study on dynamic acoustic modulation of free carriers, excitons, and trions in 2D MoS <sub>2</sub> flake. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 114005.	1.3	16
263	Controlled Molybdenum Disulfide Assembly inside Carbon Nanofiber by Boudouard Reaction Inspired Selective Carbon Oxidation. <i>Advanced Materials</i> , 2017, 29, 1605327.	11.1	14
264	A review on mechanics and mechanical properties of 2D materials—Graphene and beyond. <i>Extreme Mechanics Letters</i> , 2017, 13, 42-77.	2.0	920
265	Enhanced piezoelectric effect at the edges of stepped molybdenum disulfide nanosheets. <i>Nanoscale</i> , 2017, 9, 6237-6245.	2.8	24
266	Synthesis of Orthorhombic Perovskite-Type ZnSnO <sub>3</sub> Single-Crystal Nanoplates and Their Application in Energy Harvesting. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 8271-8279.	4.0	105
267	Ultrasensitive 2D ZnO Piezotronic Transistor Array for High Resolution Tactile Imaging. <i>Advanced Materials</i> , 2017, 29, 1606346.	11.1	79
268	Integration of functionalized two-dimensional TaS <sub>2</sub> nanosheets and an electron mediator for more efficient biocatalyzed artificial photosynthesis. <i>Journal of Materials Chemistry A</i> , 2017, 5, 5511-5522.	5.2	38
269	Concurrent Synthesis of High-Performance Monolayer Transition Metal Disulfides. <i>Advanced Functional Materials</i> , 2017, 27, 1605896.	7.8	35
270	Flexible thermoelectric nanogenerator based on the MoS <sub>2</sub> /graphene nanocomposite and its application for a self-powered temperature sensor. <i>Semiconductor Science and Technology</i> , 2017, 32, 044003.	1.0	47
271	Topology-Scaling Identification of Layered Solids and Stable Exfoliated 2D Materials. <i>Physical Review Letters</i> , 2017, 118, 106101.	2.9	262
272	Acousto-optical phonon excitation in cubic piezoelectric slabs and crystal growth orientation effects. <i>Physical Review B</i> , 2017, 95, .	1.1	6
273	Shape-Controllable Gold Nanoparticle—MoS <sub>2</sub> Hybrids Prepared by Tuning Edge-Active Sites and Surface Structures of MoS <sub>2</sub> via Temporally Shaped Femtosecond Pulses. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 7447-7455.	4.0	50
274	Centimeter-Scale Nearly Single-Crystal Monolayer MoS <sub>2</sub> via Self-Limiting Vapor Deposition Epitaxy. <i>Journal of Physical Chemistry C</i> , 2017, 121, 4703-4707.	1.5	12
275	Recent advances in wearable tactile sensors: Materials, sensing mechanisms, and device performance. <i>Materials Science and Engineering Reports</i> , 2017, 115, 1-37.	14.8	557
276	Piezoelectricity of 2D nanomaterials: characterization, properties, and applications. <i>Semiconductor Science and Technology</i> , 2017, 32, 043006.	1.0	49
277	Data Mining for New Two- and One-Dimensional Weakly Bonded Solids and Lattice-Commensurate Heterostructures. <i>Nano Letters</i> , 2017, 17, 1915-1923.	4.5	166
278	Interfacial synthesis of electrofunctional coordination nanowires and nanosheets of bis(terpyridine) complexes. <i>Coordination Chemistry Reviews</i> , 2017, 346, 139-149.	9.5	63



#	ARTICLE	IF	CITATIONS
279	Ultrathin Nickel-Cobalt Phosphate 2D Nanosheets for Electrochemical Energy Storage under Aqueous/Solid-State Electrolyte. <i>Advanced Functional Materials</i> , 2017, 27, 1605784.	7.8	368
280	Strain Gated Bilayer Molybdenum Disulfide Field Effect Transistor with Edge Contacts. <i>Scientific Reports</i> , 2017, 7, 41593.	1.6	17
281	Performance-enhanced triboelectric nanogenerator enabled by wafer-scale nanogrates of multistep pattern downscaling. <i>Nano Energy</i> , 2017, 35, 415-423.	8.2	120
282	Wafer-scale synthesis of ultrathin CoO nanosheets with enhanced electrochemical catalytic properties. <i>Journal of Materials Chemistry A</i> , 2017, 5, 9060-9066.	5.2	31
283	Thickness-dependent Schottky barrier height of MoS <sub>2</sub> field-effect transistors. <i>Nanoscale</i> , 2017, 9, 6151-6157.	2.8	120
284	The hot carrier diffusion coefficient of sub-10 nm virgin MoS <sub>2</sub> : uncovered by non-contact optical probing. <i>Nanoscale</i> , 2017, 9, 6808-6820.	2.8	46
285	The effects of local bond relaxations on the electronic and photocatalysis performances of nonmetal doped 3R-MoS <sub>2</sub> based photocatalyst: density functional theory. <i>Materials Research Express</i> , 2017, 4, 035908.	0.8	1
286	Enhanced piezoelectric effect in Janus group-III chalcogenide monolayers. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	307
287	Ultrasensitive Vertical Piezotronic Transistor Based on ZnO Twin Nanoplatelet. <i>ACS Nano</i> , 2017, 11, 4859-4865.	7.3	45
288	Identifying the Active Surfaces of Electrochemically Tuned LiCoO <sub>2</sub> for Oxygen Evolution Reaction. <i>Journal of the American Chemical Society</i> , 2017, 139, 6270-6276.	6.6	143
289	CVD growth of monolayer MoS <sub>2</sub> : Role of growth zone configuration and precursors ratio. <i>Japanese Journal of Applied Physics</i> , 2017, 56, 06GG05.	0.8	51
290	Smart Reinvention of the Contact Lens with Graphene. <i>ACS Nano</i> , 2017, 11, 5223-5226.	7.3	25
291	Two-Photon Fluorescent Molybdenum Disulfide Dots for Targeted Prostate Cancer Imaging in the Biological II Window. <i>ACS Omega</i> , 2017, 2, 1826-1835.	1.6	47
292	Simultaneously Enhancing Light Emission and Suppressing Efficiency Droop in GaN Microwire-Based Ultraviolet Light-Emitting Diode by the Piezo-Phototronic Effect. <i>Nano Letters</i> , 2017, 17, 3718-3724.	4.5	55
293	Chalcogenide Nanosheets: Optical Signatures of Many-Body Effects and Electronic Band Structure. <i>Nanostructure Science and Technology</i> , 2017, , 133-162.	0.1	2
294	Na <sub>0.35</sub> MnO <sub>2</sub> as an ionic conductor with randomly distributed nano-sized layers. <i>Journal of Materials Chemistry A</i> , 2017, 5, 10021-10026.	5.2	13
295	Research Update: Hybrid energy devices combining nanogenerators and energy storage systems for self-charging capability. <i>APL Materials</i> , 2017, 5, .	2.2	59
296	Compressive strain induced enhancement in thermoelectric-power-factor in monolayer MoS <sub>2</sub> nanosheet. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 225501.	0.7	38

#	ARTICLE	IF	CITATIONS
297	Direct current energy generators from a conducting polymer–inorganic oxide junction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 8267-8273.	5.2	40
298	Wearable smart sensor systems integrated on soft contact lenses for wireless ocular diagnostics. <i>Nature Communications</i> , 2017, 8, 14997.	5.8	633
299	Rotational Anisotropy Nonlinear Harmonic Generation. , 2017, , 1-49.		5
300	Wearable Sensing Systems with Mechanically Soft Assemblies of Nanoscale Materials. <i>Advanced Materials Technologies</i> , 2017, 2, 1700053.	3.0	89
301	Spatiotemporal Evolution of Coherent Elastic Strain Waves in a Single MoS <sub>2</sub> Flake. <i>Nano Letters</i> , 2017, 17, 3952-3958.	4.5	54
302	The effects of different possible modes of uniaxial strain on the tunability of electronic and band structures in $\text{MoS}_2$ MoS <sub>2</sub> monolayer nanosheet via first-principles density functional theory. <i>Pramana - Journal of Physics</i> , 2017, 89, 1.	0.9	6
303	Molecular Beam Epitaxy of Highly Crystalline Monolayer Molybdenum Disulfide on Hexagonal Boron Nitride. <i>Journal of the American Chemical Society</i> , 2017, 139, 9392-9400.	6.6	167
304	Theory of 2D crystals: graphene and beyond. <i>Chemical Society Reviews</i> , 2017, 46, 4387-4399.	18.7	121
305	Graphene and related two-dimensional materials: Structure-property relationships for electronics and optoelectronics. <i>Applied Physics Reviews</i> , 2017, 4, .	5.5	476
306	Nano-force sensor based on a single tellurium microwire. <i>Semiconductor Science and Technology</i> , 2017, 32, 074001.	1.0	6
307	Monolayer AgBiP <sub>2</sub> Se <sub>6</sub> : an atomically thin ferroelectric semiconductor with out-plane polarization. <i>Nanoscale</i> , 2017, 9, 8427-8434.	2.8	97
308	From two-dimensional materials to their heterostructures: An electrochemist's perspective. <i>Applied Materials Today</i> , 2017, 8, 68-103.	2.3	212
309	In situ nanomechanical characterization of multi-layer MoS <sub>2</sub> membranes: from intraplanar to interplanar fracture. <i>Nanoscale</i> , 2017, 9, 9119-9128.	2.8	39
310	2D transition metal dichalcogenides. <i>Nature Reviews Materials</i> , 2017, 2, .	23.3	3,689
311	Piezoelectricity in two-dimensional covalent organic frameworks. <i>Journal of Applied Physics</i> , 2017, 121, 225112.	1.1	0
312	Edge eigen-stress and eigen-displacement of armchair molybdenum disulfide nanoribbons. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2017, 381, 1568-1572.	0.9	4
313	Recent Progress on Piezoelectric and Triboelectric Energy Harvesters in Biomedical Systems. <i>Advanced Science</i> , 2017, 4, 1700029.	5.6	405
314	Controlling the luminescence of monolayer MoS <sub>2</sub> based on the piezoelectric effect. <i>Nano Research</i> , 2017, 10, 2527-2534.	5.8	28

#	ARTICLE	IF	CITATIONS
315	Strain-Induced Optimization of Nanoelectromechanical Energy Harvesting and Nanopiezotronic Response in a MoS <sub>2</sub> Monolayer Nanosheet. <i>Journal of Physical Chemistry C</i> , 2017, 121, 9181-9190.	1.5	50
316	Novel carbon channels from loofah sponge for construction of metal sulfide/carbon composites with robust electrochemical energy storage. <i>Journal of Materials Chemistry A</i> , 2017, 5, 7578-7585.	5.2	90
317	Phase-transfer induced room temperature ferromagnetic behavior in 1T@2H-MoSe <sub>2</sub> nanosheets. <i>Scientific Reports</i> , 2017, 7, 45307.	1.6	23
318	Piezoelectricity in two-dimensional materials: Comparative study between lattice dynamics and <i>ab initio</i> calculations. <i>Physical Review B</i> , 2017, 95, .	1.1	36
319	Nanogenerators: An emerging technology towards nanoenergy. <i>APL Materials</i> , 2017, 5, .	2.2	164
320	Recent progress in piezo-phototronics with extended materials, application areas and understanding. <i>Semiconductor Science and Technology</i> , 2017, 32, 053002.	1.0	22
321	Wafer-Scale Synthesis of High-Quality Semiconducting Two-Dimensional Layered InSe with Broadband Photoresponse. <i>ACS Nano</i> , 2017, 11, 4225-4236.	7.3	277
322	Rapid Synthesis of Sub-5 nm Sized Cubic Boron Nitride Nanocrystals with High-Piezoelectric Behavior via Electrochemical Shock. <i>Nano Letters</i> , 2017, 17, 355-361.	4.5	16
323	Electric field controlled CO <sub>2</sub> capture and CO <sub>2</sub> /N <sub>2</sub> separation on MoS <sub>2</sub> monolayers. <i>Nanoscale</i> , 2017, 9, 19-24.	2.8	78
324	A facile route to graphene-covered and carbon-encapsulated CoSO <sub>4</sub> nanoparticles as anode materials for lithium-ion batteries. <i>Chemical Engineering Journal</i> , 2017, 313, 610-618.	6.6	21
325	Single- and few-layers MoS <sub>2</sub> nanocomposite as piezo-catalyst in dark and self-powered active sensor. <i>Nano Energy</i> , 2017, 31, 575-581.	8.2	135
326	Metal halide perovskite nanomaterials: synthesis and applications. <i>Chemical Science</i> , 2017, 8, 2522-2536.	3.7	233
327	Recent Advances in Synthesis and Biomedical Applications of Two-Dimensional Transition Metal Dichalcogenide Nanosheets. <i>Small</i> , 2017, 13, 1602660.	5.2	221
328	Recent Progress of Self-Powered Sensing Systems for Wearable Electronics. <i>Small</i> , 2017, 13, 1701791.	5.2	223
329	Giant Piezoelectric Effects in Monolayer Group-V Binary Compounds with Honeycomb Phases: A First-Principles Prediction. <i>Journal of Physical Chemistry C</i> , 2017, 121, 25576-25584.	1.5	78
330	Single crystal monolayer MoS <sub>2</sub> triangles with wafer-scale spatial uniformity by MoO <sub>3</sub> pre-deposited chemical vapor deposition. <i>Journal of Crystal Growth</i> , 2017, 480, 6-12.	0.7	10
331	On the nature of AFM tip metal-MoS <sub>2</sub> contact; effect of single layer character and tip force. <i>Applied Physics Letters</i> , 2017, 111, 141601.	1.5	7
332	Boron nitride honeycombs with superb and tunable piezopotential properties. <i>Nano Energy</i> , 2017, 41, 460-468.	8.2	25

#	ARTICLE	IF	CITATIONS
333	Compressive strain induced dynamical stability of monolayer 1T-MX <sub>2</sub> (M = Mo, W; X = S, Se). <i>Materials Research Express</i> , 2017, 4, 115018.	0.8	13
334	Nature-Inspired Structural Materials for Flexible Electronic Devices. <i>Chemical Reviews</i> , 2017, 117, 12893-12941.	23.0	578
335	Bis(aminothiolo)nickel nanosheet as a redox switch for conductivity and an electrocatalyst for the hydrogen evolution reaction. <i>Chemical Science</i> , 2017, 8, 8078-8085.	3.7	120
336	Integration of Energy Harvesting and Electrochemical Storage Devices. <i>Advanced Materials Technologies</i> , 2017, 2, 1700182.	3.0	78
337	Inorganic semiconducting materials for flexible and stretchable electronics. <i>Npj Flexible Electronics</i> , 2017, 1, .	5.1	144
338	Interlayer bond polarizability model for stacking-dependent low-frequency Raman scattering in layered materials. <i>Nanoscale</i> , 2017, 9, 15340-15355.	2.8	38
339	Enhanced piezoelectricity of monolayer phosphorene oxides: a theoretical study. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 27508-27515.	1.3	27
340	Transparent, Flexible Cellulose Nanofibril-Phosphorene Hybrid Paper as Triboelectric Nanogenerator. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700651.	1.9	97
341	Broadband reconfigurable logic gates in phonon waveguides. <i>Scientific Reports</i> , 2017, 7, 12745.	1.6	15
342	One-Step, Solventless, and Scalable Mechanochemical Synthesis of WO <sub>3</sub> ·2H <sub>2</sub> O Ultrathin Narrow Nanosheets with Superior UV-Vis-Light-Driven Photocatalytic Activity. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 10735-10743.	3.2	31
343	Inducing High Coercivity in MoS <sub>2</sub> Nanosheets by Transition Element Doping. <i>Chemistry of Materials</i> , 2017, 29, 9066-9074.	3.2	81
344	Gate-controlled reversible rectifying behaviour in tunnel contacted atomically-thin MoS <sub>2</sub> transistor. <i>Nature Communications</i> , 2017, 8, 970.	5.8	68
345	Strain engineering, efficient excitonic photoluminescence, and exciton funnelling in unmodified MoS <sub>2</sub> nanosheets. <i>Nanoscale</i> , 2017, 9, 16602-16606.	2.8	39
346	Piezoelectric Phototronic Matrix via a Nanowire Array. <i>Small</i> , 2017, 13, 1702377.	5.2	14
347	Acoustic Traps and Lattices for Electrons in Semiconductors. <i>Physical Review X</i> , 2017, 7, .	2.8	21
348	Out-of-Plane Piezoelectricity and Ferroelectricity in Layered In <sub>2</sub> Se <sub>3</sub> Nanoflakes. <i>Nano Letters</i> , 2017, 17, 5508-5513.	4.5	567
349	Harvesting electrical energy from carbon nanotube yarn twist. <i>Science</i> , 2017, 357, 773-778.	6.0	306
350	Piezoelectricity in two dimensions: Graphene vs. molybdenum disulfide. <i>Applied Physics Letters</i> , 2017, 111, .	1.5	27

#	ARTICLE	IF	CITATIONS
352	Transparent Large-Area MoS <sub>2</sub> Phototransistors with Inkjet-Printed Components on Flexible Platforms. ACS Nano, 2017, 11, 10273-10280.	7.3	72
353	Fabrication of a solution-processed, highly flexible few layer MoS <sub>2</sub> (n)-CuO (p) piezotronic diode on a paper substrate for an active analog frequency modulator and enhanced broadband photodetector. Journal of Materials Chemistry C, 2017, 5, 11436-11447.	2.7	35
354	A Simple Method for Synthesis of High-Quality Millimeter-Scale 1T Transition-Metal Telluride and Near-Field Nanooptical Properties. Advanced Materials, 2017, 29, 1700704.	11.1	101
355	Piezoelectricity enhancement and bandstructure modification of atomic defect-mediated MoS <sub>2</sub> monolayer. Physical Chemistry Chemical Physics, 2017, 19, 24271-24275.	1.3	11
356	Piezoelectric coefficients of bulk 3R transition metal dichalcogenides. Japanese Journal of Applied Physics, 2017, 56, 098002.	0.8	9
357	Strain-Modulated Bandgap and Piezo-Resistive Effect in Black Phosphorus Field-Effect Transistors. Nano Letters, 2017, 17, 6097-6103.	4.5	117
358	A novel and facile method for detecting the lattice orientation of MoS <sub>2</sub> tribological surface using the SPSA process. Materials and Design, 2017, 135, 291-299.	3.3	5
359	Direct observation of multiple rotational stacking faults coexisting in freestanding bilayer MoS <sub>2</sub> . Scientific Reports, 2017, 7, 8323.	1.6	15
360	Low-energy electron excitation effect on formation of graphene nanocrystallites during carbon film growth process. Applied Physics Letters, 2017, 111, .	1.5	20
361	Flexible Photodetectors Based on Novel Functional Materials. Small, 2017, 13, 1701822.	5.2	259
362	Highly Localized Strain in a MoS <sub>2</sub> /Au Heterostructure Revealed by Tip-Enhanced Raman Spectroscopy. Nano Letters, 2017, 17, 6027-6033.	4.5	91
363	BP <sub>5</sub> monolayer with multiferroicity and negative Poisson's ratio: a prediction by global optimization method. 2D Materials, 2017, 4, 045020.	2.0	83
364	Controlled Layer Thinning and p-Type Doping of WSe <sub>2</sub> by Vapor XeF <sub>2</sub> . Advanced Functional Materials, 2017, 27, 1702455.	7.8	103
365	High-energy electronic excitations in a bulk $\text{MoS}_2$ crystal. Physical Review B, 2017, 96, .	1.1	9
366	High-frequency electromechanical resonators based on thin GaTe. Nanotechnology, 2017, 28, 42LT02.	1.3	16
367	Piezotronic effect in 1D van der Waals solid of elemental tellurium nanobelt for smart adaptive electronics. Semiconductor Science and Technology, 2017, 32, 104004.	1.0	32
368	A Clean and Facile Synthesis Strategy of MoS <sub>2</sub> Nanosheets Grown on Multi-Wall CNTs for Enhanced Hydrogen Evolution Reaction Performance. Scientific Reports, 2017, 7, 8825.	1.6	53
369	Stabilization of 1T phase WTe <sub>2</sub> by scalar relativistic effect. Applied Physics Letters, 2017, 110, 263104.	1.5	7

#	ARTICLE	IF	CITATIONS
370	A review of recent <i>ab initio</i> studies on strain-tunable conductivity in tunnel junctions with piezoelectric, ferroelectric and multiferroic barriers. <i>Semiconductor Science and Technology</i> , 2017, 32, 083006.	1.0	4
371	Construction of Nitrogen-Doped Carbon-Coated MoSe <sub>2</sub> Microspheres with Enhanced Performance for Lithium Storage. <i>Chemistry - A European Journal</i> , 2017, 23, 12924-12929.	1.7	43
372	Wearable All-Fabric-Based Triboelectric Generator for Water Energy Harvesting. <i>Advanced Energy Materials</i> , 2017, 7, 1701243.	10.2	220
373	Capacitor Mismatch Calibration Technique to Improve the SFDR of 14-Bit SAR ADC. , 2017, , .		6
374	Large-size graphene-like porous carbon nanosheets with controllable N-doped surface derived from sugarcane bagasse pith/chitosan for high performance supercapacitors. <i>Carbon</i> , 2017, 123, 290-298.	5.4	157
375	Enhanced Triboelectric Nanogenerators Based on MoS <sub>2</sub> Monolayer Nanocomposites Acting as Electron-Acceptor Layers. <i>ACS Nano</i> , 2017, 11, 8356-8363.	7.3	196
376	Graphene-Contacted Ultrashort Channel Monolayer MoS <sub>2</sub> Transistors. <i>Advanced Materials</i> , 2017, 29, 1702522.	11.1	218
377	Recent advanced in energy harvesting and storage applications with two-dimensional layered materials. <i>FlatChem</i> , 2017, 6, 37-47.	2.8	20
378	Mechanical Analyses and Structural Design Requirements for Flexible Energy Storage Devices. <i>Advanced Energy Materials</i> , 2017, 7, 1700535.	10.2	170
379	Few-layer MoS <sub>2</sub> as nitrogen protective barrier. <i>Nanotechnology</i> , 2017, 28, 415706.	1.3	6
380	A kinetic Monte Carlo simulation method of van der Waals epitaxy for atomistic nucleation-growth processes of transition metal dichalcogenides. <i>Scientific Reports</i> , 2017, 7, 2977.	1.6	72
381	One-dimensional electron gas in strained lateral heterostructures of single layer materials. <i>Scientific Reports</i> , 2017, 7, 4316.	1.6	4
382	Adhesion, Stiffness, and Instability in Atomically Thin MoS <sub>2</sub> Bubbles. <i>Nano Letters</i> , 2017, 17, 5329-5334.	4.5	92
383	Out-of-Plane Electromechanical Response of Monolayer Molybdenum Disulfide Measured by Piezoresponse Force Microscopy. <i>Nano Letters</i> , 2017, 17, 5464-5471.	4.5	94
384	Odd-parity superconductivity in bilayer transition metal dichalcogenides. <i>Physical Review B</i> , 2017, 96, .	1.1	44
385	Triboelectrification-Enabled Self-Charging Lithium-Ion Batteries. <i>Advanced Energy Materials</i> , 2017, 7, 1700103.	10.2	89
386	A Self-Powered Wearable Noninvasive Electronic-Skin for Perspiration Analysis Based on Piezo-Biosensing Unit Matrix of Enzyme/ZnO Nanoarrays. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 29526-29537.	4.0	119
387	Enhanced photoresponsivity of the MoS <sub>2</sub> -GaN heterojunction diode via the piezo-phototronic effect. <i>NPG Asia Materials</i> , 2017, 9, e418-e418.	3.8	57

#	ARTICLE	IF	CITATIONS
388	van der Waals epitaxial two-dimensional CdS <sub>x</sub> Se <sub>(1-x)</sub> semiconductor alloys with tunable-composition and application to flexible optoelectronics. <i>Nanoscale</i> , 2017, 9, 13786-13793.	2.8	30
389	Electronic Properties and Strain Engineering in Semiconducting Transition Metal Dichalcogenides. , 2017, , 259-278.		2
390	Effect of Carrier Localization on Electrical Transport and Noise at Individual Grain Boundaries in Monolayer MoS <sub>2</sub> . <i>Nano Letters</i> , 2017, 17, 5452-5457.	4.5	39
391	Elastocaloric effect on the piezoelectric potential of boron nitride nanotubes. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 415308.	1.3	13
392	Atomic-level molybdenum oxide nanorings with full-spectrum absorption and photoresponsive properties. <i>Nature Communications</i> , 2017, 8, 1559.	5.8	81
393	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
394	Reliable Piezoelectricity in Bilayer WSe <sub>2</sub> for Piezoelectric Nanogenerators. <i>Advanced Materials</i> , 2017, 29, 1606667.	11.1	158
395	Thin, Transferred Layers of Silicon Dioxide and Silicon Nitride as Water and Ion Barriers for Implantable Flexible Electronic Systems. <i>Advanced Electronic Materials</i> , 2017, 3, 1700077.	2.6	61
396	Valley magnetoelectricity in single-layer MoS <sub>2</sub> . <i>Nature Materials</i> , 2017, 16, 887-891.	13.3	150
397	Metallic modification of molybdenum disulfide monolayer via doping charge carriers: A DFT investigation. <i>Chemical Physics Letters</i> , 2017, 684, 158-163.	1.2	5
398	Large In-Plane and Vertical Piezoelectricity in Janus Transition Metal Dichalcogenides. <i>ACS Nano</i> , 2017, 11, 8242-8248.	7.3	599
399	Piezoresistive Response of Quasi-One-Dimensional ZnO Nanowires Using an in Situ Electromechanical Device. <i>ACS Omega</i> , 2017, 2, 2985-2993.	1.6	72
400	Genetic algorithm prediction of two-dimensional group-IV dioxides for dielectrics. <i>Physical Review B</i> , 2017, 95, .	1.1	23
401	Effect of interface on mid-infrared photothermal response of MoS <sub>2</sub> thin film grown by pulsed laser deposition. <i>Nano Research</i> , 2017, 10, 3571-3584.	5.8	30
402	Dynamic carrier transport modulation for constructing advanced devices with improved performance by piezotronic and piezo-phototronic effects: a brief review. <i>Semiconductor Science and Technology</i> , 2017, 32, 083001.	1.0	3
403	Characterization of wafer-scale MoS <sub>2</sub> and WSe <sub>2</sub> 2D films by spectroscopic ellipsometry. <i>Current Applied Physics</i> , 2017, 17, 1329-1334.	1.1	26
404	Highly Scalable Synthesis of MoS <sub>2</sub> Thin Films with Precise Thickness Control via Polymer-Assisted Deposition. <i>Chemistry of Materials</i> , 2017, 29, 5772-5776.	3.2	96
405	Brittle Fracture of 2D MoSe <sub>2</sub> . <i>Advanced Materials</i> , 2017, 29, 1604201.	11.1	138

#	ARTICLE	IF	CITATIONS
406	Thin-film ferroelectric materials and their applications. Nature Reviews Materials, 2017, 2, .	23.3	590
407	Theoretical study of two-dimensional boron silicide from first-principles. Computational Materials Science, 2017, 128, 22-28.	1.4	3
408	Transition metal dichalcogenide based nanomaterials for rechargeable batteries. Chemical Engineering Journal, 2017, 307, 189-207.	6.6	89
409	Two-dimensional Piezoelectric MoS <sub>2</sub> -Modulated Nanogenerator and Nanosensor Made of Poly(vinylidene Fluoride) Nanofiber Webs for Self-Powered Electronics and Robotics. Energy Technology, 2017, 5, 234-243.	1.8	82
410	Interaction of O <sub>2</sub> with monolayer MoS <sub>2</sub> : Effect of doping and hydrogenation. Materials and Design, 2017, 113, 1-8.	3.3	28
411	Scalable single crystalline PMN-PT nanobelts sculpted from bulk for energy harvesting. Nano Energy, 2017, 31, 239-246.	8.2	49
412	In Vivo Long-Term Biodistribution, Excretion, and Toxicology of PEGylated Transition-Metal Dichalcogenides MS <sub>2</sub> (M = Mo, W, Ti) Nanosheets. Advanced Science, 2017, 4, 1600160.	5.6	191
413	Deconvoluting the Photonic and Electronic Response of 2D Materials: The Case of MoS <sub>2</sub> . Scientific Reports, 2017, 7, 16938.	1.6	23
414	A wireless smart UV accumulation patch based on conductive polymer and CNT composites. RSC Advances, 2017, 7, 54741-54746.	1.7	6
415	Anion vacancy-mediated ferromagnetism in atomic-thick Ni <sub>3</sub> N nanosheets. Applied Physics Letters, 2017, 111, .	1.5	11
416	Large single-domain growth of monolayer WS <sub>2</sub> by rapid-cooling chemical vapor deposition. Applied Physics Express, 2017, 10, 075201.	1.1	9
417	Peculiar electronic, strong in-plane and out-of-plane second harmonic generation and piezoelectric properties of atom-thick 1±-M <sub>2</sub> X <sub>3</sub> (M = Ga, In; X = S, Se): role of spontaneous electric dipole orientations. RSC Advances, 2017, 7, 55034-55043.	1.7	66
418	Size-dependent piezoelectricity of molybdenum disulfide (MoS <sub>2</sub> ) films obtained by atomic layer deposition (ALD). Applied Physics Letters, 2017, 111, .	1.5	19
419	Modification of Deposited, Size-Selected MoS <sub>2</sub> Nanoclusters by Sulphur Addition: An Aberration-Corrected STEM Study. Inorganics, 2017, 5, 1.	1.2	26
420	Structural Distortion in MnO <sub>2</sub> Nanosheets and Its Suppression by Cobalt Substitution. Nanomaterials, 2017, 7, 295.	1.9	5
421	Patterned growth of tungsten diselenide flakes by chemical vapor deposition. Japanese Journal of Applied Physics, 2017, 56, 080303.	0.8	4
422	Giant and Linear Piezo-Phototronic Response in Layered GaSe Nanosheets. Advanced Electronic Materials, 2018, 4, 1700447.	2.6	14
423	Alpha particle irradiation of bulk and exfoliated MoS <sub>2</sub> and WS <sub>2</sub> membranes. Nuclear Instruments & Methods in Physics Research B, 2018, 435, 180-189.	0.6	4



#	ARTICLE	IF	CITATIONS
424	Introduction to the Piezotronic Effect and Sensing Applications. Mechanical Engineering Series, 2018, , 1-4.	0.1	1
425	Electricity generation from water droplets via capillary infiltrating. Nano Energy, 2018, 48, 211-216.	8.2	94
426	Annealing effect on the ferromagnetism of MoS <sub>2</sub> nanoparticles. Journal of Alloys and Compounds, 2018, 746, 399-404.	2.8	27
427	Coherent, atomically thin transition-metal dichalcogenide superlattices with engineered strain. Science, 2018, 359, 1131-1136.	6.0	247
428	Piezotronic Effect in a Zinc Oxide Nanowire. Mechanical Engineering Series, 2018, , 39-52.	0.1	2
429	A Green Route to a Low Cost Anisotropic MoS <sub>2</sub> /Poly(Vinylidene Fluoride) Nanocomposite with Ultrahigh Electroactive Phase and Improved Electrical and Mechanical Properties. ACS Sustainable Chemistry and Engineering, 2018, 6, 5043-5052.	3.2	35
430	Straining effects in MoS <sub>2</sub> monolayer on nanostructured substrates: temperature-dependent photoluminescence and exciton dynamics. Nanoscale, 2018, 10, 5717-5724.	2.8	54
431	Materials and Wearable Devices for Autonomous Monitoring of Physiological Markers. Advanced Materials, 2018, 30, e1705024.	11.1	145
432	Hybrid nanobud-array structures (C <sub>24</sub> ) <sub>n</sub> /MoS <sub>2</sub> and (C <sub>24</sub> V) <sub>n</sub> /MoS <sub>2</sub> : two-dimensional half metallic and ferromagnetic materials. Journal of Materials Chemistry C, 2018, 6, 3373-3386.	2.7	1
433	GPS-Inspired Stretchable Self-Powered Electronic Skin. IEEE Nanotechnology Magazine, 2018, 17, 460-466.	1.1	6
434	Tunable Electronic and Optical Properties of Monolayer and Multilayer Janus MoSSe as a Photocatalyst for Solar Water Splitting: A First-Principles Study. Journal of Physical Chemistry C, 2018, 122, 6209-6216.	1.5	233
435	The intrinsic interface properties of the top and edge 1T/2H MoS <sub>2</sub> contact: A first-principles study. Journal of Applied Physics, 2018, 123, .	1.1	19
436	Allotropes of Phosphorus with Remarkable Stability and Intrinsic Piezoelectricity. Physical Review Applied, 2018, 9, .	1.5	16
437	Metallic Contact between MoS <sub>2</sub> and Ni via Au Nanogluue. Small, 2018, 14, e1704526.	5.2	32
438	Multidirection Piezoelectricity in Mono- and Multilayered Hexagonal In <sub>2</sub> Se <sub>3</sub> . ACS Nano, 2018, 12, 4976-4983.	7.3	215
439	Metal (Ag, Pt)@MoS <sub>2</sub> Hybrids Greenly Prepared Through Photochemical Reduction of Femtosecond Laser Pulses for SERS and HER. ACS Sustainable Chemistry and Engineering, 2018, 6, 7704-7714.	3.2	55
440	Energy-loss return gate via liquid dielectric polarization. Nature Communications, 2018, 9, 1437.	5.8	19
441	Lead iodide nanosheets for piezoelectric energy conversion and strain sensing. Nano Energy, 2018, 49, 7-13.	8.2	59

#	ARTICLE	IF	CITATIONS
442	Field-effect transistors made from solution-grown two-dimensional tellurene. <i>Nature Electronics</i> , 2018, 1, 228-236.	13.1	591
443	Trends on band alignments: Validity of Anderson's rule in $\text{SnS}_2/\text{SnSe}_2$ and $\text{SnS}_2/\text{SnSe}_2$ van der Waals heterostructures. <i>Physical Review B</i> , 2018, 97, .	1.1	57
444	Piezoelectric properties in two-dimensional materials: Simulations and experiments. <i>Materials Today</i> , 2018, 21, 611-630.	8.3	219
445	Point-Defect-Passivated $\text{MoS}_2$ Nanosheet-Based High Performance Piezoelectric Nanogenerator. <i>Advanced Materials</i> , 2018, 30, e1800342.	11.1	124
446	High-Performance All 2D-Layered Tin Disulfide: Graphene Photodetecting Transistors with Thickness-Controlled Interface Dynamics. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 13002-13010.	4.0	32
447	Tunable phase transition in single-layer $\text{TiSe}_2$ via electric field. <i>Journal of Solid State Chemistry</i> , 2018, 262, 309-312.	1.4	4
448	Probing nanoscale variations in strain and band structure of $\text{MoS}_2$ on Au nanopillars using tip-enhanced Raman spectroscopy. <i>Physical Review B</i> , 2018, 97, .	1.1	9
449	Plasmonic thin film $\text{InP}$ /graphene-based Schottky-junction solar cell using nanorods. <i>Journal of Advanced Research</i> , 2018, 10, 15-20.	4.4	15
450	Gradient doped polymer nanowire for moistelectric nanogenerator. <i>Nano Energy</i> , 2018, 46, 297-304.	8.2	91
451	Role of S-S interlayer spacing on the hydrogen storage mechanism of $\text{MoS}_2$ . <i>International Journal of Hydrogen Energy</i> , 2018, 43, 3087-3091.	3.8	74
452	Piezotronic Effect Enhanced Flexible Humidity Sensing of Monolayer $\text{MoS}_2$ . <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 8110-8116.	4.0	63
453	Synthesis and Characterization of Piezotronic Materials for Application in Strain/Stress Sensing. <i>Mechanical Engineering Series</i> , 2018, .	0.1	5
454	Impact of Polar Edge Terminations of the Transition Metal Dichalcogenide Monolayers during Vapor Growth. <i>Journal of Physical Chemistry C</i> , 2018, 122, 3575-3581.	1.5	6
455	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
456	Intercorrelated In-Plane and Out-of-Plane Ferroelectricity in Ultrathin Two-Dimensional Layered Semiconductor $\text{In}_2\text{Se}_3$ . <i>Nano Letters</i> , 2018, 18, 1253-1258.	4.5	509
457	Large-area synthesis and photoelectric properties of few-layer $\text{MoSe}_2$ on molybdenum foils. <i>Nanotechnology</i> , 2018, 29, 125605.	1.3	20
458	Strain Modulation by van der Waals Coupling in Bilayer Transition Metal Dichalcogenide. <i>ACS Nano</i> , 2018, 12, 1940-1948.	7.3	51
459	Scalable $\text{MoS}_2$ /graphene hetero-structures grown epitaxially on sapphire substrates for phototransistor applications. <i>Semiconductor Science and Technology</i> , 2018, 33, 025007.	1.0	11

#	ARTICLE	IF	CITATIONS
460	Synergistic effect of Co–Ni co-bridging with MoS <sub>2</sub> nanosheets for enhanced electrocatalytic hydrogen evolution reactions. RSC Advances, 2018, 8, 3374-3380.	1.7	26
461	Wearable energy sources based on 2D materials. Chemical Society Reviews, 2018, 47, 3152-3188.	18.7	226
462	High efficient degradation of dye molecules by PDMS embedded abundant single-layer tungsten disulfide and their antibacterial performance. Nano Energy, 2018, 46, 338-346.	8.2	131
463	Piezoelectricity induced water splitting and formation of hydroxyl radical from active edge sites of MoS <sub>2</sub> nanoflowers. Nano Energy, 2018, 46, 372-382.	8.2	133
464	Probing Electron Mobility of Monolayer MoS <sub>2</sub> Field-Effect Transistors in Aqueous Environments. Advanced Electronic Materials, 2018, 4, 1700418.	2.6	6
465	Magnetoelectric Effect in Single-Phase Multiferroic Materials. , 2018, , 49-75.		1
466	Piezotronic Effect on Rashba Spin–Orbit Coupling in a ZnO/P3HT Nanowire Array Structure. ACS Nano, 2018, 12, 1811-1820.	7.3	61
467	Computation of Electronic Energy Band Diagrams for Piezotronic Semiconductor and Electrochemical Systems. Advanced Electronic Materials, 2018, 4, 1700395.	2.6	15
468	Large Converse Piezoelectric Effect Measured on a Single Molecule on a Metallic Surface. Journal of the American Chemical Society, 2018, 140, 940-946.	6.6	33
469	Tailoring the charge carrier in few layers MoS <sub>2</sub> field-effect transistors by Au metal adsorbate. Applied Surface Science, 2018, 437, 70-74.	3.1	20
470	Piezotronic Transistor Based on Topological Insulators. ACS Nano, 2018, 12, 779-785.	7.3	57
471	Nanostructured molybdenum disulfide biointerface for adhesion and osteogenic differentiation of mesenchymal stem cells. Applied Materials Today, 2018, 10, 164-172.	2.3	37
472	Growth and microstructural evolution of WS <sub>2</sub> nanostructures with tunable field and light modulated electrical transport. Applied Surface Science, 2018, 436, 846-853.	3.1	18
473	Superior Electro-Oxidation and Corrosion Resistance of Monolayer Transition Metal Disulfides. ACS Applied Materials & Interfaces, 2018, 10, 4285-4294.	4.0	23
474	Surface-enhanced Raman scattering of alkyne-conjugated MoS <sub>2</sub> : a comparative study between metallic and semiconductor phases. Journal of Materials Chemistry C, 2018, 6, 1071-1082.	2.7	31
475	Electron Field Emission of Geometrically Modulated Monolayer Semiconductors. Advanced Functional Materials, 2018, 28, 1706113.	7.8	23
476	Atomic-thick 2D MoS <sub>2</sub> /insulator interjection structures for enhancing nanogenerator output. Journal of Materials Chemistry C, 2018, 6, 899-906.	2.7	8
477	Flexible chemical sensors based on hybrid layer consisting of molybdenum disulfide nanosheets and carbon nanotubes. Carbon, 2018, 129, 607-612.	5.4	38

#	ARTICLE	IF	CITATIONS
478	Ultrasensitive tunability of the direct bandgap of 2D InSe flakes via strain engineering. 2D Materials, 2018, 5, 021002.	2.0	75
479	Atom-Dependent Edge-Enhanced Second-Harmonic Generation on MoS <sub>2</sub> Monolayers. Nano Letters, 2018, 18, 793-797.	4.5	51
480	Double-Channel Piezotronic Transistors for Highly Sensitive Pressure Sensing. ACS Nano, 2018, 12, 1732-1738.	7.3	33
481	Dynamic model for piezotronic and piezo-phototronic devices under low and high frequency external compressive stresses. Journal of Applied Physics, 2018, 123, .	1.1	19
482	Hollow Spherical Nanoshell Arrays of 2D Layered Semiconductor for High-Performance Photodetector Device. Advanced Functional Materials, 2018, 28, 1705153.	7.8	50
483	Magnetic-Induced Piezopotential Gated MoS <sub>2</sub> Field-Effect Transistor at Room Temperature. Advanced Materials, 2018, 30, 1704524.	11.1	47
484	Nondegenerate valleys in the half-metallic ferromagnet Fe/WS <sub>2</sub> . Physical Review B, 2018, 97, .	1.1	2
485	Controllable Phase Stabilities in Transition Metal Dichalcogenides through Curvature Engineering: First-Principles Calculations and Continuum Prediction. Advanced Theory and Simulations, 2018, 1, 1800003.	1.3	5
486	Fully Rollable Lead-Free Poly(vinylidene fluoride)-Niobate-Based Nanogenerator with Ultra-Flexible Nano-Network Electrodes. ACS Nano, 2018, 12, 4803-4811.	7.3	106
487	A flexible photo-thermoelectric nanogenerator based on MoS <sub>2</sub> /PU photothermal layer for infrared light harvesting. Nano Energy, 2018, 49, 588-595.	8.2	124
488	Ultrathin Piezotronic Transistors with 2 nm Channel Lengths. ACS Nano, 2018, 12, 4903-4908.	7.3	63
489	Friction and work function oscillatory behavior for an even and odd number of layers in polycrystalline MoS <sub>2</sub> . Nanoscale, 2018, 10, 8304-8312.	2.8	36
490	Nanoscale thermal transport: Theoretical method and application. Chinese Physics B, 2018, 27, 036304.	0.7	21
491	Large-area and bright pulsed electroluminescence in monolayer semiconductors. Nature Communications, 2018, 9, 1229.	5.8	146
492	Enhanced electronic and magnetic properties by functionalization of monolayer GaS via substitutional doping and adsorption. Journal of Physics Condensed Matter, 2018, 30, 195805.	0.7	11
493	Hierarchical PbZr <sub>x</sub> Ti <sub>1-x</sub> O <sub>3</sub> Nanowires for Vibrational Energy Harvesting. ACS Applied Nano Materials, 2018, 1, 1461-1466.	2.4	5
494	Sustainable direct current powering a triboelectric nanogenerator via a novel asymmetrical design. Energy and Environmental Science, 2018, 11, 2057-2063.	15.6	153
495	Time-evolution of the electrical characteristics of MoS <sub>2</sub> field-effect transistors after electron beam irradiation. Physical Chemistry Chemical Physics, 2018, 20, 9038-9044.	1.3	17

#	ARTICLE	IF	CITATIONS
496	Chemical synthesis of two-dimensional atomic crystals, heterostructures and superlattices. Chemical Society Reviews, 2018, 47, 3129-3151.	18.7	132
497	Piezoelectric effect on the thermal conductivity of monolayer gallium nitride. Journal of Applied Physics, 2018, 123, .	1.1	11
498	Atomic force microscopy for two-dimensional materials: A tutorial review. Optics Communications, 2018, 406, 3-17.	1.0	57
499	Transferred, Ultrathin Oxide Bilayers as Biofluid Barriers for Flexible Electronic Implants. Advanced Functional Materials, 2018, 28, 1702284.	7.8	49
500	Flexible supercapacitor electrodes based on MoS <sub>2</sub> -intercalated rGO membranes on Ti mesh. Materials Science in Semiconductor Processing, 2018, 73, 106-110.	1.9	32
501	Computational study of phase engineered transition metal dichalcogenides heterostructures. Computational Materials Science, 2018, 142, 129-134.	1.4	11
502	Magnetic properties of Co doped WSe <sub>2</sub> by implantation. Journal of Alloys and Compounds, 2018, 731, 25-31.	2.8	40
503	Towards band structure and band offset engineering of monolayer Mo <sub>1-x</sub> W <sub>x</sub> S <sub>2</sub> via Strain. 2D Materials, 2018, 5, 015008.	2.0	28
504	Piezotronic effect on the luminescence of quantum dots for micro/nano-newton force measurement. Nano Research, 2018, 11, 1977-1986.	5.8	12
505	Phosphorene under strain:electronic, mechanical and piezoelectric responses. Journal of Physics and Chemistry of Solids, 2018, 112, 137-142.	1.9	35
506	Enhanced reversible lithium ion storage in stable 1T@2H WS <sub>2</sub> nanosheet arrays anchored on carbon fiber. Electrochimica Acta, 2018, 259, 1-8.	2.6	49
507	Effect of UV Irradiation and Heat Treatment on the Surface Potential Distribution of Monolayer WS <sub>2</sub> on SiO <sub>2</sub> /Si and Au Substrates. Advanced Materials Interfaces, 2018, 5, 1701083.	1.9	7
508	Two-dimensional nanosheets as building blocks to construct three-dimensional structures for lithium storage. Journal of Energy Chemistry, 2018, 27, 128-145.	7.1	23
509	Virtual Out-of-Plane Piezoelectric Response in MoS <sub>2</sub> Layers Controlled by Ferroelectric Polarization. ACS Applied Materials & Interfaces, 2018, 10, 1334-1339.	4.0	24
510	Edge orientations of mechanically exfoliated anisotropic two-dimensional materials. Journal of the Mechanics and Physics of Solids, 2018, 112, 157-168.	2.3	22
511	Bi SPR-Promoted Z-Scheme Bi <sub>2</sub> MoO <sub>6</sub> /CdS-Diethylenetriamine Composite with Effectively Enhanced Visible Light Photocatalytic Hydrogen Evolution Activity and Stability. ACS Sustainable Chemistry and Engineering, 2018, 6, 696-706.	3.2	240
512	Van der Waals heterojunction diode composed of WS <sub>2</sub> flake placed on p-type Si substrate. Nanotechnology, 2018, 29, 045201.	1.3	21
513	Group 6 transition metal dichalcogenide nanomaterials: synthesis, applications and future perspectives. Nanoscale Horizons, 2018, 3, 90-204.	4.1	309

#	ARTICLE	IF	CITATIONS
514	Recent Advances in Flexible/Stretchable Supercapacitors for Wearable Electronics. <i>Small</i> , 2018, 14, e1702829.	5.2	208
515	A 10.6 pJÅ·K <sup>2</sup> Resolution FoM Temperature Sensor Using Astable Multivibrator. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2018, 65, 869-873.	2.2	12
516	Piezoelectric and polarized enhancement by hydrofluorination of penta-graphene. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 26288-26296.	1.3	26
517	Manipulating three-dimensional bending to extraordinarily stiffen two-dimensional membranes by interference colors. <i>Nanoscale</i> , 2018, 10, 21782-21789.	2.8	6
518	Controlled p-type substitutional doping in large-area monolayer WSe <sub>2</sub> crystals grown by chemical vapor deposition. <i>Nanoscale</i> , 2018, 10, 21374-21385.	2.8	58
519	A novel multi-flaw MoS <sub>2</sub> nanosheet piezocatalyst with superhigh degradation efficiency for ciprofloxacin. <i>Environmental Science: Nano</i> , 2018, 5, 2876-2887.	2.2	55
520	Emergence of high piezoelectricity along with robust electron mobility in Janus structures in semiconducting Group IVB dichalcogenide monolayers. <i>Journal of Materials Chemistry A</i> , 2018, 6, 24885-24898.	5.2	127
521	Fraunhofer response and supercurrent spin switching in black phosphorus with strain and disorder. <i>Physical Review B</i> , 2018, 98, .	1.1	33
522	Strain Engineered Band Gaps and Electronic Properties in PbPdO <sub>2</sub> and PbPd <sub>0.75</sub> Co <sub>0.25</sub> O <sub>2</sub> Slabs. <i>Materials</i> , 2018, 11, 2002.	1.3	4
523	Flexoelectricity in Monolayer Transition Metal Dichalcogenides. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 6841-6846.	2.1	51
524	Observation of piezotronic and piezo-phototronic effects in n-InGaN nanowires/Ti grown by molecular beam epitaxy. <i>Nano Energy</i> , 2018, 54, 264-271.	8.2	18
525	Epidermis-Inspired Ultrathin 3D Cellular Sensor Array for Self-Powered Biomedical Monitoring. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 41070-41075.	4.0	136
526	Introduction: 2d-Based Quantum Technologies. <i>Springer Theses</i> , 2018, , 1-30.	0.0	0
527	Two-dimensional nanomaterials for novel piezotronics and piezophototronics. <i>Materials Today Nano</i> , 2018, 4, 17-31.	2.3	97
528	A comprehensive review on piezoelectric energy harvesting technology: Materials, mechanisms, and applications. <i>Applied Physics Reviews</i> , 2018, 5, .	5.5	565
529	Ultrahigh Output Piezoelectric and Triboelectric Hybrid Nanogenerators Based on ZnO Nanoflakes/Polydimethylsiloxane Composite Films. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 44415-44420.	4.0	66
530	Piezotronics and piezo-phototronics in two-dimensional materials. <i>MRS Bulletin</i> , 2018, 43, 959-964.	1.7	28
531	Piezotronics and piezo-phototronics with third-generation semiconductors. <i>MRS Bulletin</i> , 2018, 43, 922-927.	1.7	121

#	ARTICLE	IF	CITATIONS
532	Piezotronic sensors. MRS Bulletin, 2018, 43, 941-945.	1.7	32
533	Piezo-phototronic effect on optoelectronic nanodevices. MRS Bulletin, 2018, 43, 952-958.	1.7	38
534	Theory of piezotronics and piezo-phototronics. MRS Bulletin, 2018, 43, 928-935.	1.7	66
535	Recent Advances in Large-scale Tactile Sensor Arrays Based on a Transistor Matrix. Advanced Materials Interfaces, 2018, 5, 1801061.	1.9	48
536	Highly Sensitive and Flexible Strain-Pressure Sensors with Cracked Paddy-Shaped MoS <sub>2</sub> /Graphene Foam/Ecoflex Hybrid Nanostructures. ACS Applied Materials & Interfaces, 2018, 10, 36377-36384.	4.0	126
537	Dynamic Electronic Doping for Correlated Oxides by a Triboelectric Nanogenerator. Advanced Materials, 2018, 30, e1803580.	11.1	20
538	A liquid metal-based triboelectric nanogenerator as stretchable electronics for safeguarding and self-powered mechanosensing. Nano Energy, 2018, 53, 863-870.	8.2	63
539	Two-Dimensional Janus Transition Metal Oxides and Chalcogenides: Multifunctional Properties for Photocatalysts, Electronics, and Energy Conversion. ACS Applied Materials & Interfaces, 2018, 10, 35289-35295.	4.0	135
540	Recent Advances in Synthesis and Applications of 2D Junctions. Small, 2018, 14, e1801606.	5.2	19
541	ZnO-based single crystal-polycrystal structures for piezotronic applications. Journal of the American Ceramic Society, 2018, 102, 2640.	1.9	10
542	Surface etching induced ultrathin sandwich structure realizing enhanced photocatalytic activity. Science China Chemistry, 2018, 61, 1572-1580.	4.2	19
543	Ultrathin Trilayer Assemblies as Long-Lived Barriers against Water and Ion Penetration in Flexible Bioelectronic Systems. ACS Nano, 2018, 12, 10317-10326.	7.3	57
544	Nanogenerators, self-powered systems, blue energy, piezotronics and piezo-phototronics – A recall on the original thoughts for coining these fields. Nano Energy, 2018, 54, 477-483.	8.2	182
545	Robust parity-mixed superconductivity in disordered monolayer transition metal dichalcogenides. Physical Review B, 2018, 98, .	1.1	45
546	In-plane Ferroelectricity in Thin Flakes of Van der Waals Hybrid Perovskite. Advanced Materials, 2018, 30, e1803249.	11.1	76
547	Nano-electromechanical Drumhead Resonators from Two-Dimensional Material Bimorphs. Nano Letters, 2018, 18, 6686-6695.	4.5	44
548	Hierarchical FeCo@MoS <sub>2</sub> Nanoflowers with Strong Electromagnetic Wave Absorption and Broad Bandwidth. ACS Applied Nano Materials, 2018, 1, 5179-5187.	2.4	82
549	3D core-shell MoS <sub>2</sub> superspheres composed of oriented nanosheets with quasi molecular superlattices: mimicked embryo formation and Li-storage properties. Journal of Materials Chemistry A, 2018, 6, 18498-18507.	5.2	32

#	ARTICLE	IF	CITATIONS
550	Printing two-dimensional gallium phosphate out of liquid metal. <i>Nature Communications</i> , 2018, 9, 3618.	5.8	107
551	Perspectives on Thermoelectricity in Layered and 2D Materials. <i>Advanced Electronic Materials</i> , 2018, 4, 1800248.	2.6	77
552	Ultra-high performance flexible piezopotential gated $\text{In}_x\text{Sn}_{1-x}\text{Se}$ phototransistor. <i>Nanoscale</i> , 2018, 10, 18642-18650.	2.8	13
553	Recent Progress of Janus 2D Transition Metal Chalcogenides: From Theory to Experiments. <i>Small</i> , 2018, 14, e1802091.	5.2	247
554	Engineering two-dimensional layered nanomaterials for wearable biomedical sensors and power devices. <i>Materials Chemistry Frontiers</i> , 2018, 2, 1944-1986.	3.2	59
555	Efficient Self-Driven Photodetectors Featuring a Mixed-Dimensional van der Waals Heterojunction Formed from a CdS Nanowire and a $\text{MoTe}_2$ Flake. <i>Small</i> , 2018, 14, e1802302.	5.2	34
556	Directly printed wearable electronic sensing textiles towards human-machine interfaces. <i>Journal of Materials Chemistry C</i> , 2018, 6, 12841-12848.	2.7	54
557	Progress in Contact, Doping and Mobility Engineering of $\text{MoS}_2$ : An Atomically Thin 2D Semiconductor. <i>Crystals</i> , 2018, 8, 316.	1.0	118
558	Tight-binding piezoelectric theory and electromechanical coupling correlations for transition metal dichalcogenide monolayers. <i>Physical Review B</i> , 2018, 98, .	1.1	12
559	Heterogeneous and cross-distributed metal structure hybridized with $\text{MoS}_2$ as high-performance flexible SERS substrate. <i>Optics Express</i> , 2018, 26, 23831.	1.7	18
560	Achieving half-metallicity in zigzag $\text{MoS}_2$ nanoribbon with a sulfur vacancy by edge passivation. <i>Journal Physics D: Applied Physics</i> , 2018, 51, 265005.	1.3	5
561	Tuning Transport and Photoelectric Performance of Monolayer $\text{MoS}_2$ Device by E-Beam Irradiation. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800348.	1.9	21
562	Enhanced $\text{H}_2$ evolution based on ultrasound-assisted piezo-catalysis of modified $\text{MoS}_2$ . <i>Journal of Materials Chemistry A</i> , 2018, 6, 11909-11915.	5.2	76
563	Controllable, eco-friendly, synthesis of highly crystalline 2D- $\text{MoS}_2$ and clarification of the role of growth-induced strain. <i>2D Materials</i> , 2018, 5, 035035.	2.0	23
564	Self-Powered Insole Plantar Pressure Mapping System. <i>Advanced Functional Materials</i> , 2018, 28, 1801606.	7.8	104
565	Recent Advances in Materials, Devices, and Systems for Neural Interfaces. <i>Advanced Materials</i> , 2018, 30, e1800534.	11.1	148
566	Increasing Exfoliation Yield in the Synthesis of $\text{MoS}_2$ Quantum Dots for Optoelectronic and Other Applications through a Continuous Multicycle Acoustofluidic Approach. <i>ACS Applied Nano Materials</i> , 2018, 1, 2503-2508.	2.4	19
567	Controllable Growth and Formation Mechanisms of Dislocated $\text{WS}_2$ Spirals. <i>Nano Letters</i> , 2018, 18, 3885-3892.	4.5	88



#	ARTICLE	IF	CITATIONS
568	A Review on Applications of Two-Dimensional Materials in Surface-Enhanced Raman Spectroscopy. International Journal of Spectroscopy, 2018, 2018, 1-9.	1.4	26
569	Atomic scale electronic structure of the ferromagnetic semiconductor Cr <sub>2</sub> Ge <sub>2</sub> Te <sub>6</sub> . Science Bulletin, 2018, 63, 825-830.	4.3	40
570	Piezoelectric diphenylalanine peptide for greatly improved flexible nanogenerators. Nano Energy, 2018, 51, 317-323.	8.2	71
571	The path to flexible ferroelectrics: Approaches and progress. Japanese Journal of Applied Physics, 2018, 57, 0902A3.	0.8	11
572	Probing the nanoscale light emission properties of a CVD-grown MoS <sub>2</sub> monolayer by tip-enhanced photoluminescence. Nanoscale, 2018, 10, 14055-14059.	2.8	36
573	Chemical sensing with 2D materials. Chemical Society Reviews, 2018, 47, 4860-4908.	18.7	513
574	Ultra-high sensitivity strain sensor based on piezotronic bipolar transistor. Nano Energy, 2018, 50, 744-749.	8.2	25
575	Electronic transport modulation on suspended few-layer $\text{MoS}_2$ under strain. Physical Review B, 2018, 97, .		
576	Piezoelectric Phototronic Effect for Enhanced Flexible MoS <sub>2</sub> /WSe <sub>2</sub> van der Waals Photodiodes. Advanced Functional Materials, 2018, 28, 1802849.	7.8	130
577	Morphology-Tailored Halide Perovskite Platelets and Wires: From Synthesis, Properties to Optoelectronic Devices. Advanced Optical Materials, 2018, 6, 1800413.	3.6	34
578	Second Harmonic Generation Spectroscopy of Hidden Phases. , 2018, , 207-226.		5
579	Two-dimensional materials with piezoelectric and ferroelectric functionalities. Npj 2D Materials and Applications, 2018, 2, .	3.9	258
580	Strain Engineering and Raman Spectroscopy of Monolayer Transition Metal Dichalcogenides. Chemistry of Materials, 2018, 30, 5148-5155.	3.2	92
581	Polymer-based nanocomposites for significantly enhanced dielectric properties and energy storage capability. , 2018, , 131-183.		4
582	3D hybrid MoS <sub>2</sub> /AgNPs/inverted pyramid PMMA resonant cavity system for the excellent flexible surface enhanced Raman scattering sensor. Sensors and Actuators B: Chemical, 2018, 274, 152-162.	4.0	33
583	Observing phase transformation in CVD-grown MoS <sub>2</sub> via atomic resolution TEM. Chemical Communications, 2018, 54, 9941-9944.	2.2	11
584	Uniaxial stress flips the natural quantization axis of a quantum dot for integrated quantum photonics. Nature Communications, 2018, 9, 3058.	5.8	35
585	Tunable Out-of-Plane Piezoelectricity in Thin-Layered MoTe <sub>2</sub> by Surface Corrugation-Mediated Flexoelectricity. ACS Applied Materials & Interfaces, 2018, 10, 27424-27431.	4.0	44

#	ARTICLE	IF	CITATIONS
586	Room-temperature pyro-catalytic hydrogen generation of 2D few-layer black phosphorene under cold-hot alternation. <i>Nature Communications</i> , 2018, 9, 2889.	5.8	125
587	Gate-Tuned Temperature in a Hexagonal Boron Nitride-Encapsulated 2-D Semiconductor Device. <i>IEEE Transactions on Electron Devices</i> , 2018, 65, 4068-4072.	1.6	12
588	Exploring electric field assisted van der Waals weakening of stratified crystals. <i>Applied Materials Today</i> , 2018, 12, 359-365.	2.3	2
589	Piezoelectricity of atomically thin WSe <sub>2</sub> via laterally excited scanning probe microscopy. <i>Nano Energy</i> , 2018, 52, 117-122.	8.2	43
590	High-performance piezoelectric-energy-harvester and self-powered mechanosensing using lead-free potassium-sodium niobate flexible piezoelectric composites. <i>Journal of Materials Chemistry A</i> , 2018, 6, 16439-16449.	5.2	73
591	Diphenylalanine Peptide Nanotube Energy Harvesters. <i>ACS Nano</i> , 2018, 12, 8138-8144.	7.3	136
592	Native point defects of semiconducting layered Bi <sub>2</sub> O <sub>2</sub> Se. <i>Scientific Reports</i> , 2018, 8, 10920.	1.6	31
593	Tunable WSe <sub>2</sub> -CdS mixed-dimensional van der Waals heterojunction with a piezo-phototronic effect for an enhanced flexible photodetector. <i>Nanoscale</i> , 2018, 10, 14472-14479.	2.8	53
594	Enhanced Efficiency of Flexible GaN/Perovskite Solar Cells Based on the Piezo-Phototronic Effect. <i>ACS Applied Energy Materials</i> , 2018, 1, 3063-3069.	2.5	22
595	Recent Advances in Tactile Sensing Technology. <i>Micromachines</i> , 2018, 9, 321.	1.4	67
596	Stable and High Piezoelectric Output of GaN Nanowire-Based Lead-Free Piezoelectric Nanogenerator by Suppression of Internal Screening. <i>Nanomaterials</i> , 2018, 8, 437.	1.9	38
597	Pumping electrons from chemical potential difference. <i>Nano Energy</i> , 2018, 51, 698-703.	8.2	38
598	Theoretical study of piezotronic metal-insulator-semiconductor tunnel devices. <i>Journal Physics D: Applied Physics</i> , 2018, 51, 324006.	1.3	1
599	Room temperature in-plane ferroelectricity in van der Waals In <sub>2</sub> Se <sub>3</sub> . <i>Science Advances</i> , 2018, 4, eaar7720.	4.7	224
600	Liquid Phase Acoustic Wave Exfoliation of Layered MoS <sub>2</sub> : Critical Impact of Electric Field in Efficiency. <i>Chemistry of Materials</i> , 2018, 30, 5593-5601.	3.2	31
601	Fabrication and Surface Engineering of Two-Dimensional SnS Toward Piezoelectric Nanogenerator Application. <i>MRS Advances</i> , 2018, 3, 2809-2814.	0.5	19
602	Mechanically Bent Graphene as an Effective Piezoelectric Nanogenerator. <i>Journal of Physical Chemistry C</i> , 2018, 122, 20581-20588.	1.5	15
603	Tellurene: its physical properties, scalable nanomanufacturing, and device applications. <i>Chemical Society Reviews</i> , 2018, 47, 7203-7212.	18.7	214

#	ARTICLE	IF	CITATIONS
604	Recent progress in flexible pressure sensor arrays: from design to applications. <i>Journal of Materials Chemistry C</i> , 2018, 6, 11878-11892.	2.7	194
605	Kirigami-Inspired Highly Stretchable Nanoscale Devices Using Multidimensional Deformation of Monolayer MoS <sub>2</sub> . <i>Chemistry of Materials</i> , 2018, 30, 6063-6070.	3.2	66
606	Progress in piezotronics of transition-metal dichalcogenides. <i>Journal Physics D: Applied Physics</i> , 2018, 51, 493002.	1.3	15
607	Research Update: Recent progress on 2D materials beyond graphene: From ripples, defects, intercalation, and valley dynamics to straintronics and power dissipation. <i>APL Materials</i> , 2018, 6, .	2.2	30
608	Triboelectric Series of 2D Layered Materials. <i>Advanced Materials</i> , 2018, 30, e1801210.	11.1	179
609	Single-Crack-Activated Ultrasensitive Impedance Strain Sensor. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800616.	1.9	21
610	Enhanced thermoelectric performance of two dimensional MS <sub>2</sub> (M=Mo, W) through phase engineering. <i>Journal of Materiomics</i> , 2018, 4, 329-337.	2.8	21
611	Strain engineering in two-dimensional nanomaterials beyond graphene. <i>Nano Today</i> , 2018, 22, 14-35.	6.2	252
612	Progress in piezotronic and piezo-phototronic effect of 2D materials. <i>2D Materials</i> , 2018, 5, 042003.	2.0	62
613	Theory of superconductivity in hole-doped monolayer MoS <sub>2</sub> . <i>Physical Review B</i> , 2018, 98, .	1.1	10
614	Piezotronic graphene barristor: Efficient and interactive modulation of Schottky barrier. <i>Nano Energy</i> , 2018, 50, 598-605.	8.2	31
615	A monolayer MoS <sub>2</sub> p-n homogenous photodiode with enhanced photoresponse by piezo-phototronic effect. <i>2D Materials</i> , 2018, 5, 035038.	2.0	50
616	Tunable electronic structure of graphdiyne/MoS <sub>2</sub> van der Waals heterostructure. <i>Materials Letters</i> , 2018, 228, 289-292.	1.3	26
617	Preparation of 2D material dispersions and their applications. <i>Chemical Society Reviews</i> , 2018, 47, 6224-6266.	18.7	459
618	Ferroelectric and Piezoelectric Effects on the Optical Process in Advanced Materials and Devices. <i>Advanced Materials</i> , 2018, 30, e1707007.	11.1	159
619	Piezoelectricity and valley chern number in inhomogeneous hexagonal 2D crystals. <i>Npj 2D Materials and Applications</i> , 2018, 2, .	3.9	49
620	Theory of the strain-induced magnetoelectric effect in planar Dirac systems. <i>Physical Review B</i> , 2018, 97, .	1.1	2
621	Piezoelectricity in WSe <sub>2</sub> /MoS <sub>2</sub> heterostructure atomic layers. <i>Nanoscale</i> , 2018, 10, 12472-12479.	2.8	24

#	ARTICLE	IF	CITATIONS
622	Origins of Moiré Patterns in CVD-grown MoS <sub>2</sub> Bilayer Structures at the Atomic Scales. Scientific Reports, 2018, 8, 9439.	1.6	2
623	Modulating the Charge Transport in 2D Semiconductors via Energy Level Phototuning. Advanced Materials, 2019, 31, 1903402.	11.1	30
624	Wrinkling and failure behavior of single-layer MoS <sub>2</sub> sheets under in-plane shear. Physical Chemistry Chemical Physics, 2019, 21, 19115-19125.	1.3	8
625	Low-Cost, Disposable, Flexible, and Smartphone Enabled Pressure Sensor for Monitoring Drug Dosage in Smart Medicine Applications. IEEE Sensors Journal, 2019, 19, 11255-11261.	2.4	23
626	Smart in situ construction of NiS/MoS <sub>2</sub> composite nanosheets with ultrahigh specific capacity for high-performance asymmetric supercapacitor. Journal of Alloys and Compounds, 2019, 811, 151915.	2.8	39
628	ZnO nanoparticles on MoS <sub>2</sub> microflowers for ultrasensitive SERS detection of bisphenol A. Mikrochimica Acta, 2019, 186, 593.	2.5	47
629	Piezo-promoted the generation of reactive oxygen species and the photodegradation of organic pollutants. Applied Catalysis B: Environmental, 2019, 258, 118024.	10.8	84
630	Flexible self-powered high-performance ammonia sensor based on Au-decorated MoSe <sub>2</sub> nanoflowers driven by single layer MoS <sub>2</sub> -flake piezoelectric nanogenerator. Nano Energy, 2019, 65, 103974.	8.2	281
631	Laser-induced photoresistance effect in Si-based vertical standing MoS <sub>2</sub> nanoplate heterojunctions for self-powered high performance broadband photodetection. Journal of Materials Chemistry C, 2019, 7, 10642-10651.	2.7	24
632	Shear anisotropy-driven crystallographic orientation imaging in flexible hexagonal two-dimensional atomic crystals. Applied Physics Letters, 2019, 115, .	1.5	18
633	Textile based ferroelectret for foot pressure sensor. , 2019, , .		1
634	Ferroelectric thin films and nanostructures: current and future. , 2019, , 19-39.		0
635	Transparent and stretchable bimodal triboelectric nanogenerators with hierarchical micro-nanostructures for mechanical and water energy harvesting. Nano Energy, 2019, 64, 103904.	8.2	85
636	Strain Engineering of the Berry Curvature Dipole and Valley Magnetization in Monolayer $\text{MoS}_2$ . Physical Review Letters, 2019, 123, 036806.	2.9	108
637	A review on synthesis of graphene, h-BN and MoS <sub>2</sub> for energy storage applications: Recent progress and perspectives. Nano Research, 2019, 12, 2655-2694.	5.8	283
638	Carbon Nanomaterials and Two-Dimensional Transition Metal Dichalcogenides (2D TMDCs). Advanced Structured Materials, 2019, , 165-245.	0.3	4
639	Two-dimensional layered materials: from mechanical and coupling properties towards applications in electronics. Nanoscale, 2019, 11, 13181-13212.	2.8	67
640	Graphene-Based Mixed-Dimensional van der Waals Heterostructures for Advanced Optoelectronics. Advanced Materials, 2019, 31, e1806411.	11.1	115

#	ARTICLE	IF	CITATIONS
641	Two-Dimensional van der Waals Materials with Aligned In-Plane Polarization and Large Piezoelectric Effect for Self-Powered Piezoelectric Sensors. <i>Nano Letters</i> , 2019, 19, 5410-5416.	4.5	132
642	Reexamination of the Schottky Barrier Heights in Monolayer MoS <sub>2</sub> Field-Effect Transistors. <i>ACS Applied Nano Materials</i> , 2019, 2, 4717-4726.	2.4	27
643	Seesaw structured triboelectric nanogenerator with enhanced output performance and its applications in self-powered motion sensing. <i>Nano Energy</i> , 2019, 65, 103944.	8.2	57
644	Piezotronics and Piezo-phototronics of Third Generation Semiconductor Nanowires. <i>Chemical Reviews</i> , 2019, 119, 9303-9359.	23.0	213
645	Graphene nanoparticle strain sensors with modulated sensitivity through tunneling types transition. <i>Nanotechnology</i> , 2019, 30, 425501.	1.3	5
646	Mechanical elasticity and piezoelectricity in monolayer transition-metal dichalcogenide alloys. <i>Journal of Physics and Chemistry of Solids</i> , 2019, 135, 109081.	1.9	4
647	Electronic Skin for Closed-Loop Systems. <i>ACS Nano</i> , 2019, 13, 12287-12293.	7.3	103
648	Probing Effective Out-of-Plane Piezoelectricity in van der Waals Layered Materials Induced by Flexoelectricity. <i>Small</i> , 2019, 15, e1903106.	5.2	29
649	Piezotronic Tunneling Junction Gated by Mechanical Stimuli. <i>Advanced Materials</i> , 2019, 31, e1905436.	11.1	14
650	Enhanced Performances of PVK/ZnO Nanorods/Graphene Heterostructure UV Photodetector via Piezo-Phototronic Interface Engineering. <i>Advanced Materials Interfaces</i> , 2019, 6, 1901365.	1.9	20
651	Piezotronic effect of single/few-layers MoS <sub>2</sub> nanosheets composite with TiO <sub>2</sub> nanorod heterojunction. <i>Nano Energy</i> , 2019, 66, 104168.	8.2	52
652	Flexible tactile sensor array for distributed tactile sensing and slip detection in robotic hand grasping. <i>Sensors and Actuators A: Physical</i> , 2019, 297, 111512.	2.0	78
653	Recent advances in synthesis and biosensors of two-dimensional MoS <sub>2</sub> . <i>Nanotechnology</i> , 2019, 30, 502004.	1.3	11
654	Analysis of vibration characteristics of mounting plate for molded case circuit breaker. <i>Journal of Physics: Conference Series</i> , 2019, 1303, 012008.	0.3	1
655	Strain Improving the Performance of a Flexible Monolayer MoS <sub>2</sub> Photodetector. <i>Advanced Electronic Materials</i> , 2019, 5, 1900803.	2.6	48
656	Design and analysis of an axial flux permanent magnet motor for the direct drive radial piston pump. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2019, 233, 7077-7088.	1.1	3
657	Stabilities, and electronic and piezoelectric properties of two-dimensional tin dichalcogenide derived Janus monolayers. <i>Journal of Materials Chemistry C</i> , 2019, 7, 13203-13210.	2.7	72
658	Preparation of Novel Ultrathin Co doped MoS <sub>2</sub> Nanosheets Piezocatalyst for Fast Simultaneous Decomposition of Cr(VI) and MB in Dark. <i>Chemical Research in Chinese Universities</i> , 2019, 35, 892-900.	1.3	14

#	ARTICLE	IF	CITATIONS
659	Structural, electronic, and electromechanical properties of MoSSe/blue phosphorene heterobilayer. AIP Advances, 2019, 9, 115302.	0.6	19
660	High Gauge Factor Strain Sensors Based on Vanadium Doped Molybdenum Disulfide 2D Films. , 2019, , .		0
661	Electricity Generation from Capillary-Driven Ionic Solution Flow in a Three-Dimensional Graphene Membrane. ACS Applied Materials & Interfaces, 2019, 11, 4922-4929.	4.0	57
662	Securing the Device Drivers of Your Embedded Systems. , 2019, , .		2
663	Wafer-scale MOCVD growth of monolayer MoS <sub>2</sub> on sapphire and SiO <sub>2</sub> . Nano Research, 2019, 12, 2646-2652.	5.8	104
664	Tactile Sensors for Advanced Intelligent Systems. Advanced Intelligent Systems, 2019, 1, 1900090.	3.3	80
665	Charge Accumulation Effect in Transition Metal Dichalcogenide Heterobilayers. Small, 2019, 15, e1902424.	5.2	30
666	Large out-of-plane piezoelectricity of oxygen functionalized MXenes for ultrathin piezoelectric cantilevers and diaphragms. Nano Energy, 2019, 65, 104058.	8.2	49
667	Generalized Dynamic Analytical Model of Piezoelectric Materials for Characterization Using Electrical Impedance Spectroscopy. Materials, 2019, 12, 2502.	1.3	4
668	Electronic, elastic and piezoelectric properties of boron-V group binary and ternary monolayers. Physica B: Condensed Matter, 2019, 574, 311634.	1.3	23
669	Scaled-up Direct-Current Generation in MoS <sub>2</sub> Multilayer-Based Moving Heterojunctions. ACS Applied Materials & Interfaces, 2019, 11, 35404-35409.	4.0	55
670	Growth of highly oriented MoS <sub>2</sub> via an intercalation process in the graphene/SiC(0001) system. Physical Chemistry Chemical Physics, 2019, 21, 20641-20646.	1.3	8
671	Ge <sub>3</sub> P <sub>2</sub> : New viable two-dimensional semiconductors with ultrahigh carrier mobility. Applied Surface Science, 2019, 497, 143803.	3.1	17
672	Piezoelectric Energy Harvesting from Two-Dimensional Boron Nitride Nanoflakes. ACS Applied Materials & Interfaces, 2019, 11, 37920-37926.	4.0	98
673	Gold and ZnO-Based Metal-Semiconductor Network for Highly Sensitive Room-Temperature Gas Sensing. Sensors, 2019, 19, 3815.	2.1	6
674	Few-layer transition metal dichalcogenides (MoS <sub>2</sub> , WS <sub>2</sub> , and WSe <sub>2</sub> ) for water splitting and degradation of organic pollutants: Understanding the piezocatalytic effect. Nano Energy, 2019, 66, 104083.	8.2	181
675	Theoretical Insights into CO <sub>2</sub> Adsorption by MoS <sub>2</sub> Nanomaterials. Journal of Physical Chemistry C, 2019, 123, 26338-26350.	1.5	18
676	A Compact and Flexible Nonbeam-Type Vibrational Energy Harvesting Device With Bistable Characteristics. IEEE/ASME Transactions on Mechatronics, 2019, 24, 282-292.	3.7	11

#	ARTICLE	IF	CITATIONS
677	Doping-Induced Second-Harmonic Generation in Centrosymmetric Graphene from Quadrupole Response. <i>Physical Review Letters</i> , 2019, 122, 047401.	2.9	64
678	Racemic Amino Acid Piezoelectric Transducer. <i>Physical Review Letters</i> , 2019, 122, 047701.	2.9	59
679	Single-layer ferromagnetic and piezoelectric CoAsS with pentagonal structure. <i>APL Materials</i> , 2019, 7, .	2.2	14
680	Tunable electronic structure and magnetic anisotropy of two dimensional van der Waals GeS/FeCl <sub>2</sub> multiferroic heterostructures. <i>Journal of Materials Chemistry C</i> , 2019, 7, 2049-2058.	2.7	28
681	Role of rough substrate on the growth of large single-crystal MoS <sub>2</sub> by chemical vapor deposition. <i>Applied Surface Science</i> , 2019, 476, 1008-1015.	3.1	30
682	High-Gauge Factor Strain Sensor Based on Piezoelectric Aluminum Nitride Coupled to MOSFET. <i>IEEE Sensors Journal</i> , 2019, 19, 3626-3632.	2.4	14
683	Flexible electronic skins based on piezoelectric nanogenerators and piezotronics. <i>Nano Energy</i> , 2019, 59, 84-90.	8.2	171
684	On the piezopotential properties of two-dimensional materials. <i>Nano Energy</i> , 2019, 58, 568-578.	8.2	37
685	Surface functional modification boosts the output of an evaporation-driven water flow nanogenerator. <i>Nano Energy</i> , 2019, 58, 797-802.	8.2	145
686	Symmetry-breaking induced large piezoelectricity in Janus tellurene materials. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 1207-1216.	1.3	134
687	A piezo-phototronic enhanced serrate-structured ZnO-based heterojunction photodetector for optical communication. <i>Nanoscale</i> , 2019, 11, 3021-3027.	2.8	53
688	Anomalous Conductance near Percolative Metal-Insulator Transition in Monolayer MoS <sub>2</sub> at Low Voltage Regime. <i>ACS Nano</i> , 2019, 13, 6631-6637.	7.3	11
689	Synergistic sensing of stratified structures enhancing touch recognition for multifunctional interactive electronics. <i>Nano Energy</i> , 2019, 62, 410-418.	8.2	38
690	Stretchable strain sensor based on a nanocomposite of zinc stannate nanocubes and silver nanowires. <i>Composite Structures</i> , 2019, 224, 111005.	3.1	24
691	Enhanced intrinsic photovoltaic effect in tungsten disulfide nanotubes. <i>Nature</i> , 2019, 570, 349-353.	13.7	197
692	Anomalous lattice vibrations of CVD-grown monolayer MoS <sub>2</sub> probed using linear polarized excitation light. <i>Nanoscale</i> , 2019, 11, 13725-13730.	2.8	24
693	Ultrahigh Gauge Factor in Graphene/MoS <sub>2</sub> Heterojunction Field Effect Transistor with Variable Schottky Barrier. <i>ACS Nano</i> , 2019, 13, 8392-8400.	7.3	54
694	High power mechanical energy harvester based on exfoliated black phosphorous-polymer composite and its multiple applications. <i>Sustainable Energy and Fuels</i> , 2019, 3, 1943-1950.	2.5	8

#	ARTICLE	IF	CITATIONS
695	Revealing the failure mechanism and designing protection approach for MoS <sub>2</sub> in humid environment by first-principles investigation. <i>Applied Surface Science</i> , 2019, 487, 1121-1130.	3.1	26
696	Charge-Induced Lattice Compression in Monolayer MoS <sub>2</sub> . <i>Journal of Physical Chemistry C</i> , 2019, 123, 17943-17950.	1.5	14
697	Flexible Water-proof Bio-Integrated Electronics. , 2019, , .		0
698	A strain tunable single-layer MoS <sub>2</sub> photodetector. <i>Materials Today</i> , 2019, 27, 8-13.	8.3	161
699	Investigation on friction force and surface modification of MoS <sub>2</sub> flakes under Ga <sup>+</sup> ion irradiation. <i>Materials Research Express</i> , 2019, 6, 085088.	0.8	1
700	Enhanced photocatalytic H <sub>2</sub> evolution by plasmonic and piezotronic effects based on periodic Al/BaTiO <sub>3</sub> heterostructures. <i>Nano Energy</i> , 2019, 62, 513-520.	8.2	127
701	A self-powered temperature-sensitive electronic-skin based on triboelectric effect of PDMS/PANI nanostructures. <i>Journal of Materials Science and Technology</i> , 2019, 35, 2187-2193.	5.6	20
702	Quantum Dots for Hybrid Energy Harvesting: From Integration to Piezo-Phototronics. <i>Israel Journal of Chemistry</i> , 2019, 59, 747-761.	1.0	3
703	An ab initio study of the ferroelectric In <sub>2</sub> Se <sub>3</sub> /graphene heterostructure. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2019, 114, 113582.	1.3	18
704	Barrier materials for flexible bioelectronic implants with chronic stability—Current approaches and future directions. <i>APL Materials</i> , 2019, 7, 050902.	2.2	27
705	Robust ferromagnetism and half-metallicity in hydrogenated monolayer-CdS. <i>Physica B: Condensed Matter</i> , 2019, 570, 209-216.	1.3	12
706	Robust Piezo-Phototronic Effect in Multilayer In <sub>2</sub> Se <sub>3</sub> for High-Performance Self-Powered Flexible Photodetectors. <i>ACS Nano</i> , 2019, 13, 7291-7299.	7.3	118
707	Thickness-Dependent Semiconductor-to-Metal Transition in Molybdenum Tungsten Disulfide Alloy under Hydrostatic Pressure. <i>ACS Omega</i> , 2019, 4, 8641-8649.	1.6	4
708	Ab initio simulation studies on the room-temperature ferroelectricity in two-dimensional <i>h</i> -phase GeS. <i>Applied Physics Letters</i> , 2019, 114, .	1.5	72
709	Ultrathin two-dimensional cobalt-organic frameworks nanosheets for electrochemical energy storage. <i>Chemical Engineering Journal</i> , 2019, 373, 1319-1328.	6.6	132
710	Ultrafast Excitonic Behavior in Two-Dimensional Metal-Semiconductor Heterostructure. <i>ACS Photonics</i> , 2019, 6, 1379-1386.	3.2	23
711	A Uranyl-Organic Framework Featuring Two-Dimensional Graphene-like Layered Topology for Efficient Iodine and Dyes Capture. <i>Inorganic Chemistry</i> , 2019, 58, 6866-6876.	1.9	55
712	The novel transistor and photodetector of monolayer MoS <sub>2</sub> based on surface-ionic-gate modulation powered by a triboelectric nanogenerator. <i>Nano Energy</i> , 2019, 62, 38-45.	8.2	46



#	ARTICLE	IF	CITATIONS
713	Tunable piezoelectric nanogenerators using flexoelectricity of well-ordered hollow 2D MoS <sub>2</sub> shells arrays for energy harvesting. Nano Energy, 2019, 61, 471-477.	8.2	33
714	Soft Three-Dimensional Robots with Hard Two-Dimensional Materials. ACS Nano, 2019, 13, 4883-4892.	7.3	45
715	Recent Progress in 2D Layered III-VI Semiconductors and their Heterostructures for Optoelectronic Device Applications. Advanced Materials Technologies, 2019, 4, 1900108.	3.0	104
716	Out-of-plane piezoresponse of monolayer MoS <sub>2</sub> on plastic substrates enabled by highly uniform and layer-controllable CVD. Applied Surface Science, 2019, 487, 1356-1361.	3.1	36
717	Hybrid Integration of Carbon Nanotubes and Transition Metal Dichalcogenides on Cellulose Paper for Highly Sensitive and Extremely Deformable Chemical Sensors. ACS Applied Materials & Interfaces, 2019, 11, 19363-19371.	4.0	52
718	Smart illuminative Charging (SiC) of Future Electric Vehicles Using Roadway Infrastructure. MATEC Web of Conferences, 2019, 271, 06006.	0.1	0
719	Cobalt nanowire-based multifunctional platform for targeted chemo-photothermal synergistic cancer therapy. Colloids and Surfaces B: Biointerfaces, 2019, 180, 401-410.	2.5	29
720	Enhanced photoresponse of monolayer MoS <sub>2</sub> through hybridization with carbon quantum dots as efficient photosensitizer. 2D Materials, 2019, 6, 035025.	2.0	24
721	Progress in piezotronics and piezo-phototronics of quantum materials. Journal Physics D: Applied Physics, 2019, 52, 343001.	1.3	23
722	Full orientation control of epitaxial MoS <sub>2</sub> on hBN assisted by substrate defects. Physical Review B, 2019, 99, .	1.1	3
723	Attachable piezoelectric nanogenerators using collision-induced strain of vertically grown hollow MoS <sub>2</sub> nanoflakes. Nanotechnology, 2019, 30, 335402.	1.3	11
724	Self-Healing, Adhesive, and Highly Stretchable Ionogel as a Strain Sensor for Extremely Large Deformation. Small, 2019, 15, e1804651.	5.2	180
725	Optical and Piezoelectric Properties of Strained Orthorhombic PdS <sub>2</sub> . IEEE Nanotechnology Magazine, 2019, 18, 358-364.	1.1	6
726	Vertical Self-Assembly of Polarized Phage Nanostructure for Energy Harvesting. Nano Letters, 2019, 19, 2661-2667.	4.5	39
727	Flexible Molybdenum Disulfide (MoS <sub>2</sub> ) Atomic Layers for Wearable Electronics and Optoelectronics. ACS Applied Materials & Interfaces, 2019, 11, 11061-11105.	4.0	277
728	The Opposite Anisotropic Piezoresistive Effect of ReS <sub>2</sub> . ACS Nano, 2019, 13, 3310-3319.	7.3	55
729	The development of 2D materials for electrochemical energy applications: A mechanistic approach. APL Materials, 2019, 7, .	2.2	28
730	Enhanced piezoelectricity of a PVDF-based nanocomposite utilizing high-yield dispersions of exfoliated few-layer MoS <sub>2</sub> . Ceramics International, 2019, 45, 11347-11352.	2.3	39

#	ARTICLE	IF	CITATIONS
731	Probing electromechanical behaviors by datacube piezoresponse force microscopy in ambient and aqueous environments. <i>Nanotechnology</i> , 2019, 30, 235701.	1.3	9
732	Piezotronic Graphene Artificial Sensory Synapse. <i>Advanced Functional Materials</i> , 2019, 29, 1900959.	7.8	147
733	Recent advance in new-generation integrated devices for energy harvesting and storage. <i>Nano Energy</i> , 2019, 60, 600-619.	8.2	190
734	Piezoelectric potential induced the improved micro-pollutant dye degradation of Co doped MoS <sub>2</sub> ultrathin nanosheets in dark. <i>Catalysis Communications</i> , 2019, 125, 61-65.	1.6	48
735	Phonon Evidence of Kohn Anomalies in Nanogenerator ZnO. <i>Nano Energy</i> , 2019, 59, 626-635.	8.2	6
736	Piezoelectric nanotransducers. <i>Nano Energy</i> , 2019, 59, 730-744.	8.2	51
737	Regulation of Two-Dimensional Lattice Deformation Recovery. <i>IScience</i> , 2019, 13, 277-283.	1.9	6
738	Atomic Layer Deposition of Al <sub>2</sub> O <sub>3</sub> Directly on 2D Materials for High-Performance Electronics. <i>Advanced Materials Interfaces</i> , 2019, 6, 1802055.	1.9	25
739	Black phosphorus and its isoelectronic materials. <i>Nature Reviews Physics</i> , 2019, 1, 306-317.	11.9	196
740	Unique interfacial thermodynamics of few-layer 2D MoS <sub>2</sub> for (photo)electrochemical catalysis. <i>Energy and Environmental Science</i> , 2019, 12, 1648-1656.	15.6	25
741	Destructive role of oxygen in growth of molybdenum disulfide determined by secondary ion mass spectrometry. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 8837-8842.	1.3	6
742	2D piezotronics in atomically thin zinc oxide sheets: Interfacing gating and channel width gating. <i>Nano Energy</i> , 2019, 60, 724-733.	8.2	60
743	Quantum Enhancement of Charge Density Wave in NbS <sub>2</sub> in the Two-Dimensional Limit. <i>Nano Letters</i> , 2019, 19, 3098-3103.	4.5	62
744	High performance piezotronic devices based on non-uniform strain. <i>Nano Energy</i> , 2019, 60, 649-655.	8.2	18
745	Intrinsic bending flexoelectric constants in two-dimensional materials. <i>Physical Review B</i> , 2019, 99, .	1.1	68
746	Recent Progress on Irradiation-Induced Defect Engineering of Two-Dimensional 2H-MoS <sub>2</sub> Few Layers. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 678.	1.3	46
747	Highly Efficient Mechanoelectrical Energy Conversion Based on the Near-Tip Stress Field of an Antifracture Slit Observed in Scorpions. <i>Advanced Functional Materials</i> , 2019, 29, 1807693.	7.8	21
748	Coupled Ion-Gel Channel-Width Gating and Piezotronic Interface Gating in ZnO Nanowire Devices. <i>Advanced Functional Materials</i> , 2019, 29, 1807837.	7.8	27

#	ARTICLE	IF	CITATIONS
749	High luminescence color gradient by physical mixing of two perovskite nanocrystals. <i>New Journal of Chemistry</i> , 2019, 43, 4116-4122.	1.4	11
750	From flexible electronics technology in the era of IoT and artificial intelligence toward future implanted body sensor networks. <i>APL Materials</i> , 2019, 7, .	2.2	116
751	Structural characterization and transistor properties of thickness-controllable MoS <sub>2</sub> thin films. <i>Journal of Materials Science</i> , 2019, 54, 7758-7767.	1.7	15
752	Mechanical energy harvesting properties of free-standing carbyne enriched carbon film derived from dehydrohalogenation of polyvinylidene fluoride. <i>Nano Energy</i> , 2019, 59, 453-463.	8.2	24
753	Piezoelectric Nanogenerators Based on Self-Poled Two-Dimensional Li-Doped ZnO Microdisks. <i>Journal of Electronic Materials</i> , 2019, 48, 2886-2894.	1.0	9
754	Piezoelectric nylon-11 nanoparticles with ultrasound assistance for high-efficiency promotion of stem cell osteogenic differentiation. <i>Journal of Materials Chemistry B</i> , 2019, 7, 1847-1854.	2.9	35
755	Additive manufacturing of patterned 2D semiconductor through recyclable masked growth. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 3437-3442.	3.3	46
756	Piezo-phototronic solar cell based on 2D monochalcogenides materials. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 204001.	1.3	19
757	Hysteresis and its impact on characterization of mechanical properties of suspended monolayer molybdenum-disulfide sheets. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 7454-7461.	1.3	6
758	Temperature-dependent piezotronic effect of MoS <sub>2</sub> monolayer. <i>Nano Energy</i> , 2019, 58, 811-816.	8.2	26
759	Seamless Fabrication and Threshold Engineering in Monolayer MoS <sub>2</sub> Dual-Gated Transistors via Hydrogen Silsesquioxane. <i>Advanced Electronic Materials</i> , 2019, 5, 1800888.	2.6	13
760	Designing high energy conversion efficient bio-inspired vitamin assisted single-structured based self-powered piezoelectric/wind/acoustic multi-energy harvester with remarkable power density. <i>Nano Energy</i> , 2019, 59, 169-183.	8.2	107
761	Piezoresistive strain sensor based on monolayer molybdenum disulfide continuous film deposited by chemical vapor deposition. <i>Journal of Micromechanics and Microengineering</i> , 2019, 29, 055002.	1.5	20
762	Tuning optical properties of metasurface via piezoelectric effect. <i>IET Optoelectronics</i> , 2019, 13, 134-138.	1.8	5
763	Synchronous Enhancement for Responsivity and Response Speed in In <sub>2</sub> Se <sub>3</sub> Photodetector Modulated by Piezoresistive Effect. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 47098-47105.	4.0	29
764	Superhigh out-of-plane piezoelectricity, low thermal conductivity and photocatalytic abilities in ultrathin 2D van der Waals heterostructures of boron monophosphide and gallium nitride. <i>Nanoscale</i> , 2019, 11, 21880-21890.	2.8	54
765	Monolayer MoSe <sub>2</sub> /NiO van der Waals heterostructures for infrared light-emitting diodes. <i>Journal of Materials Chemistry C</i> , 2019, 7, 13613-13621.	2.7	11
766	Modeling and simulation of a LaCoO <sub>3</sub> Nanofibers /CNT electrode for supercapacitor application. <i>Journal of Physics: Conference Series</i> , 2019, 1380, 012101.	0.3	7

#	ARTICLE	IF	CITATIONS
767	Defect repair for enhanced piezo-phototronic MoS <sub>2</sub> flexible phototransistors. Journal of Materials Chemistry C, 2019, 7, 14731-14738.	2.7	20
768	Influences of Contact Metals on the Performances of MoS <sub>2</sub> Devices under Strains. Journal of Physical Chemistry C, 2019, 123, 30696-30703.	1.5	5
769	Reconfigurable Dipole-Induced Resistive Switching of MoS <sub>2</sub> Thin Layers on Nb:SrTiO <sub>3</sub> . ACS Applied Materials & Interfaces, 2019, 11, 46344-46349.	4.0	4
770	Photoluminescence of PdS <sub>2</sub> and PdSe <sub>2</sub> quantum dots. RSC Advances, 2019, 9, 38077-38084.	1.7	13
771	Pyroelectric response and temperature-induced $\sqrt{I_{\pm}}$ - $I^2$ phase transitions in $\sqrt{I_{\pm}}$ -ln		

#	ARTICLE	IF	CITATIONS
785	Rollable, Stretchable, and Reconfigurable Graphene Hydroelectric Generators. <i>Advanced Materials</i> , 2019, 31, e1805705.	11.1	117
786	2D MoS <sub>2</sub> -Based Nanomaterials for Therapeutic, Bioimaging, and Biosensing Applications. <i>Small</i> , 2019, 15, e1803706.	5.2	265
787	First-Principles Prediction of a Room-Temperature Ferromagnetic Janus VSSe Monolayer with Piezoelectricity, Ferroelasticity, and Large Valley Polarization. <i>Nano Letters</i> , 2019, 19, 1366-1370.	4.5	292
788	A roadmap for electronic grade 2D materials. <i>2D Materials</i> , 2019, 6, 022001.	2.0	205
789	From pentagonal geometries to two-dimensional materials. <i>Computational Materials Science</i> , 2019, 159, 448-453.	1.4	24
790	Vanadium-doped molybdenum disulfide film-based strain sensors with high gauge factor. <i>Applied Physics Express</i> , 2019, 12, 015003.	1.1	20
791	Triboelectric Nanogenerator Driven Self-Charging and Self-Healing Flexible Asymmetric Supercapacitor Power Cell for Direct Power Generation. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 5022-5036.	4.0	63
792	Controllable Synthesis of One-Dimensional MoO <sub>3</sub> /MoS <sub>2</sub> Hybrid Composites with their Enhanced Efficient Electromagnetic Wave Absorption Properties. <i>ChemPlusChem</i> , 2019, 84, 226-232.	1.3	25
793	Atomic-scale symmetry breaking for out-of-plane piezoelectricity in two-dimensional transition metal dichalcogenides. <i>Nano Energy</i> , 2019, 58, 57-62.	8.2	33
794	Three-dimensional piezoelectric polymer microsystems for vibrational energy harvesting, robotic interfaces and biomedical implants. <i>Nature Electronics</i> , 2019, 2, 26-35.	13.1	322
795	Enhanced NO <sub>2</sub> gas sensing of a single-layer MoS <sub>2</sub> by photogating and piezo-phototronic effects. <i>Science Bulletin</i> , 2019, 64, 128-135.	4.3	92
796	Materials and Designs for Power Supply Systems in Skin-Interfaced Electronics. <i>Accounts of Chemical Research</i> , 2019, 52, 53-62.	7.6	59
797	A highly efficient Au-MoS <sub>2</sub> nanocatalyst for tunable piezocatalytic and photocatalytic water disinfection. <i>Nano Energy</i> , 2019, 57, 14-21.	8.2	154
798	Mechanical properties of two-dimensional materials and their applications. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 083001.	1.3	97
799	Prediction of strong piezoelectricity in 3R-MoS <sub>2</sub> multilayer structures. <i>Nano Energy</i> , 2019, 56, 512-515.	8.2	55
800	Anomalous and Polarization-Sensitive Photoresponse of T <sub>d</sub> WTe <sub>2</sub> from Visible to Infrared Light. <i>Advanced Materials</i> , 2019, 31, e1804629.	11.1	63
801	On the Geometry of Nanowires and the Role of Torsion. <i>Physica Status Solidi - Rapid Research Letters</i> , 2019, 13, 1800357.	1.2	3
802	Nanogenerators for wearable bioelectronics and biodevices. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 023002.	1.3	37

#	ARTICLE	IF	CITATIONS
803	Fiber-Based Energy Conversion Devices for Human Body Energy Harvesting. <i>Advanced Materials</i> , 2020, 32, e1902034.	11.1	204
804	Flexible Piezoelectric Acoustic Sensors and Machine Learning for Speech Processing. <i>Advanced Materials</i> , 2020, 32, e1904020.	11.1	155
805	High Coercivity and Magnetization in $WSe_2$ by Codoping Co and Nb. <i>Small</i> , 2020, 16, e1903173.	5.2	43
806	Direct Imaging of Dopant and Impurity Distributions in 2D $MoS_2$ . <i>Advanced Materials</i> , 2020, 32, e1907235.	11.1	26
807	In-plane anisotropic electronics based on low-symmetry 2D materials: progress and prospects. <i>Nanoscale Advances</i> , 2020, 2, 109-139.	2.2	84
808	Shape- and size dependent piezoelectric properties of monolayer hexagonal boron nitride nanosheets. <i>Nanoscale Advances</i> , 2020, 2, 470-477.	2.2	15
809	Mechanochemical preparation of piezoelectric nanomaterials: BN, $MoS_2$ and $WS_2$ 2D materials and their glycine-cocrystals. <i>Nanoscale Horizons</i> , 2020, 5, 331-335.	4.1	21
810	Two-dimensional materials: From mechanical properties to flexible mechanical sensors. <i>Informa Materials</i> , 2020, 2, 1077-1094.	8.5	158
811	Versatile energy loss conversion for recovering waste alternating potential through polarization transfer medium. <i>Nano Energy</i> , 2020, 69, 104400.	8.2	10
812	Importance of Many-Body Dispersion in the Stability of Vacancies and Antisites in Free-Standing Monolayer of $MoS_2$ from First-Principles Approaches. <i>Journal of Physical Chemistry C</i> , 2020, 124, 1390-1397.	1.5	8
813	Anomalous Linear Layer-Dependent Blue Shift of Ultraviolet-Range Interband Transition in Two-Dimensional $MoS_2$ . <i>Journal of Physical Chemistry C</i> , 2020, 124, 1609-1616.	1.5	1
814	Enhanced Piezoelectric Effect Derived from Grain Boundary in $MoS_2$ Monolayers. <i>Nano Letters</i> , 2020, 20, 201-207.	4.5	66
815	Coupling Piezocatalysis and Photocatalysis in $Bi_4NbO_8$ (X = Cl, Br) Polar Single Crystals. <i>Advanced Functional Materials</i> , 2020, 30, 1908168.	7.8	225
816	Piezoelectricity in Monolayer Hexagonal Boron Nitride. <i>Advanced Materials</i> , 2020, 32, e1905504.	11.1	87
817	Activated HER performance of defected single layered $TiO_2$ nanosheet via transition metal doping. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 2681-2688.	3.8	27
818	2D semiconducting materials for electronic and optoelectronic applications: potential and challenge. <i>2D Materials</i> , 2020, 7, 022003.	2.0	168
819	A nonlocal continuum model for the piezopotential of two-dimensional semiconductors. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 045303.	1.3	2
820	Rationally designed rotation triboelectric nanogenerators with much extended lifetime and durability. <i>Nano Energy</i> , 2020, 68, 104378.	8.2	111

#	ARTICLE	IF	CITATIONS
821	Interfacing Boron Monophosphide with Molybdenum Disulfide for an Ultrahigh Performance in Thermoelectrics, Two-Dimensional Excitonic Solar Cells, and Nanopiezotronics. ACS Applied Materials & Interfaces, 2020, 12, 3114-3126.	4.0	84
822	Unlocking the high redox activity of MoS <sub>2</sub> on dual-doped graphene as a superior piezocatalyst. Nano Energy, 2020, 68, 104366.	8.2	60
823	Out-of-Plane Polarization in Bent Graphene-Like Zinc Oxide and Nanogenerator Applications. Advanced Functional Materials, 2020, 30, 1907885.	7.8	18
824	Recent Progress in Two-Dimensional Ferroelectric Materials. Advanced Electronic Materials, 2020, 6, 1900818.	2.6	236
825	Strain-Induced Band-Gap Tuning of 2D SnSSe Flakes for Application in Flexible Sensors. Advanced Materials Technologies, 2020, 5, 1900853.	3.0	21
826	Novel phenomena in two-dimensional semiconductors. , 2020, , 25-79.		0
827	2D-Nanolayered Tungsten and Molybdenum Disulfides: Structure, Properties, Synthesis, and Processing for Strategic Applications. , 2020, , 75-120.		2
828	Beyond Graphene: Low-Symmetry and Anisotropic 2D Materials. Journal of Applied Physics, 2020, 128, 140401.	1.1	13
829	Electronic and optical properties of low-dimensional group-IV monochalcogenides. Journal of Applied Physics, 2020, 128, .	1.1	29
830	35 <sup>th</sup> : High Sensitive Pen Writing Solution Based on Mechanical Sensing. Digest of Technical Papers SID International Symposium, 2020, 51, 501-504.	0.1	0
831	Tunable Contacts in Graphene/InSe van der Waals Heterostructures. Journal of Physical Chemistry C, 2020, 124, 23699-23706.	1.5	25
832	Revealing Electrical-Induced Polarization Potential in Hybrid Perovskite Photodetectors. Advanced Materials, 2020, 32, e2005481.	11.1	23
833	Atomistic mechanism of stress modulated phase transition in monolayer MoTe <sub>2</sub> . $\frac{1}{10}$ Extreme Mechanics Letters, 2020, 40, 100946.	2.0	14
834	Flexible Biomechanical Energy Harvesters with Colossal Piezoelectric Output ( $\sim 1/42.07$ V/kPa) Based on Transition Metal Dichalcogenides-Poly(vinylidene fluoride) Nanocomposites. ACS Applied Electronic Materials, 2020, 2, 3327-3335.	2.0	15
835	Enhanced Spin-Orbit Coupled Photoluminescence of Perovskite CsPbBr <sub>3</sub> Quantum Dots by Piezo-Phototronic Effect. Nano Letters, 2020, 20, 8298-8304.	4.5	19
836	Ultrathin Quasibinary Heterojunctioned ReS <sub>2</sub> /MoS <sub>2</sub> Film with Controlled Adhesion from a Bimetallic Co-Feeding Atomic Layer Deposition. ACS Applied Materials & Interfaces, 2020, 12, 43311-43319.	4.0	10
837	Suppressing photoexcited electron-hole recombination in MoSe <sub>2</sub> /WSe <sub>2</sub> lateral heterostructures via interface-coupled state engineering: a time-domain study. Journal of Materials Chemistry A, 2020, 8, 20621-20628.	5.2	18
838	Piezotronic effect boosted photocatalytic performance of heterostructured BaTiO <sub>3</sub> /TiO <sub>2</sub> nanofibers for degradation of organic pollutants. Nano Energy, 2020, 77, 105122.	8.2	110

#	ARTICLE	IF	CITATIONS
839	Acoustic Gain in Solids due to Piezoelectricity, Flexoelectricity, and Electrostriction. <i>Advanced Functional Materials</i> , 2020, 30, 2003503.	7.8	10
840	Simultaneous Piezoelectrocatalytic Hydrogen Evolution and Degradation of Water Pollutants by Quartz Microrods@Layered MoS <sub>2</sub> Hierarchical Heterostructures. <i>Advanced Materials</i> , 2020, 32, e2002875.	11.1	79
841	Asymmetrically flexoelectric gating effect of Janus transition-metal dichalcogenides and their sensor applications. <i>Journal of Materials Chemistry C</i> , 2020, 8, 11457-11467.	2.7	15
842	Excitons in strain-induced one-dimensional moiré potentials at transition metal dichalcogenide heterojunctions. <i>Nature Materials</i> , 2020, 19, 1068-1073.	13.3	169
843	Mechanical testing of two-dimensional materials: a brief review. <i>International Journal of Smart and Nano Materials</i> , 2020, 11, 207-246.	2.0	20
844	Stable and high-performance piezoelectric sensor via CVD grown WS <sub>2</sub> . <i>Nanotechnology</i> , 2020, 31, 445203.	1.3	25
845	Physics-Based Device Models and Progress Review for Active Piezoelectric Semiconductor Devices. <i>Sensors</i> , 2020, 20, 3872.	2.1	12
846	Current Trends in Nanomaterials for Metal Oxide-Based Conductometric Gas Sensors: Advantages and Limitations. Part 1: 1D and 2D Nanostructures. <i>Nanomaterials</i> , 2020, 10, 1392.	1.9	79
847	Piezoelectricity enhances MoSe <sub>2</sub> nanoflowers adsorption of the antibacterial dye malachite green under sonication. <i>Environmental Chemistry Letters</i> , 2020, 18, 2141-2148.	8.3	16
848	Enhanced Piezoelectric Response of Layered In <sub>2</sub> Se <sub>3</sub> /MoS <sub>2</sub> Nanosheet-Based van der Waals Heterostructures. <i>ACS Applied Nano Materials</i> , 2020, 3, 11979-11986.	2.4	44
849	Direct electron-beam patterning of monolayer MoS <sub>2</sub> with ice. <i>Nanoscale</i> , 2020, 12, 22473-22477.	2.8	13
850	Stable Layered Sulfur Nanosheets Prepared by One-Step Liquid-Phase Exfoliation of Natural Sublimed Sulfur with Bovine Serum Albumin for Photocatalysis. <i>Chemistry of Materials</i> , 2020, 32, 10476-10481.	3.2	18
851	Tuning the physical properties of ultrathin transition-metal dichalcogenides via strain engineering. <i>RSC Advances</i> , 2020, 10, 39455-39467.	1.7	28
852	Site-specific electrical contacts with the two-dimensional materials. <i>Nature Communications</i> , 2020, 11, 3982.	5.8	16
853	Pyro-phototronic effect enhanced ZnO nanowire-based tri-layer heterojunction for visible light sensing and communication. <i>Nano Energy</i> , 2020, 78, 105268.	8.2	36
854	Enhanced Photovoltaic Performances of La-Doped Bismuth Ferrite/Zinc Oxide Heterojunction by Coupling Piezo-Phototronic Effect and Ferroelectricity. <i>ACS Nano</i> , 2020, 14, 10723-10732.	7.3	62
855	Dielectric Nanoantennas for Strain Engineering in Atomically Thin Two-Dimensional Semiconductors. <i>ACS Photonics</i> , 2020, 7, 2413-2422.	3.2	26
856	Evolution of Raman Spectra in Ion Irradiated MoS <sub>2</sub> Atomic Layers: Computational and Experimental Studies. <i>Journal of Nanoscience and Nanotechnology</i> , 2020, 20, 7522-7529.	0.9	2



#	ARTICLE	IF	CITATIONS
857	Polar vibrational and dielectric properties of monolayer transition metal dichalcogenides from macroscopic equations. <i>AIP Advances</i> , 2020, 10, .	0.6	5
858	The interaction of gas molecules with aluminum/silicone doped SnS <sub>2</sub> nanosheets: A density functional theory investigation. <i>Computational and Theoretical Chemistry</i> , 2020, 1188, 112946.	1.1	6
859	Strain-dependent luminescence and piezoelectricity in monolayer transition metal dichalcogenides. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2020, 38, 042205.	0.6	4
860	Janus two-dimensional materials based on group IV monochalcogenides. <i>Journal of Applied Physics</i> , 2020, 128, .	1.1	29
861	Intercalation and hybrid heterostructure integration of two-dimensional atomic crystals with functional organic semiconductor molecules. <i>Nano Research</i> , 2020, 13, 2917-2924.	5.8	11
862	Recent Progress in the Nanoscale Evaluation of Piezoelectric and Ferroelectric Properties via Scanning Probe Microscopy. <i>Advanced Science</i> , 2020, 7, 1901391.	5.6	44
863	Effect of Cu concentration and dopant site on the band gap of MoS <sub>2</sub> : A DFT study. <i>Computational Condensed Matter</i> , 2020, 24, e00494.	0.9	21
864	Environment-dependent edge reconstruction of transition metal dichalcogenides: a global search. <i>Materials Today Advances</i> , 2020, 8, 100079.	2.5	21
865	Optically tunable charge carrier injection in monolayer MoS <sub>2</sub> . <i>Applied Physics A: Materials Science and Processing</i> , 2020, 126, 1.	1.1	6
866	Piezotronic-enhanced oxygen evolution reaction enabled by a Au/MoS <sub>2</sub> nanosheet catalyst. <i>Catalysis Science and Technology</i> , 2020, 10, 6180-6187.	2.1	22
867	Influences of surface charges and gap width between p-type and n-type semiconductors on charge pumping. <i>Nano Energy</i> , 2020, 78, 105287.	8.2	11
868	Controlled growth of atomically thin transition metal dichalcogenides via chemical vapor deposition method. <i>Materials Today Advances</i> , 2020, 8, 100098.	2.5	28
869	Piezoelectric Responses of Mechanically Exfoliated Two-Dimensional SnS <sub>2</sub> Nanosheets. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 51662-51668.	4.0	45
870	Interfacial hybridization of Janus MoSSe and BX (X = P, As) monolayers for ultrathin excitonic solar cells, nanopiezotronics and low-power memory devices. <i>Nanoscale</i> , 2020, 12, 22645-22657.	2.8	73
871	Advances in Functional Nanomaterials Science. <i>Annalen Der Physik</i> , 2020, 532, 2000015.	0.9	12
872	Coupling Effect of Piezo- and Flexocatalytic Hydrogen Evolution with Hybrid 1T and 2H Phase Few-Layered MoSe <sub>2</sub> Nanosheets. <i>Advanced Energy Materials</i> , 2020, 10, 2002082.	10.2	57
873	Flexoinduced ferroelectricity in low-dimensional transition metal dichalcogenides. <i>Physical Review B</i> , 2020, 102, .	1.1	15
874	Single-Layer MoS <sub>2</sub> Mechanical Resonant Piezo-Sensors with High Mass Sensitivity. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 41991-41998.	4.0	39

#	ARTICLE	IF	CITATIONS
875	Unravelling the effect of sulfur vacancies on the electronic structure of the MoS <sub>2</sub> crystal. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 21776-21783.	1.3	34
876	Empowering 2D nanoelectronics via ferroelectricity. <i>Applied Physics Letters</i> , 2020, 117, .	1.5	34
877	The Instability of Monolayer-Thick PbSe on VSe <sub>2</sub> . <i>Chemistry of Materials</i> , 2020, 32, 7992-8003.	3.2	5
878	Ultra-thin lead oxide piezoelectric layers for reduced environmental contamination using a liquid metal-based process. <i>Journal of Materials Chemistry A</i> , 2020, 8, 19434-19443.	5.2	29
879	Piezochromism in the magnetic chalcogenide MnPS <sub>3</sub> . <i>Npj Quantum Materials</i> , 2020, 5, .	1.8	26
880	A flower-inspired divergent light-trapping structure with quasi-spherical symmetry towards a high-performance flexible photodetector. <i>Nanoscale</i> , 2020, 12, 20898-20907.	2.8	13
881	Construction of an MZO heterojunction system with improved photocatalytic activity for degradation of organic dyes. <i>CrystEngComm</i> , 2020, 22, 7059-7065.	1.3	13
882	Bioelectronics-Related 2D Materials Beyond Graphene: Fundamentals, Properties, and Applications. <i>Advanced Functional Materials</i> , 2020, 30, 2003732.	7.8	39
883	Enhanced output performance of flexible piezoelectric energy harvester by using auxetic graphene films as electrodes. <i>Applied Physics Letters</i> , 2020, 117, .	1.5	10
884	Piezocatalysis and Piezo-Photocatalysis: Catalysts Classification and Modification Strategy, Reaction Mechanism, and Practical Application. <i>Advanced Functional Materials</i> , 2020, 30, 2005158.	7.8	435
885	Stretchable Self-Powered Generator for Multiple Functional Detection. <i>ACS Applied Electronic Materials</i> , 2020, 2, 3577-3584.	2.0	4
886	Momentum-resolved observation of ultrafast interlayer charge transfer between the topmost layers of $\text{MoS}_2$ . <i>Physical Review B</i> , 2020, 102, .		13
887	Ultrahigh Out-of-Plane Piezoelectricity Meets Giant Rashba Effect in 2D Janus Monolayers and Bilayers of Group IV Transition-Metal Trichalcogenides. <i>Journal of Physical Chemistry C</i> , 2020, 124, 21250-21260.	1.5	87
888	Giant Piezoresistive Effect and Strong Bandgap Tunability in Ultrathin InSe upon Biaxial Strain. <i>Advanced Science</i> , 2020, 7, 2001645.	5.6	22
889	Self-Powered 2D Material-Based pH Sensor and Photodetector Driven by Monolayer MoSe <sub>2</sub> Piezoelectric Nanogenerator. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 58132-58139.	4.0	53
890	Piezoelectric Current Generator Based on Bismuth Ferrite Nanoparticles. <i>Sensors</i> , 2020, 20, 6736.	2.1	5
891	Time-Domain Investigations of Coherent Phonons in van der Waals Thin Films. <i>Nanomaterials</i> , 2020, 10, 2543.	1.9	25
892	Tailoring the transfer characteristics and hysteresis in MoS <sub>2</sub> transistors using substrate engineering. <i>Nanoscale</i> , 2020, 12, 23817-23823.	2.8	6

#	ARTICLE	IF	CITATIONS
893	Hydrothermal synthesis of three-dimensional hydrangea-like MoSe <sub>2</sub> @N-doped carbon anode material for high performance lithium ion batteries. <i>Journal of Electroanalytical Chemistry</i> , 2020, 879, 114818.	1.9	5
894	Fiber-Shaped Fluidic Nanogenerator with High Power Density for Self-Powered Integrated Electronics. <i>Cell Reports Physical Science</i> , 2020, 1, 100175.	2.8	9
895	Nonlinear electromechanical analysis of micro/nanobeams based on the nonlocal strain gradient theory tuned by flexoelectric and piezoelectric effects. <i>Mechanics Based Design of Structures and Machines</i> , 2023, 51, 179-198.	3.4	8
896	Towards future physics and applications via two-dimensional material NEMS resonators. <i>Nanoscale</i> , 2020, 12, 22366-22385.	2.8	15
897	Recent Advances in Strain-Induced Piezoelectric and Piezoresistive Effect-Engineered 2D Semiconductors for Adaptive Electronics and Optoelectronics. <i>Nano-Micro Letters</i> , 2020, 12, 106.	14.4	89
899	Tin disulfide piezoelectric nanogenerators for biomechanical energy harvesting and intelligent human-robot interface applications. <i>Nano Energy</i> , 2020, 75, 104879.	8.2	40
900	Fluid-Guided CVD Growth for Large-Scale Monolayer Two-Dimensional Materials. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 26342-26349.	4.0	14
901	2D Electrets of Ultrathin MoO <sub>2</sub> with Apparent Piezoelectricity. <i>Advanced Materials</i> , 2020, 32, e2000006.	11.1	51
902	Synthesis of Tungsten Disulfide and Molybdenum Disulfide Quantum Dots and Their Applications. <i>Chemistry of Materials</i> , 2020, 32, 4409-4424.	3.2	51
903	Superhigh flexibility and out-of-plane piezoelectricity together with strong anharmonic phonon scattering induced extremely low lattice thermal conductivity in hexagonal buckled CdX (X = S, Se, Te). <i>npj 2D Materials and Applications</i> , 2020, 4, .	3.9	10
904	Zero-writing-power tribotronic MoS <sub>2</sub> touch memory. <i>Nano Energy</i> , 2020, 75, 104936.	8.2	11
905	Manipulation of mechanical properties of monolayer molybdenum disulfide: Kirigami and hetero-structure based approach. <i>Materials Chemistry and Physics</i> , 2020, 252, 123280.	2.0	5
906	Novel MoS <sub>2</sub> /C nanosheets as excellent piezocatalyst for degradation of imidacloprid with ultralow dosage. <i>Materials Letters</i> , 2020, 272, 127800.	1.3	8
907	Piezopotential-driven simulated electrocatalytic nanosystem of ultrasmall MoC quantum dots encapsulated in ultrathin N-doped graphene vesicles for superhigh H <sub>2</sub> production from pure water. <i>Nano Energy</i> , 2020, 75, 104990.	8.2	64
908	Piezoelectricity and topological quantum phase transitions in two-dimensional spin-orbit coupled crystals with time-reversal symmetry. <i>Nature Communications</i> , 2020, 11, 2290.	5.8	22
909	Tailoring phonon modes of few-layered MoS <sub>2</sub> by in-plane electric field. <i>Npj 2D Materials and Applications</i> , 2020, 4, .	3.9	10
910	Adjustable electronic and optical properties of BlueP/MoS <sub>2</sub> van der Waals heterostructure by external strain: a first-principles study. <i>Nanotechnology</i> , 2020, 31, 375706.	1.3	11
911	Polarization-Driven Edge-State Transport in Transition-Metal Dichalcogenides. <i>Physical Review Applied</i> , 2020, 13, .	1.5	8

#	ARTICLE	IF	CITATIONS
912	Atomically thin ZnS nanosheets: Facile synthesis and superior piezocatalytic H <sub>2</sub> production from pure H <sub>2</sub> O. <i>Applied Catalysis B: Environmental</i> , 2020, 277, 119250.	10.8	124
913	Ultra-low thermal conductivity and super-slow hot-carrier thermalization induced by a huge phononic gap in multifunctional nanoscale boron pnictides. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020, 124, 114222.	1.3	21
914	Flexoelectronics of centrosymmetric semiconductors. <i>Nature Nanotechnology</i> , 2020, 15, 661-667.	15.6	175
915	High mobility monolayer MoS <sub>2</sub> transistors and its charge transport behaviour under E-beam irradiation. <i>Journal of Materials Science</i> , 2020, 55, 14315-14325.	1.7	15
916	Porous Two-Dimensional Materials for Photocatalytic and Electrocatalytic Applications. <i>Matter</i> , 2020, 2, 1377-1413.	5.0	254
917	Electrical properties tunability of large area MoS <sub>2</sub> thin films by oxygen plasma treatment. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	12
918	Thermodynamic, Structural, and Piezoelectric Properties of Adatom-Doped Phosphorene and Its Applications in Smart Surfaces. <i>Physical Review Applied</i> , 2020, 13, .	1.5	4
919	Mn absorbed on the surface of the monolayer of GeSe Sheet. , 2020, , .		0
920	Bioâ€Derived Natural Materials Based Triboelectric Devices for Selfâ€Powered Ubiquitous Wearable and Implantable Intelligent Devices. <i>Advanced Sustainable Systems</i> , 2020, 4, 2000108.	2.7	42
921	Human Motion Driven Self-Powered Photodynamic System for Long-Term Autonomous Cancer Therapy. <i>ACS Nano</i> , 2020, 14, 8074-8083.	7.3	77
922	Strainâ€Engineered Anisotropic Optical and Electrical Properties in 2D Chiralâ€Chain Tellurium. <i>Advanced Materials</i> , 2020, 32, e2002342.	11.1	40
923	Ferroelasticâ€Domainâ€Assisted Mechanical Switching of Ferroelectric Domains in Pb(Zr,Ti)O <sub>3</sub> Thin Films. <i>Advanced Electronic Materials</i> , 2020, 6, 2000300.	2.6	12
924	Nanogenerators to Power Implantable Medical Systems. <i>Joule</i> , 2020, 4, 1398-1407.	11.7	61
925	Characteristics of Cl-doped MoS <sub>2</sub> field-effect transistors. <i>Sensors and Actuators A: Physical</i> , 2020, 312, 112165.	2.0	11
926	Unravelling Work Function Contributions and Their Engineering in 2H-MoS <sub>2</sub> Single Crystal Discovered by Molecular Probe Interaction. <i>Journal of Physical Chemistry C</i> , 2020, 124, 6732-6740.	1.5	4
927	Polar coupling enabled nonlinear optical filtering at MoS <sub>2</sub> /ferroelectric heterointerfaces. <i>Nature Communications</i> , 2020, 11, 1422.	5.8	31
928	Semiconducting few-layer PdSe <sub>2</sub> and Pd <sub>2</sub> Se <sub>3</sub> : native point defects and contacts with native metallic Pd <sub>17</sub> Se <sub>15</sub> . <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 7365-7373.	1.3	8
929	Piezotronic spin and valley transistors based on monolayer MoS <sub>2</sub> . <i>Nano Energy</i> , 2020, 72, 104678.	8.2	16

#	ARTICLE	IF	CITATIONS
930	Piezo/Tribotronics Toward Smart Flexible Sensors. <i>Advanced Intelligent Systems</i> , 2020, 2, 1900175.	3.3	33
931	Upconversion photoluminescence of Er <sup>3+</sup> and Yb <sup>3+</sup> codoped MoS <sub>2</sub> powders. <i>Journal of Luminescence</i> , 2020, 223, 117189.	1.5	12
932	Breaking symmetry in device design for self-driven 2D material based photodetectors. <i>Nanoscale</i> , 2020, 12, 8109-8118.	2.8	29
933	From nanocomposites to nanostructured materials. , 2020, , 3-39.		2
934	Smart Textiles for Electricity Generation. <i>Chemical Reviews</i> , 2020, 120, 3668-3720.	23.0	644
935	In-Plane and Interfacial Thermal Conduction of Two-Dimensional Transition-Metal Dichalcogenides. <i>Physical Review Applied</i> , 2020, 13, .	1.5	38
936	Strain-engineering the Schottky barrier and electrical transport on MoS <sub>2</sub> . <i>Nanotechnology</i> , 2020, 31, 275703.	1.3	42
937	Shape and Orientation Controlled Hydrothermal Synthesis of Silicide and Metal Dichalcogenide on a Silicon Substrate. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 18850-18858.	4.0	10
938	Piezoelectricity of 2D materials and its applications toward mechanical energy harvesting. , 2020, , 1-38.		8
939	Motion Detection Using Tactile Sensors Based on Pressure-Sensitive Transistor Arrays. <i>Sensors</i> , 2020, 20, 3624.	2.1	33
940	Mechanical properties of two-dimensional materials: atomistic modeling and future directions. , 2020, , 9-35.		4
941	Roles of Semiconductor Junctions in Mechanical-Electrical Power Conversion. , 2020, , .		2
942	Manipulating Relative Permittivity for High-Performance Wearable Triboelectric Nanogenerators. <i>Nano Letters</i> , 2020, 20, 6404-6411.	4.5	231
943	Visualization of Crystallographic Orientation and Twist Angles in Two-Dimensional Crystals with an Optical Microscope. <i>Nano Letters</i> , 2020, 20, 6059-6066.	4.5	6
944	Liquid metal-based synthesis of high performance monolayer SnS piezoelectric nanogenerators. <i>Nature Communications</i> , 2020, 11, 3449.	5.8	128
945	Shock wave induced exfoliation of molybdenum disulfide (MoS <sub>2</sub> ) in various solvents: All-atom molecular dynamics simulation. <i>Journal of Molecular Liquids</i> , 2020, 314, 113671.	2.3	8
946	Fabrication of sandwich-structured PPy/MoS <sub>2</sub> /PPy nanosheets for polymer composites with high dielectric constant, low loss and high breakdown strength. <i>Composites Part A: Applied Science and Manufacturing</i> , 2020, 137, 106032.	3.8	35
947	High-performance piezo-phototronic multijunction solar cells based on single-type two-dimensional materials. <i>Nano Energy</i> , 2020, 76, 105091.	8.2	14

#	ARTICLE	IF	CITATIONS
948	Small strain induced large piezoelectric coefficient in $\text{InAsP}$ monolayer. <i>Journal of Alloys and Compounds</i> , 2020, 822, 153577.	2.8	24
949	Capillary transfer of soft films. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 5210-5216.	3.3	27
950	Surface/Interface Engineering for Constructing Advanced Nanostructured Photodetectors with Improved Performance: A Brief Review. <i>Nanomaterials</i> , 2020, 10, 362.	1.9	35
951	Biomolecular Piezoelectric Materials: From Amino Acids to Living Tissues. <i>Advanced Materials</i> , 2020, 32, e1906989.	11.1	134
952	$\text{MoS}_2$ -Based Nanomaterials for Room-Temperature Gas Sensors. <i>Advanced Materials Technologies</i> , 2020, 5, 1901062.	3.0	138
953	Enhancement of electronic and optoelectronic performance of multilayer $\text{InSe}$ via strain engineering. <i>Semiconductor Science and Technology</i> , 2020, 35, 055016.	1.0	4
954	Out-of-plane electromechanical coupling in transition metal dichalcogenides. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	21
955	Enhanced Stretchable and Sensitive Strain Sensor via Controlled Strain Distribution. <i>Nanomaterials</i> , 2020, 10, 218.	1.9	18
956	Modulation on the electronic properties and band gap of layered $\text{ReSe}_2$ via strain engineering. <i>Journal of Alloys and Compounds</i> , 2020, 827, 154364.	2.8	13
957	A generic method to control hysteresis and memory effect in Van der Waals hybrids. <i>Materials Research Express</i> , 2020, 7, 014004.	0.8	12
958	Tuning pure out-of-plane piezoelectric effect of penta-graphene: A first-principle study. <i>Journal of Physics and Chemistry of Solids</i> , 2020, 140, 109375.	1.9	20
959	Tunable $\text{MoS}_2$ strain sensor. <i>IEEE Instrumentation and Measurement Magazine</i> , 2020, 23, 30-33.	1.2	1
960	Bandgap tuning of two-dimensional materials by sphere diameter engineering. <i>Nature Materials</i> , 2020, 19, 528-533.	13.3	80
961	$\text{WSe}_2$ 2D $\text{p-n}$ type semiconductor-based electronic devices for information technology: Design, preparation, and applications. <i>Information Materials</i> , 2020, 2, 656-697.	8.5	115
962	Thermoplastic polymer composites for EMI shielding applications. , 2020, , 73-99.		10
963	Selective Ion Sweeping on Prussian Blue Analogue Nanoparticles and Activated Carbon for Electrochemical Kinetic Energy Harvesting. <i>Nano Letters</i> , 2020, 20, 1800-1807.	4.5	8
964	Peculiar piezoelectricity of atomically thin planar structures. <i>Nanoscale</i> , 2020, 12, 2875-2901.	2.8	44
965	A full picture of intrinsic defects induced self-activation of elastic potential fluctuation within monolayered metal chalcogenide. <i>Nano Energy</i> , 2020, 70, 104530.	8.2	2

#	ARTICLE	IF	CITATIONS
966	The Rise of 2D Photothermal Materials beyond Graphene for Clean Water Production. <i>Advanced Science</i> , 2020, 7, 1902236.	5.6	206
967	Anion charge density disturbance induces in-plane instabilities within 2D lateral heterojunction of TMD: An atomic view. <i>Nano Energy</i> , 2020, 70, 104484.	8.2	6
968	Stochastic Stress Jumps Due to Soliton Dynamics in Two-Dimensional van der Waals Interfaces. <i>Nano Letters</i> , 2020, 20, 1201-1207.	4.5	16
969	Intrinsic piezoelectricity of monolayer group IV-VI MX <sub>2</sub> : SiP <sub>2</sub> , SiAs <sub>2</sub> , GeP <sub>2</sub> , and GeAs <sub>2</sub> . <i>Applied Physics Letters</i> , 2020, 116, .	1.5	30
970	Piezopotential augmented photo- and photoelectro-catalysis with a built-in electric field. <i>Chinese Journal of Catalysis</i> , 2020, 41, 534-549.	6.9	75
971	Transition metal dichalcogenides-based flexible gas sensors. <i>Sensors and Actuators A: Physical</i> , 2020, 303, 111875.	2.0	125
972	Strong Light-Matter Interactions Enabled by Polaritons in Atomically Thin Materials. <i>Advanced Optical Materials</i> , 2020, 8, 1901473.	3.6	56
973	Direct-current flexible piezoelectric nanogenerators based on two-dimensional ZnO nanosheet. <i>Applied Surface Science</i> , 2020, 509, 145328.	3.1	38
974	Piezoelectricity in Multilayer Black Phosphorus for Piezotronics and Nanogenerators. <i>Advanced Materials</i> , 2020, 32, e1905795.	11.1	84
975	Monolayer MoS <sub>2</sub> for nanoscale photonics. <i>Nanophotonics</i> , 2020, 9, 1557-1577.	2.9	65
976	Excellent thermoelectric performance in weak-coupling molecular junctions with electrode doping and electrochemical gating. <i>Science China: Physics, Mechanics and Astronomy</i> , 2020, 63, 1.	2.0	51
977	Impact of transverse and vertical gate electric field on vibrational and electronic properties of MoS <sub>2</sub> . <i>Journal of Applied Physics</i> , 2020, 127, .	1.1	3
978	Two-Dimensional Metals for Piezoelectriclike Devices Based on Berry-Curvature Dipole. <i>Physical Review Applied</i> , 2020, 13, .	1.5	22
979	Monolayer MoS <sub>2</sub> Transferred on Arbitrary Substrates for Potential Use in Flexible Electronics. <i>ACS Applied Nano Materials</i> , 2020, 3, 4445-4453.	2.4	31
980	Recent advances in emerging Janus two-dimensional materials: from fundamental physics to device applications. <i>Journal of Materials Chemistry A</i> , 2020, 8, 8813-8830.	5.2	185
981	Strong Anisotropy and Piezoelectric Phototronic Effect in SnO <sub>2</sub> Microwires. <i>Advanced Electronic Materials</i> , 2020, 6, 1901441.	2.6	15
982	Two-Dimensional Tellurium: Progress, Challenges, and Prospects. <i>Nano-Micro Letters</i> , 2020, 12, 99.	14.4	139
983	Large-area 2D TMD layers for mechanically reconfigurable electronic devices. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 313002.	1.3	22

#	ARTICLE	IF	CITATIONS
984	Metal-chalcogen bond-length induced electronic phase transition from semiconductor to topological semimetal in $ZrX_2$ ( $Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 732 Td$ )	1.1	34
985	Covalent and noncovalent films made up of sulfonimide-based dendrimers. Applied Surface Science, 2021, 535, 146345.	3.1	2
986	Edge-enriched MoS <sub>2</sub> @C/rGO film as self-standing anodes for high-capacity and long-life lithium-ion batteries. Science China Materials, 2021, 64, 96-104.	3.5	30
987	Piezoelectric boron nitride nanosheets for high performance energy harvesting devices. Nano Energy, 2021, 80, 105561.	8.2	49
988	Enhancing the electroactive phases in freestanding flexible films of $MoS_2$ / $PVDF$ . Polymer Crystallization, 2021, 4, e10164.	0.5	6
989	Visualizing Piezoelectricity on 2D Crystals Nanobubbles. Advanced Functional Materials, 2021, 31, 2005053.	7.8	23
990	Two-dimensional materials for light emitting applications: Achievement, challenge and future perspectives. Nano Research, 2021, 14, 1912-1936.	5.8	34
991	Functional Fibers and Fabrics for Soft Robotics, Wearables, and Human-Robot Interface. Advanced Materials, 2021, 33, e2002640.	11.1	278
992	Diversiform sensors and sensing systems driven by triboelectric and piezoelectric nanogenerators. Coordination Chemistry Reviews, 2021, 427, 213597.	9.5	114
993	Reaction mechanism transformation of LPCVD-grown MoS <sub>2</sub> from isolated triangular grains to continuous films. Journal of Alloys and Compounds, 2021, 853, 157374.	2.8	9
994	Intermediate layer for enhanced triboelectric nanogenerator. Nano Energy, 2021, 79, 105439.	8.2	70
995	Selective patterning of out-of-plane piezoelectricity in MoTe <sub>2</sub> via focused ion beam. Nano Energy, 2021, 79, 105451.	8.2	17
996	Building Functional Memories and Logic Circuits with 2D Boron Nitride. Advanced Functional Materials, 2021, 31, 2004733.	7.8	22
997	Paramagnetic properties of manganese chelated on glutathione-exfoliated MoS <sub>2</sub> . Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 608, 125432.	2.3	2
998	In-situ TEM investigation of MoS <sub>2</sub> wrinkles and its effects on electrical properties. Materials Chemistry and Physics, 2021, 257, 123797.	2.0	5
999	Switchable, Tunable, and Directable Exciton Funneling in Periodically Wrinkled WS <sub>2</sub> . Nano Letters, 2021, 21, 43-50.	4.5	49
1000	Electronic and optical properties of graphene/molybdenite bilayer composite. Composite Structures, 2021, 255, 112978.	3.1	12
1001	Piezo-response in two-dimensional $\pm$ -Tellurene films. Materials Today, 2021, 44, 40-47.	8.3	9



#	ARTICLE	IF	CITATIONS
1002	Improving dielectric properties of poly(arylene ether nitrile) composites by employing core-shell structured BaTiO <sub>3</sub> @polydopamine and MoS <sub>2</sub> @polydopamine interlinked with poly(ethylene imine) for high-temperature applications. Journal of Alloys and Compounds, 2021, 856, 158213.	2.8	20
1003	Piezotronic and piezo-phototronic effects of atomically-thin ZnO nanosheets. Nano Energy, 2021, 82, 105653.	8.2	32
1004	Improving the gas sensing performance of MoS <sub>2</sub> nanosheets through silver adsorption: A theoretical study. Computational and Theoretical Chemistry, 2021, 1195, 113087.	1.1	6
1005	Fast MoS <sub>2</sub> thickness identification by transmission imaging. Applied Nanoscience (Switzerland), 2021, 11, 605-610.	1.6	7
1006	High Frequency Sonoprocessing: A New Field of Cavitation-Free Acoustic Materials Synthesis, Processing, and Manipulation. Advanced Science, 2021, 8, 2001983.	5.6	37
1007	Layer-Dependent Exciton Modulation Characteristics of 2D MoS <sub>2</sub> Driven by Acoustic Waves. Advanced Optical Materials, 2021, 9, 2001349.	3.6	8
1008	Pulsed Gate Switching of MoS <sub>2</sub> Field-Effect Transistor Based on Flexible Polyimide Substrate for Ultrasonic Detectors. Advanced Functional Materials, 2021, 31, 2007389.	7.8	18
1009	Biaxial strain enhanced piezoelectric properties in monolayer g- $\text{C}_3\text{N}_4$ . Journal of Physics and Chemistry of Solids, 2021, 151, 109896.	1.9	17
1010	A self-powered 2D-material sensor unit driven by a SnSe piezoelectric nanogenerator. Journal of Materials Chemistry A, 2021, 9, 4716-4723.	5.2	45
1011	Advanced Applications of Emerging 2D Nanomaterials in Construction Materials. Lecture Notes in Civil Engineering, 2021, , 247-256.	0.3	0
1012	Built-in piezoelectric field improved photocatalytic performance of nanoflower-like Bi <sub>2</sub> WO <sub>6</sub> using low-power white LEDs. Chinese Chemical Letters, 2021, 32, 2317-2321.	4.8	53
1013	Recent advances in anisotropic two-dimensional materials and device applications. Nano Research, 2021, 14, 897-919.	5.8	69
1014	A comprehensive review of powering methods used in state-of-the-art miniaturized implantable electronic devices. Biosensors and Bioelectronics, 2021, 172, 112781.	5.3	69
1015	High-performance nanogenerators based on flexible cellulose nanofibril/MoS <sub>2</sub> nanosheet composite piezoelectric films for energy harvesting. Nano Energy, 2021, 80, 105541.	8.2	100
1016	Patchable and Implantable 2D Nanogenerator. Small, 2021, 17, e1903519.	5.2	30
1017	Sheet Resistance Reduction of MoS <sub>2</sub> Film Using Sputtering and Chlorine Plasma Treatment Followed by Sulfur Vapor Annealing. IEEE Journal of the Electron Devices Society, 2021, 9, 278-285.	1.2	10
1018	A review of strain sensors based on two-dimensional molybdenum disulfide. Journal of Materials Chemistry C, 2021, 9, 9083-9101.	2.7	23
1019	High-performance carbon nanotube electronic ratchets. Energy and Environmental Science, 2021, 14, 5457-5468.	15.6	8

#	ARTICLE	IF	CITATIONS
1020	Generating large out-of-plane piezoelectric properties of atomically thin MoS <sub>2</sub> via defect engineering. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 23945-23952.	1.3	2
1021	Two-Dimensional and Subnanometer-Thin Quasi-Copper-Sulfide Semiconductor Formed upon Copper-Copper Bonding. <i>ACS Nano</i> , 2021, 15, 873-883.	7.3	12
1022	Metastable piezoelectric group-IV monochalcogenide monolayers with a buckled honeycomb structure. <i>Physical Review B</i> , 2021, 103, .	1.1	23
1023	Improved anisotropy and piezoelectricity by applying in-plane deformation in monolayer WS <sub>2</sub> . <i>Journal of Materials Chemistry C</i> , 2021, 9, 1396-1400.	2.7	8
1024	High electron transfer of TiO <sub>2</sub> nanorod@carbon layer supported flower-like WS <sub>2</sub> nanosheets for triiodide electrocatalytic reduction. <i>New Journal of Chemistry</i> , 2021, 45, 3387-3391.	1.4	1
1025	Entering a Two-Dimensional Materials World. <i>Springer Series in Solid-state Sciences</i> , 2021, , 17-59.	0.3	0
1026	Environmentally hazardous gas sensing ability of MoS <sub>2</sub> -nanotubes: an insight from the electronic structure and transport properties. <i>Nanoscale Advances</i> , 2021, 3, 4528-4535.	2.2	7
1027	Piezoelectric activation of peroxymonosulfate by MoS <sub>2</sub> nanoflowers for the enhanced degradation of aqueous organic pollutants. <i>Environmental Science: Nano</i> , 2021, 8, 784-794.	2.2	57
1028	Emerging Energy Harvesting Technology for Electro/Photo-Catalytic Water Splitting Application. <i>Catalysts</i> , 2021, 11, 142.	1.6	24
1029	Emerging beyond-graphene elemental 2D materials for energy and catalysis applications. <i>Chemical Society Reviews</i> , 2021, 50, 10983-11031.	18.7	170
1030	Temperature Gradient-Dominated Electrical Behaviours in a Piezoelectric PN Junction. <i>Journal of Electronic Materials</i> , 2021, 50, 947-953.	1.0	14
1031	Controlled growth of SnSe/MoS <sub>2</sub> vertical $\pi$ -n heterojunction for optoelectronic applications. <i>Nano Futures</i> , 2021, 5, 015002.	1.0	12
1032	Theoretical investigations of novel Janus Pb <sub>2</sub> SSe monolayer as a potential multifunctional material for piezoelectric, photovoltaic, and thermoelectric applications. <i>Nanoscale</i> , 2021, 13, 15611-15623.	2.8	12
1033	Probing interface strength in nanocomposites and hybrid nanomaterials. , 2021, , 209-240.		1
1034	A piezoelectric quantum spin Hall insulator with Rashba spin splitting in Janus monolayer SrAlGaSe <sub>4</sub> . <i>Journal of Materials Chemistry C</i> , 2021, 9, 7465-7473.	2.7	28
1035	Long-term cyclic use of a sample collector for toilet-based urine analysis. <i>Scientific Reports</i> , 2021, 11, 2170.	1.6	10
1036	Controllable preparation and photoelectric applications of two-dimensional in-plane and van der Waals heterostructures. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2021, 70, 027901-027901.	0.2	5
1037	Enhanced out-of-plane electromechanical response of Janus ZrSeO. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 16289-16295.	1.3	9

#	ARTICLE	IF	CITATIONS
1038	Ultrasound Mediates Discharging of Hexagonal Boron Nitride Nanoflakes in Liquid Conditions. SSRN Electronic Journal, 0, , .	0.4	0
1039	Piezoelectricity of Graphene-like Monolayer ZnO and GaN. Wuji Cailiao Xuebao/Journal of Inorganic Materials, 2021, 36, 492.	0.6	2
1040	Influence of the choice of precursors on the synthesis of two-dimensional transition metal dichalcogenides. Dalton Transactions, 2021, 50, 12365-12385.	1.6	20
1041	Oxidation and Degradation of WS <sub>2</sub> Monolayers Grown by NaCl-Assisted Chemical Vapor Deposition: Mechanism and Prevention. Nanoscale, 2021, 13, 16629-16640.	2.8	7
1042	Simultaneous sulfidation of Mo and Co oxides supported on Au(111). Physical Chemistry Chemical Physics, 2021, 23, 8403-8412.	1.3	4
1043	First-principles discovery of stable two-dimensional materials with high-level piezoelectric response. Journal of Physics Condensed Matter, 2021, 33, 115705.	0.7	5
1044	Advances in ultrasensitive piezoresistive sensors: from conventional to flexible and stretchable applications. Materials Horizons, 2021, 8, 2123-2150.	6.4	61
1045	State-of-the-art surface oxide semiconductors of liquid metals: an emerging platform for development of multifunctional two-dimensional materials. Journal of Materials Chemistry A, 2021, 9, 34-73.	5.2	26
1046	Electrospinning of Flexible Poly(vinyl alcohol)/MXene Nanofiber-Based Humidity Sensor Self-Powered by Monolayer Molybdenum Diselenide Piezoelectric Nanogenerator. Nano-Micro Letters, 2021, 13, 57.	14.4	224
1047	A Flexible Pressure Sensor Based on Magnetron Sputtered MoS <sub>2</sub> . Sensors, 2021, 21, 1130.	2.1	19
1048	Statistical Piezotronic Effect in Nanocrystal Bulk by Anisotropic Geometry Control. Advanced Functional Materials, 2021, 31, 2010339.	7.8	4
1049	Experimental nanomechanics of 2D materials for strain engineering. Applied Nanoscience (Switzerland), 2021, 11, 1075-1091.	1.6	20
1050	Engineering symmetry breaking in 2D layered materials. Nature Reviews Physics, 2021, 3, 193-206.	11.9	135
1051	Lateral photovoltaic effect based on novel materials and external modulations. Journal Physics D: Applied Physics, 2021, 54, 153003.	1.3	11
1052	Anisotropic correlation between the piezoelectricity and anion-polarizability difference in 2D phosphorene-type ternary GaXY (X=Se, Te; Y=F, Cl, Br, I) monolayers. Journal of Materials Science, 2021, 56, 8024-8036.	1.2	1
1053	Strain-Modulated Photoelectric Responses from a Flexible In <sub>2</sub> Se <sub>3</sub> /3R MoS <sub>2</sub> Heterojunction. Nano-Micro Letters, 2021, 13, 74.	14.4	31
1054	Giant Photoluminescence Enhancement and Resonant Charge Transfer in Atomically Thin Two-Dimensional Cr <sub>2</sub> Ge <sub>2</sub> Te <sub>6</sub> /WS <sub>2</sub> Heterostructures. ACS Applied Materials & Interfaces, 2021, 13, 7423-7433.	4.0	19
1055	The strain-generated electrical potential in cartilaginous tissues: a role for piezoelectricity. Biophysical Reviews, 2021, 13, 91-100.	1.5	13



#	ARTICLE	IF	CITATIONS
1074	Piezoelectricity of Janus Sb <sub>2</sub> Se <sub>2</sub> Te monolayers: A first-principles study. Journal of Applied Physics, 2021, 129, .	1.1	26
1075	Twistronics: a turning point in 2D quantum materials. Electronic Structure, 2021, 3, 014004.	1.0	40
1076	1D chain structure in 1Tâ€²-phase 2D transition metal dichalcogenides and their anisotropic electronic structures. Applied Physics Reviews, 2021, 8, .	5.5	9
1077	Tipâ€²induced Nanoâ€²Engineering of Strain, Bandgap, and Exciton Funneling in 2D Semiconductors. Advanced Materials, 2021, 33, e2008234.	11.1	44
1078	Nanoscale Bilayer Mechanical Lithography Using Water as Developer. Nano Letters, 2021, 21, 3827-3834.	4.5	2
1079	Preferential hole defect formation in monolayer WSe <sub>2</sub> by electron-beam irradiation. Physical Review Materials, 2021, 5, .	0.9	4
1080	A computational study of MoS <sub>2</sub> for band gap engineering by substitutional doping of TMN (T = transition metal (Cu), M = Metalloid (B) and N = non-metal (C)). Materials Research Express, 2021, 8, 046301.	0.8	6
1081	Giant Piezoelectricity of Janus Mâ€²SeX (M = Ge, Sn; X = S, Te) Monolayers. IEEE Electron Device Letters, 2021, 42, 561-564.	2.2	25
1082	Synthesis of Highâ€²Performance Monolayer Molybdenum Disulfide at Low Temperature. Small Methods, 2021, 5, e2000720.	4.6	27
1083	Advances in piezotronic transistors and piezotronics. Nano Today, 2021, 37, 101108.	6.2	48
1084	Giant gauge factor of Van der Waals material based strain sensors. Nature Communications, 2021, 12, 2018.	5.8	62
1085	High Performance Generation of H <sub>2</sub> O <sub>2</sub> under Piezophototronic Effect with Multiâ€²Layer In <sub>2</sub> S <sub>3</sub> Nanosheets Modified by Spherical ZnS and BaTiO <sub>3</sub> Nanopiezoelectrics. Small Methods, 2021, 5, e2100269.	4.6	34
1086	A Fully Self-Healing Piezoelectric Nanogenerator for Self-Powered Pressure Sensing Electronic Skin. Research, 2021, 2021, 9793458.	2.8	19
1087	Correlation Between Corrugation-Induced Flexoelectric Polarization and Conductivity of Low-Dimensional Transition Metal Dichalcogenides. Physical Review Applied, 2021, 15, .	1.5	12
1088	Piezoelectric tunability and topological insulator transition in a GaN/InN/GaN quantum-well device. JPhys Materials, 2021, 4, 034008.	1.8	1
1089	A Flexible Piezoelectric Energy Harvester-Based Single-Layer WS <sub>2</sub> Nanometer 2D Material for Self-Powered Sensors. Energies, 2021, 14, 2097.	1.6	11
1090	Maximum piezoelectricity in a few unit-cell thick planar ZnO â€² A liquid metal-based synthesis approach. Materials Today, 2021, 44, 69-77.	8.3	44
1091	Dualâ€²Responsive Soft Actuators with Integrated Sensing Function Based on 1Tâ€²MoS <sub>2</sub> Composite. Advanced Intelligent Systems, 2021, 3, 2000240.	3.3	15

#	ARTICLE	IF	CITATIONS
1092	Recent trends and emerging challenges in two-dimensional materials for energy harvesting and storage applications. <i>Energy Storage</i> , 2022, 4, e244.	2.3	15
1093	Construction of Bio-Piezoelectric Platforms: From Structures and Synthesis to Applications. <i>Advanced Materials</i> , 2021, 33, e2008452.	11.1	114
1094	Dynamical characteristics of the piezotronic ZnO nanowire device in ballistic transport and its MEMS/NEMS resonator hybrid. <i>Journal of Applied Physics</i> , 2021, 129, 194501.	1.1	2
1095	2D Materials as Effective Cantilever Piezoelectric Nano Energy Harvesters. <i>ACS Energy Letters</i> , 2021, 6, 2313-2319.	8.8	20
1096	Recent advances in graphene and other 2D materials. <i>Nano Materials Science</i> , 2022, 4, 3-9.	3.9	97
1097	Few-Layer MoS <sub>2</sub> Nanosheet/Carbon Nanotube Composite Films for Long-Lifetime Lithium Storage and Hydrogen Generation. <i>ACS Applied Nano Materials</i> , 2021, 4, 4754-4762.	2.4	13
1098	Enhanced Piezoelectric Output Performance of the SnS <sub>2</sub> /SnS Heterostructure Thin-Film Piezoelectric Nanogenerator Realized by Atomic Layer Deposition. <i>ACS Nano</i> , 2021, 15, 10428-10436.	7.3	28
1099	Effects of p-type (Ag, Cu) dopant on the electronic, optical and photocatalytic properties of MoS <sub>2</sub> , and impact on Au/Mo <sub>100-x-y</sub> Ag <sub>x</sub> Cu <sub>y</sub> S <sub>2</sub> performance. <i>Journal of Alloys and Compounds</i> , 2021, 863, 158366.	2.8	14
1100	Anomalous layer-dependent electronic and piezoelectric properties of 2D GaInS <sub>3</sub> nanosheets. <i>Applied Physics Letters</i> , 2021, 118, .	1.5	29
1101	Adsorption of CO <sub>2</sub> and CH <sub>4</sub> molecules on the Pd-decorated C <sub>3</sub> N based sensors: A first-principles study. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2021, 129, 114622.	1.3	13
1102	Enhancing Electrical Outputs of Piezoelectric Nanogenerators by Controlling the Dielectric Constant of ZnO/PDMS Composite. <i>Micromachines</i> , 2021, 12, 630.	1.4	9
1103	Piezophototronic Effect in Nanosensors. <i>Small Science</i> , 2021, 1, 2000060.	5.8	28
1104	Using MoS <sub>2</sub> Nanomaterials to Generate or Remove Reactive Oxygen Species: A Review. <i>ACS Applied Nano Materials</i> , 2021, 4, 7523-7537.	2.4	37
1105	Temperature dependence of the piezotronic effect in CdS nanospheres. <i>Nano Energy</i> , 2021, 84, 105923.	8.2	14
1106	Meritorious spatially on hierarchically Co <sub>3</sub> O <sub>4</sub> /MoS <sub>2</sub> phase nanocomposite synergistically a high-efficient electrocatalyst for hydrogen evolution reaction performance: Recent advances & future perspectives. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 22707-22718.	3.8	24
1107	Unfolding photophysical properties of poly(3-hexylthiophene)-MoS <sub>2</sub> organic-inorganic hybrid materials: an application to self-powered photodetectors. <i>Nanotechnology</i> , 2021, 32, 385201.	1.3	10
1108	Ultralong lifetime for fully photogenerated spin-polarized current in two-dimensional ferromagnetic/nonmagnetic semiconductor heterostructures. <i>Physical Review B</i> , 2021, 103, .	1.1	14
1109	Understanding the Role of 2D Nature on the Junction Properties in WS <sub>2</sub> Layers; Effect of AFM Tip Induced Loading Force on Spatially Varying Contact. <i>Surfaces and Interfaces</i> , 2021, 24, 101131.	1.5	1

#	ARTICLE	IF	CITATIONS
1110	Effective Piezo-Phototronic Enhancement of Flexible Photodetectors Based on 2D Hybrid Perovskite Ferroelectric Single-Crystalline Thin Films. <i>Advanced Materials</i> , 2021, 33, e2101263.	11.1	53
1111	Flexible nanogenerators for wearable electronic applications based on piezoelectric materials. <i>Materials Today Energy</i> , 2021, 20, 100690.	2.5	70
1112	Piezoelectric Nanogenerators Derived Self-Powered Sensors for Multifunctional Applications and Artificial Intelligence. <i>Advanced Functional Materials</i> , 2021, 31, 2102983.	7.8	163
1113	Intrinsic piezoelectric ferromagnetism with large out-of-plane piezoelectric response in Janus monolayer CrBr <sub>1.5</sub> I <sub>1.5</sub> . <i>Journal of Applied Physics</i> , 2021, 129, .	1.1	17
1114	Flexoelectricity enhanced water splitting and hydrogen evolution reaction on grain boundaries of monolayer transition metal dichalcogenides. <i>Nano Research</i> , 2022, 15, 978-984.	5.8	15
1115	Electroactive Biomaterials and Systems for Cell Fate Determination and Tissue Regeneration: Design and Applications. <i>Advanced Materials</i> , 2021, 33, e2007429.	11.1	153
1116	Recent Advances in Transition Metal Dichalcogenide Cathode Materials for Aqueous Rechargeable Multivalent Metal-Ion Batteries. <i>Nanomaterials</i> , 2021, 11, 1517.	1.9	27
1117	Flexoelectricity and transport properties of phosphorene nanoribbons under mechanical bending. <i>Physical Review B</i> , 2021, 103, .	1.1	13
1118	Geometric, electronic, and optical properties of MoS <sub>2</sub> /WSSe van der Waals heterojunctions: a first-principles study. <i>Nanotechnology</i> , 2021, 32, 355705.	1.3	4
1119	Strain-tuning of the electronic, optical, and vibrational properties of two-dimensional crystals. <i>Applied Physics Reviews</i> , 2021, 8, .	5.5	67
1120	Enhanced piezoelectric effect in MoS <sub>2</sub> and surface-engineered GaN bilayer. <i>Journal of Applied Physics</i> , 2021, 130, 015113.	1.1	2
1121	Effect of copper concentration and sulfur vacancies on electronic properties of MoS <sub>2</sub> monolayer: a computational study. <i>Journal of Molecular Modeling</i> , 2021, 27, 213.	0.8	10
1122	The influence of piezoelectric effect on the heterogeneous photocatalytic hydrogen production of strontium titanate nanoparticles. <i>Nano Energy</i> , 2021, 85, 105949.	8.2	52
1123	Flexoelectric effect in boron nitride-graphene heterostructures. <i>Acta Mechanica</i> , 2021, 232, 3781-3800.	1.1	17
1124	Fabrication of PVDF-based piezocatalytic active membrane with enhanced oxytetracycline degradation efficiency through embedding few-layer E-MoS <sub>2</sub> nanosheets. <i>Chemical Engineering Journal</i> , 2021, 415, 129000.	6.6	78
1125	Coexistence of large out-of-plane and in-plane piezoelectricity in 2D monolayer Li-based ternary chalcogenides LiMX <sub>2</sub> . <i>Results in Physics</i> , 2021, 26, 104398.	2.0	14
1126	Thermal Conductivity of Few-Layer PtS <sub>2</sub> and PtSe <sub>2</sub> Obtained from Optothermal Raman Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2021, 125, 16129-16135.	1.5	22
1127	Strongly enhanced electromechanical coupling in atomically thin transition metal dichalcogenides. <i>Materials Today</i> , 2021, 47, 69-74.	8.3	7

#	ARTICLE	IF	CITATIONS
1128	3R-MoS <sub>2</sub> in Review: History, Status, and Outlook. ACS Applied Energy Materials, 2021, 4, 7405-7418.	2.5	39
1129	1,2,4-Azadiphosphole-based piezoelectric penta-CNP sheet with high spontaneous polarization. Applied Surface Science, 2021, 554, 149499.	3.1	21
1130	Piezo-Phototronic Effect in 2D In <sub>2</sub> Se <sub>3</sub> /WSe <sub>2</sub> van der Waals Heterostructure for Photodetector with Enhanced Photoresponse. Advanced Optical Materials, 2021, 9, 2100864.	3.6	37
1131	Ultra-thin ferroelectrics. Materials Science and Engineering Reports, 2021, 145, 100622.	14.8	41
1132	Strain of 2D materials via substrate engineering. Chinese Chemical Letters, 2022, 33, 153-162.	4.8	13
1133	Ultrahigh degradation efficiency of AB type in-plane reverse polarization WS <sub>2</sub> nano sheets in dark by piezo-catalyst effect. Applied Surface Science, 2021, 553, 149557.	3.1	13
1134	Piezotronics in two-dimensional materials. Informa Mater, 2021, 3, 987-1007.	8.5	54
1135	2D Layered Dipeptide Crystals for Piezoelectric Applications. Advanced Functional Materials, 2021, 31, 2102524.	7.8	21
1136	Large in-plane piezoelectricity of Janus Bi <sub>2</sub> X <sub>2</sub> Y (X = As, Se, Te; Y = As, Se, Te; X ≠ Y) monolayers with polyatomic thickness. Materials Letters, 2021, 296, 129878.	1.3	5
1137	WS <sub>2</sub> Monolayer for Piezo-Phototronic Dye Degradation and Bacterial Disinfection. ACS Applied Nano Materials, 2021, 4, 7879-7887.	2.4	34
1138	Exploration of 2D Ti <sub>3</sub> C <sub>2</sub> MXene for all solution processed piezoelectric nanogenerator applications. Scientific Reports, 2021, 11, 17432.	1.6	14
1139	Nonlinear exciton drift in piezoelectric two-dimensional materials. Physical Review B, 2021, 104, .	1.1	7
1140	Superior transverse piezoelectricity in organic-inorganic hybrid perovskite nanorods for mechanical energy harvesting. Nano Energy, 2021, 86, 106039.	8.2	35
1141	Smart Materials Enabled with Artificial Intelligence for Healthcare Wearables. Advanced Functional Materials, 2021, 31, 2105482.	7.8	56
1142	2D Metallic Transition-Metal Dichalcogenides: Structures, Synthesis, Properties, and Applications. Advanced Functional Materials, 2021, 31, 2105132.	7.8	111
1143	Flexible Piezoelectricity of Two-Dimensional Materials Governed by Effective Berry Curvature. Journal of Physical Chemistry Letters, 2021, 12, 8220-8228.	2.1	3
1144	Optical and tuning electronic properties of GeC/MoS <sub>2</sub> van der Waals heterostructures by electric field and strain: A first-principles study. Superlattices and Microstructures, 2021, 156, 106935.	1.4	9
1145	Tuning bandstructure of folded MoS <sub>2</sub> through fluid dynamics. Nano Research, 2022, 15, 2734-2740.	5.8	7



#	ARTICLE	IF	CITATIONS
1146	Bifunctional interfacial engineering for piezo-phototronic enhanced photovoltaic performance of wearable perovskite solar cells. <i>Nano Energy</i> , 2021, 86, 106127.	8.2	19
1147	Hybrid double-network hydrogel for highly stretchable, excellent sensitive, stabilized, and transparent strain sensors. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2021, 32, 1548-1563.	1.9	8
1148	Recent Progress on the Scanning Tunneling Microscopy and Spectroscopy Study of Semiconductor Heterojunctions. <i>Small</i> , 2021, , 2100655.	5.2	8
1149	Enhanced out-of-plane piezoelectric effect in $\ln_{2x}/\text{transition metal dichalcogenide}$ heterostructures. <i>Physical Review B</i> , 2021, 104, .		
1150	Stimuli responsive lanthanide ions doped layered piezophotonic microcrystals for optical multifunctional sensing applications. <i>Nano Energy</i> , 2021, 87, 106177.	8.2	44
1151	Stimulated piezotronic decontamination using $\text{Cu}_2\text{MgSnS}_4$ modified $\text{BaTiO}_3$ . <i>Materials Today Energy</i> , 2021, 21, 100717.	2.5	11
1152	Surface morphology-modulated electrical conductivity behavior in 2D anisotropic exfoliated nanoribbons. <i>2D Materials</i> , 2021, 8, 045025.	2.0	4
1153	Geometric structure and piezoelectric polarization of $\text{MoS}_2$ nanoribbons under uniaxial strain. <i>FlatChem</i> , 2021, 29, 100289.	2.8	1
1154	High-Performance Piezo-Electrocatalytic Sensing of Ascorbic Acid with Nanostructured Wurtzite Zinc Oxide. <i>Advanced Materials</i> , 2021, 33, e2105697.	11.1	38
1155	Strain-dependent resistance and giant gauge factor in monolayer $\text{WSe}_2$ . <i>Chinese Physics B</i> , 2021, 30, 097203.	0.7	4
1156	Recent progress of flexible electronics by 2D transition metal dichalcogenides. <i>Nano Research</i> , 2022, 15, 2413-2432.	5.8	58
1157	Self-powered skin electronics for energy harvesting and healthcare monitoring. <i>Materials Today Energy</i> , 2021, 21, 100786.	2.5	36
1158	Near-field optical imaging and spectroscopy of 2D-TMDs. <i>Nanophotonics</i> , 2021, 10, 3397-3415.	2.9	19
1159	Flexible Piezoelectric $\text{MoS}_2/\text{P}(\text{VDF-TrFE})$ Nanocomposite Film for Vibration Energy Harvesting. <i>Journal of Electronic Materials</i> , 2021, 50, 6870-6880.	1.0	5
1160	Piezophototronic Effect Enhanced Perovskite Solar Cell Based on $\text{P}(\text{VDF-TrFE})$ . <i>Solar Rrl</i> , 2021, 5, 2100692.	3.1	8
1161	Coexistence of intrinsic piezoelectricity, ferromagnetism, and nontrivial band topology in Li-decorated Janus monolayer $\text{Fe}_2\text{SSe}$ with a high Curie temperature. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 505006.	1.3	8
1162	Strong tribo-piezoelectric effect in bilayer indium nitride ( $\text{InN}$ ). <i>Scientific Reports</i> , 2021, 11, 18669.	1.6	15
1163	Recent progress in the synthesis of novel two-dimensional van der Waals materials. <i>National Science Review</i> , 2022, 9, nwab164.	4.6	50

#	ARTICLE	IF	CITATIONS
1164	Tuning the electronic and optical properties of two-dimensional AgBiP <sub>2</sub> Se <sub>6</sub> and AgInP <sub>2</sub> Se <sub>6</sub> Janus monolayers. <i>Chemical Physics Letters</i> , 2021, 780, 138933.	1.2	8
1165	Enhanced electrocatalytic hydrogen evolution performance of 2D few-layer WS <sub>2</sub> nanosheets via piezoelectric effects. <i>Inorganic Chemistry Communication</i> , 2021, 132, 108822.	1.8	5
1166	Directionally tailoring the macroscopic polarization of piezocatalysis for hollow zinc sulfide on dual-doped graphene. <i>Nano Energy</i> , 2021, 88, 106312.	8.2	18
1167	Anisotropy of effective masses induced by strain in Janus MoSSe and WSSe monolayers. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2021, 134, 114826.	1.3	7
1168	MoS <sub>2</sub> -based nanocomposites for cancer diagnosis and therapy. <i>Bioactive Materials</i> , 2021, 6, 4209-4242.	8.6	129
1169	Piezoelectric fiber composites with polydopamine interfacial layer for self-powered wearable biomonitoring. <i>Nano Energy</i> , 2021, 89, 106321.	8.2	151
1170	Piezotronic-enhanced photocatalytic performance of heterostructured BaTiO <sub>3</sub> /SrTiO <sub>3</sub> nanofibers. <i>Nano Energy</i> , 2021, 89, 106391.	8.2	70
1171	Hybrid printing of wearable piezoelectric sensors. <i>Nano Energy</i> , 2021, 90, 106522.	8.2	31
1172	Enhanced piezocatalysis of polymorphic few-layered MoS <sub>2</sub> nanosheets by phase engineering. <i>Nano Energy</i> , 2021, 90, 106527.	8.2	52
1173	Piezoelectricity in monolayer MXene for nanogenerators and piezotronics. <i>Nano Energy</i> , 2021, 90, 106528.	8.2	43
1174	Investigating the role of chalcogen atom in the piezoelectric performance of PVDF/TMDCs based flexible nanogenerator. <i>Energy</i> , 2022, 239, 122125.	4.5	21
1175	A progressive strategy for harvesting mechanical energy using flexible PVDF-rGO-MoS <sub>2</sub> nanocomposites film-based piezoelectric nanogenerator. <i>Journal of Alloys and Compounds</i> , 2022, 890, 161840.	2.8	33
1176	Energy and environmental catalysis driven by stress and temperature-variation. <i>Journal of Materials Chemistry A</i> , 2021, 9, 12400-12432.	5.2	44
1177	Multiscale numerical simulation of in-plane mechanical properties of two-dimensional monolayers. <i>RSC Advances</i> , 2021, 11, 20232-20247.	1.7	8
1178	Intrinsic room-temperature piezoelectric quantum anomalous hall insulator in Janus monolayer Fe <sub>2</sub> X (X = Cl and Br). <i>Nanoscale</i> , 2021, 13, 12956-12965.	2.8	35
1179	Group-IV(A) Janus dichalcogenide monolayers and their interfaces straddle gigantic shear and in-plane piezoelectricity. <i>Nanoscale</i> , 2021, 13, 5460-5478.	2.8	89
1180	Effects of edge and interior stresses on electrical behaviors of piezoelectric semiconductor films. <i>Ferroelectrics</i> , 2021, 571, 96-108.	0.3	8
1181	Highly electroconductive and uniform WS <sub>2</sub> film growth by sulfurization of W film using diethyl sulfide. <i>Materials Chemistry Frontiers</i> , 2021, 5, 3692-3698.	3.2	5

#	ARTICLE	IF	CITATIONS
1182	Resistive tactile sensors. , 2021, , 13-30.		2
1183	Sensing and electrocatalytic activity of tungsten disulphide thin films fabricated via metal-organic chemical vapour deposition. Journal of Materials Chemistry C, 2021, 9, 10254-10265.	2.7	8
1184	Coexistence of intrinsic piezoelectricity and nontrivial band topology in monolayer InXO (X = Se and Tl). Nano Letters, 2021, 21, 10, 4000-4004.	2.7	14
1185	Mechanics of free-standing inorganic and molecular 2D materials. Nanoscale, 2021, 13, 1443-1484.	2.8	28
1186	Spontaneous flexoelectricity and band engineering in MS <sub>2</sub> (M = Mo, W) nanotubes. Physical Chemistry Chemical Physics, 2021, 23, 20574-20582.	1.3	7
1187	Flexo-photoelectronic effect in n-type/p-type two-dimensional semiconductors and a deriving light-stimulated artificial synapse. Materials Horizons, 2021, 8, 1985-1997.	6.4	16
1188	WS <sub>2</sub> Film by Sputtering and Sulfur-Vapor Annealing, and its pMISFET with TiN/HfO <sub>2</sub> Top-Gate Stack, TiN Bottom Contact, and Ultra-Thin Body and Box. IEEE Journal of the Electron Devices Society, 2021, , 1-1.	1.2	3
1189	Large piezoelectric and thermal expansion coefficients with negative Poisson's ratio in strain-modulated tellurene. Nanoscale Advances, 2021, 3, 3279-3287.	2.2	7
1190	Up-scalable emerging energy conversion technologies enabled by 2D materials: from miniature power harvesters towards grid-connected energy systems. Energy and Environmental Science, 2021, 14, 3352-3392.	15.6	26
1191	Predicted intrinsic piezoelectric ferromagnetism in Janus monolayer MnSbBiTe <sub>4</sub> : a first principles study. Physical Chemistry Chemical Physics, 2021, 23, 22443-22450.	1.3	8
1192	Inversion symmetry broken in 2H phase vanadium-doped molybdenum disulfide. Nanoscale, 2021, 13, 18103-18111.	2.8	11
1193	Extraordinary Temperature Dependent Second Harmonic Generation in Atomically Thin Layers of Transition-Metal Dichalcogenides. Advanced Optical Materials, 2020, 8, 2000441.	3.6	30
1194	Electronic and Optoelectronic Applications Based on 2D Novel Anisotropic Transition Metal Dichalcogenides. Advanced Science, 2017, 4, 1700231.	5.6	219
1195	In-Plane Isotropic/Anisotropic 2D van der Waals Heterostructures for Future Devices. Small, 2019, 15, e1804733.	5.2	46
1196	Measurement of the Second-Order Nonlinear Susceptibility and Probing Symmetry Properties of Few-Layer MoS <sub>2</sub> and h-BN by Optical Second-Harmonic Generation. Springer Theses, 2016, , 45-54.	0.0	1
1197	Gas Sensing Using Monolayer MoS <sub>2</sub> . NATO Science for Peace and Security Series A: Chemistry and Biology, 2019, , 71-95.	0.5	1
1198	Electrical energy harvesting from ferritin bisrolled carbon nanotube yarn. Biosensors and Bioelectronics, 2020, 164, 112318.	5.3	19
1199	High performance piezotronic spin transistors using molybdenum disulfide nanoribbon. Nano Energy, 2020, 75, 104953.	8.2	20

#	ARTICLE	IF	CITATIONS
1200	Atomic-Step-Induced Screw-Dislocation-Driven Spiral Growth of SnS. <i>Chemistry of Materials</i> , 2021, 33, 186-194.	3.2	16
1201	Current status and prospects of memristors based on novel 2D materials. <i>Materials Horizons</i> , 2020, 7, 1495-1518.	6.4	101
1202	Defect modification engineering on a laminar MoS <sub>2</sub> film for optimizing thermoelectric properties. <i>Journal of Materials Chemistry C</i> , 2020, 8, 1909-1914.	2.7	20
1203	Coexistence of intrinsic piezoelectricity and ferromagnetism induced by small biaxial strain in septuple-atomic-layer VSi <sub>2</sub> P <sub>4</sub> . <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 28359-28364.	1.3	67
1204	Large piezoelectric coefficients combined with high electron mobilities in Janus monolayer XTeI (X=As, Sb). <i>Tj, ETQq0 0 0, rgBT /Ov</i>	1.1	47
1205	Stacking-dependent interlayer phonons in 3R and 2H MoS <sub>2</sub> . <i>2D Materials</i> , 2019, 6, 025022.	2.0	37
1206	Controlling the electronic bands of a 2D semiconductor by force microscopy. <i>2D Materials</i> , 2020, 7, 045029.	2.0	5
1207	High flexoelectric constants in Janus transition-metal dichalcogenides. <i>Physical Review Materials</i> , 2019, 3, .	0.9	25
1208	Intrinsic piezoelectricity in monolayer MSi <sub>2</sub> N <sub>4</sub> (M=Mo, W, Cr, Ti, Zr and Hf). <i>Europhysics Letters</i> , 2020, 132, 57002.	0.7	69
1209	Second harmonic generation spectroscopy on two-dimensional materials [Invited]. <i>Optical Materials Express</i> , 2019, 9, 1136.	1.6	45
1210	MoS <sub>2</sub> nanosheets direct supported on reduced graphene oxide: An advanced electrocatalyst for hydrogen evolution reaction. <i>PLoS ONE</i> , 2017, 12, e0177258.	1.1	12
1211	2D materials integrated with metallic nanostructures: fundamentals and optoelectronic applications. <i>Nanophotonics</i> , 2020, 9, 1877-1900.	2.9	36
1214	Emerging Devices Based on Two-Dimensional Monolayer Materials for Energy Harvesting. <i>Research</i> , 2019, 2019, 7367828.	2.8	39
1215	2D-Layered Nanomaterials for Energy Harvesting and Sensing Applications. , 0, , .		1
1216	Vapor Deposition Techniques for Synthesis of Two-Dimensional Transition Metal Dichalcogenides. <i>Applied Microscopy</i> , 2015, 45, 119-125.	0.8	7
1217	Regulation of stem cell fate using nanostructure-mediated physical signals. <i>Chemical Society Reviews</i> , 2021, 50, 12828-12872.	18.7	35
1218	Generalization of piezoelectric quantum anomalous Hall insulator based on monolayer Fe <sub>2</sub> I <sub>2</sub> : a first-principles study. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 25994-26003.	1.3	9
1219	High-performance and long-cycle life of triboelectric nanogenerator using PVC/MoS <sub>2</sub> composite membranes for wind energy scavenging application. <i>Nano Energy</i> , 2022, 91, 106649.	8.2	35

#	ARTICLE	IF	CITATIONS
1220	CVD Synthesis of Intermediate State-Free, Large-Area and Continuous MoS <sub>2</sub> via Single-Step Vapor-Phase Sulfurization of MoO <sub>3</sub> Precursor. <i>Nanomaterials</i> , 2021, 11, 2642.	1.9	10
1221	Programmable patterned MoS <sub>2</sub> film by direct laser writing for health-related signals monitoring. <i>IScience</i> , 2021, 24, 103313.	1.9	12
1222	Direct-current generators based on conductive polymers for self-powered flexible devices. <i>Scientific Reports</i> , 2021, 11, 20258.	1.6	3
1223	Piezoelectric effect enhanced photocatalysis in environmental remediation: State-of-the-art techniques and future scenarios. <i>Science of the Total Environment</i> , 2022, 806, 150924.	3.9	47
1224	Stimuli-Responsive Materials from Ferrocene-Based Organic Small Molecule for Wearable Sensors. <i>Small</i> , 2021, 17, e2103125.	5.2	14
1225	Self-powered photoelectrochemical quartz/TiO <sub>2</sub> microsystem through piezopotential sensitized photocatalytic process. <i>Nano Energy</i> , 2022, 91, 106640.	8.2	18
1226	Highly adjustable piezoelectric properties in two-dimensional LiAlTe <sub>2</sub> by strain and stacking. <i>Nanotechnology</i> , 2022, 33, 055702.	1.3	4
1227	Smart Textiles Based on MoS <sub>2</sub> Hollow Nanospheres for Personal Thermal Management. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 48988-48996.	4.0	30
1228	NEMS Sensors Based on Novel Nanomaterials. , 2022, , 133-185.		1
1229	A convenient approach to tuning the local piezopotential of an extensional piezoelectric semiconductor fiber via composite structure design. <i>Nano Energy</i> , 2021, 90, 106626.	8.2	6
1230	Tuning the electronic property of monolayer MoS <sub>2</sub> adsorbed on metal Au substrate: a first-principles study. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2015, 64, 187101.	0.2	1
1231	Nanogenerators for Self-Powered Flexible Electronics and Piezotronics for Active Human-Machine Interfacing. , 0, , .		0
1232	Assessment on The Accuracy of Piezoelectric Property Calculations of Single Layer Two Dimensional Hexagonal Crystals. <i>Anadolu University Journal of Sciences &amp; Technology</i> , 0, , 1-1.	0.2	1
1234	2D-Nanolayered Tungsten and Molybdenum Disulfides: Structure, Properties, Synthesis, and Processing for Strategic Applications. , 2020, , 1-47.		2
1235	Enhancement of Curie Temperature under Built-in Electric Field in Multi-Functional Janus Vanadium Dichalcogenides. <i>Chinese Physics Letters</i> , 2020, 37, 087505.	1.3	1
1236	Self-responsive Nanomaterials for Flexible Supercapacitors. <i>Springer Series in Materials Science</i> , 2020, , 93-138.	0.4	0
1237	Research progress and prospects of photocatalytic devices with perovskite ferroelectric semiconductors. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2020, 69, 127706.	0.2	5
1238	Flexoelectric and Piezoelectric Coupling in a Bended MoS <sub>2</sub> Monolayer. <i>Symmetry</i> , 2021, 13, 2086.	1.1	4

#	ARTICLE	IF	CITATIONS
1239	Defects-assisted piezoelectric response in liquid exfoliated MoS <sub>2</sub> nanosheets. Nanotechnology, 2022, 33, 075710.	1.3	2
1240	Scalably Nanomanufactured Atomically Thin Materials-Based Wearable Health Sensors. Small Structures, 2022, 3, 2100120.	6.9	16
1241	Syntheses of flower and tube-like MoSe <sub>2</sub> nanostructures for ultrafast piezocatalytic degradation of organic dyes on cotton fabrics. Journal of Hazardous Materials, 2022, 424, 127702.	6.5	29
1242	Hetero-architected core-shell NiMoO <sub>4</sub> @Ni <sub>9</sub> S <sub>8</sub> /MoS <sub>2</sub> nanorods enabling high-performance supercapacitors. Journal of Materials Research, 2022, 37, 284-293.	1.2	11
1243	Scratching lithography for wafer-scale MoS <sub>2</sub> monolayers. 2D Materials, 2020, 7, 045028.	2.0	11
1244	Gap opening in graphene nanoribbons by application of simple shear strain and in-plane electric field. Journal of Physics Condensed Matter, 2021, 33, 065503.	0.7	4
1245	Universal water disinfection by piezoelectret aluminium oxide-based electroporation and generation of reactive oxygen species. Nano Energy, 2022, 92, 106749.	8.2	21
1246	Modulation of electronic and thermal properties of TaMoS <sub>2</sub> by controlling the repulsive interaction between Ta dopant atoms. Solid State Communications, 2022, 342, 114590.	0.9	6
1247	Free layer-dependent piezoelectricity of oxygen-doped MoS <sub>2</sub> for the enhanced piezocatalytic hydrogen evolution from pure water. Applied Surface Science, 2022, 576, 151851.	3.1	31
1248	Temperature dependence of the piezotronic and piezophototronic effects in flexible GaN thin films. Nano Energy, 2022, 92, 106779.	8.2	5
1249	A Comparative Investigation of the Mechanical Properties of Single and Bi Layer MoS <sub>2</sub> Structures: Influences of Defect, Strain Rate and Temperature. Sakarya University Journal of Science, 0, , .	0.3	0
1250	Progress in additive manufacturing of MoS <sub>2</sub> -based structures for energy storage applications – A review. Materials Science in Semiconductor Processing, 2022, 139, 106331.	1.9	24
1251	3D-Structured Photodetectors Based on 2D Transition-Metal Dichalcogenide. Small Structures, 2022, 3, .	6.9	12
1252	High piezocatalytic capability in CuS/MoS <sub>2</sub> nanocomposites using mechanical energy for degrading pollutants. Journal of Colloid and Interface Science, 2022, 609, 657-666.	5.0	35
1253	Self-Powered Water Flow-Triggered Piezocatalytic Generation of Reactive Oxygen Species for Water Purification in Simulated Water Drainage. ACS ES&T Engineering, 2022, 2, 101-109.	3.7	40
1254	Giant Nonlinear Response of Monolayer MoS <sub>2</sub> Induced by Optimal Field-Enhancement Gain Mode on the Surface of Hyperbolic Metamaterials. Laser and Photonics Reviews, 2021, 15, .	4.4	15
1255	Second harmonic generation from tetraphenylethylene functionalized graphdiyne. 2D Materials, 2022, 9, 014006.	2.0	2
1256	High-responsivity photodetector based on scrolling monolayer MoS <sub>2</sub> hybridized with carbon quantum dots. Nanotechnology, 2022, 33, 105301.	1.3	10

#	ARTICLE	IF	CITATIONS
1257	Protrudent Iron Single-Atom Accelerated Interfacial Piezoelectric Polarization for Self-Powered Water Motion Triggered Fenton-Like Reaction. <i>Small</i> , 2022, 18, e2105279.	5.2	58
1258	Identification of the position of piezoelectric polarization at the MoS <sub>2</sub> /metal interface. <i>Applied Physics Express</i> , 0, , .	1.1	0
1259	Recent Developments in van der Waals Antiferromagnetic 2D Materials: Synthesis, Characterization, and Device Implementation. <i>ACS Nano</i> , 2021, 15, 17175-17213.	7.3	57
1260	Recent Development of Multifunctional Sensors Based on Low-Dimensional Materials. <i>Sensors</i> , 2021, 21, 7727.	2.1	4
1261	In situ microscopy techniques for characterizing the mechanical properties and deformation behavior of two-dimensional (2D) materials. <i>Materials Today</i> , 2021, 51, 247-272.	8.3	22
1262	Direct and Converse Flexoelectricity in Two-Dimensional Materials. <i>Physical Review Letters</i> , 2021, 127, 216801.	2.9	20
1263	Ten Years Progress of Electrical Detection of Heavy Metal Ions (HMIs) Using Various Field-Effect Transistor (FET) Nanosensors: A Review. <i>Biosensors</i> , 2021, 11, 478.	2.3	21
1264	Opportunities in electrically tunable 2D materials beyond graphene: Recent progress and future outlook. <i>Applied Physics Reviews</i> , 2021, 8, .	5.5	26
1265	Large-scale synthetic Mo@(2H-1T)-MoSe <sub>2</sub> monolithic electrode for efficient hydrogen evolution in all pH scale ranges and seawater. <i>Applied Catalysis B: Environmental</i> , 2022, 304, 120993.	10.8	54
1266	Piezoelectricity of Janus BiTeX (X = Cl, Br, I) Monolayer: A First-Principles Study. <i>IEEE Transactions on Electron Devices</i> , 2021, , 1-5.	1.6	1
1267	Recent Advances in Two-Dimensional Materials-Based Kretschmann Configuration for SPR Sensors: A Review. <i>IEEE Sensors Journal</i> , 2022, 22, 1069-1080.	2.4	47
1268	Mechanical sensors based on two-dimensional materials: Sensing mechanisms, structural designs and wearable applications. <i>IScience</i> , 2022, 25, 103728.	1.9	11
1269	Recent trends in 2D materials and their polymer composites for effectively harnessing mechanical energy. <i>IScience</i> , 2022, 25, 103748.	1.9	19
1270	Ultrathin metallic phase MoS <sub>2</sub> nanosheets decorated hollow carbon spheres for sodium and potassium ions storage. <i>Solid State Ionics</i> , 2022, 375, 115853.	1.3	1
1271	Investigation of mechanical energy harvesting cycles using ferroelectric/ferroelastic switching. <i>Nano Energy</i> , 2022, 93, 106862.	8.2	9
1272	Fabric-rebound triboelectric nanogenerators with loops and layered structures for energy harvesting and intelligent wireless monitoring of human motions. <i>Nano Energy</i> , 2022, 93, 106807.	8.2	28
1273	Model and performance analysis of non-uniform piezoelectric semiconductor nanofibers. <i>Applied Mathematical Modelling</i> , 2022, 104, 628-643.	2.2	10
1274	Piezo-phototronic intersubband terahertz devices based on layer-dependent van der Waals quantum well. <i>Nano Energy</i> , 2022, 94, 106912.	8.2	6

#	ARTICLE	IF	CITATIONS
1275	Current degradation mechanism of tip contact metal-silicon Schottky nanogenerator. Nano Energy, 2022, 94, 106888.	8.2	15
1276	Piezoelectric Disinfection of Water Co-Polluted by Bacteria and Microplastics Energized by Water Flow. ACS ES&T Water, 2022, 2, 367-375.	2.3	21
1277	Recent advances in two-dimensional ferromagnetism: strain-, doping-, structural- and electric field-engineering toward spintronic applications. Science and Technology of Advanced Materials, 2022, 23, 140-160.	2.8	20
1278	Å±Å±Å±Å± ve IsÅ±I Å°Å±lem SÅ±recinin MoS2 Å°nce Filmlerin YapÅ±sal Å±zelliklerine Etkisinin Å°ncelenmesi, Deu Muhendislik Fakultesi Fen Ve Muhendislik, 2022, 24, 81-90.	0.1	0
1279	Coexistence of intrinsic room-temperature ferromagnetism and piezoelectricity in monolayer BiCrX <sub>3</sub> (X = S, Se, and Te). Physical Chemistry Chemical Physics, 2022, 24, 1091-1098.	1.3	10
1280	Oxide-free materials for thermoelectric and piezoelectric applications. , 2022, , 435-450.		0
1281	Piezoelectricity in two-dimensional aluminum, boron and Janus aluminum-boron monochalcogenide monolayers. Journal Physics D: Applied Physics, 2022, 55, 155301.	1.3	5
1282	Boosting Second-Harmonic Generation in Monolayer Rhenium Disulfide by Reversible Laser Patterning. ACS Photonics, 2022, 9, 518-526.	3.2	8
1283	Investigation of emission behaviour of perovskite nanocrystals using nano to microspheres of TiO <sub>2</sub> . New Journal of Chemistry, 2022, 46, 844-850.	1.4	9
1284	Mechanical Stress Modulation of Resistance in MoS <sub>2</sub> Junctions. Nano Letters, 2022, 22, 1047-1052.	4.5	14
1285	Theoretical understanding of electronic and mechanical properties of 1Tâ€² transition metal dichalcogenide crystals. Beilstein Journal of Nanotechnology, 2022, 13, 160-171.	1.5	5
1286	Giant valley splitting in a MoTe <sub>2</sub> /MnSe <sub>2</sub> van der Waals heterostructure with room-temperature ferromagnetism. Materials Advances, 2022, 3, 2927-2933.	2.6	9
1287	High-performance ReS <sub>2</sub> photodetectors enhanced by a ferroelectric field and strain field. RSC Advances, 2022, 12, 4939-4945.	1.7	8
1288	First-principles insights into mechanical, optoelectronic, and thermo-physical properties of transition metal dichalcogenides ZrX <sub>2</sub> (X = S, Se, and Te). AIP Advances, 2022, 12, .	0.6	16
1289	2D Heterostructures for Ubiquitous Electronics and Optoelectronics: Principles, Opportunities, and Challenges. Chemical Reviews, 2022, 122, 6514-6613.	23.0	187
1290	Fabrication of a Microcavity Prepared by Remote Epitaxy over Monolayer Molybdenum Disulfide. ACS Nano, 2022, 16, 2399-2406.	7.3	13
1291	Design of piezoelectric ZnO based catalysts for ammonia production from N <sub>2</sub> and H <sub>2</sub> O under ultrasound sonication. Nano Energy, 2022, 95, 107020.	8.2	22
1292	Toward a New Generation of Fireâ€Safe Energy Storage Devices: Recent Progress on Fireâ€Retardant Materials and Strategies for Energy Storage Devices. Small Methods, 2022, 6, e2101428.	4.6	12



#	ARTICLE	IF	CITATIONS
1293	High efficiently piezocatalysis degradation of tetracycline by few-layered MoS <sub>2</sub> /GDY: Mechanism and toxicity evaluation. Chemical Engineering Journal, 2022, 436, 135173.	6.6	60
1294	Nonlinear Solution of a Piezoelectric PN Junction Under Temperature Gradient. International Journal of Applied Mechanics, 2022, 14, .	1.3	4
1295	Highly sensitive strain sensors based on piezotronic tunneling junction. Nature Communications, 2022, 13, 778.	5.8	58
1296	Deep Elastic Strain Engineering of 2D Materials and Their Twisted Bilayers. ACS Applied Materials & Interfaces, 2022, 14, 8655-8663.	4.0	16
1297	Tuning the electronic, phonon, and optical properties by strain-induced on the monolayer transition metal dichalcogenides ASe <sub>2</sub> (A=Mo and W). Materials Today Communications, 2022, 31, 103240.	0.9	10
1298	Applications of nanogenerators for biomedical engineering and healthcare systems. Informa <sup>Å</sup> ly, 2022, 4, .	8.5	45
1299	Triboelectric Uv Patterning for Wearable One-Terminal Tactile Sensor Array to Perceive Dynamic Contact Motions. SSRN Electronic Journal, 0, , .	0.4	0
1301	Origin of the enhanced edge optical transition in transition metal dichalcogenide flakes. Journal of Materials Chemistry C, 2022, 10, 5303-5310.	2.7	1
1302	Piezoelectric nanogenerators for personalized healthcare. Chemical Society Reviews, 2022, 51, 3380-3435.	18.7	145
1303	Signatures of Bright <sup>Å</sup> To <sup>Å</sup> Dark Exciton Conversion in Corrugated Mos <sub>2</sub> Monolayers. SSRN Electronic Journal, 0, , .	0.4	0
1304	Signal enhancement strategies. , 2022, , 123-168.		0
1305	Recent progress on Schottky sensors based on two-dimensional transition metal dichalcogenides. Journal of Materials Chemistry A, 2022, 10, 8107-8128.	5.2	38
1306	Strain lithography for two-dimensional materials by electron irradiation. Applied Physics Letters, 2022, 120, .	1.5	2
1307	Strong Piezoelectricity in 3R <sup>Å</sup> MoS <sub>2</sub> Flakes. Advanced Electronic Materials, 2022, 8, .	2.6	20
1308	Platinum Disulfide (PtS <sub>2</sub> ) and Silicon Pyramids: Efficient 2D/3D Heterojunction Tunneling and Breakdown Diodes. ACS Applied Electronic Materials, 2022, 4, 917-924.	2.0	12
1309	Indentation of piezoelectric micro- and nanostructures. International Journal of Modern Physics B, 2022, 36, .	1.0	1
1310	Effect of strain-induced polarization field on band structure of MoS <sub>2</sub> nanoribbon. Journal of Physics: Conference Series, 2022, 2230, 012022.	0.3	0
1311	Thermoelectric Conversion From Interface Thermophoresis and Piezoelectric Effects. Frontiers in Physics, 2022, 10, .	1.0	2

#	ARTICLE	IF	CITATIONS
1312	Rational design of high-performance wearable tactile sensors utilizing bioinspired structures/functions, natural biopolymers, and biomimetic strategies. <i>Materials Science and Engineering Reports</i> , 2022, 148, 100672.	14.8	30
1313	2D Materials for Wearable Energy Harvesting. <i>Advanced Materials Technologies</i> , 2022, 7, .	3.0	16
1314	Optimizing Piezoelectric Nanocomposites by High-Throughput Phase-Field Simulation and Machine Learning. <i>Advanced Science</i> , 2022, 9, e2105550.	5.6	42
1315	Lead-free PDMS/PPy based low-cost wearable piezoelectric nanogenerator for self-powered pulse pressure sensor application. <i>Materials Research Bulletin</i> , 2022, 151, 111815.	2.7	18
1316	Van der Waals force-induced intralayer ferroelectric-to-antiferroelectric transition via interlayer sliding in bilayer group-IV monochalcogenides. <i>Npj Computational Materials</i> , 2022, 8, .	3.5	20
1317	Temperature-induced potential barriers in piezoelectric semiconductor films through pyroelectric and thermoelastic couplings and their effects on currents. <i>Journal of Applied Physics</i> , 2022, 131, .	1.1	8
1318	A zinc oxide nanorods/molybdenum disulfide nanosheets hybrid as a sensitive and reusable electrochemical sensor for determination of anti-retroviral agent indinavir. <i>Chemosphere</i> , 2022, 300, 134430.	4.2	21
1319	Roles of MXene in Pressure Sensing: Preparation, Composite Structure Design, and Mechanism. <i>Advanced Materials</i> , 2022, 34, e2110608.	11.1	90
1320	Direct observation of ferroelectricity in two-dimensional MoS <sub>2</sub> . <i>Npj 2D Materials and Applications</i> , 2022, 6, .	3.9	30
1321	Sonophotocatalytic Dye Degradation Using rGO@BiVO <sub>4</sub> Composites. <i>Global Challenges</i> , 2022, 6, .	1.8	16
1322	Enhanced utilization efficiency of peroxymonosulfate via water vortex-driven piezo-activation for removing organic contaminants from water. <i>Environmental Science and Ecotechnology</i> , 2022, 10, 100165.	6.7	49
1323	Effects of electrode materials on solution-processed polyvinylidene fluoride-based piezoelectric nanogenerators: Do they matter?. <i>Solid-State Electronics</i> , 2022, 190, 108252.	0.8	2
1324	Mechanical, Elastic, and Adhesive Properties of Two-Dimensional Materials: From Straining Techniques to State-of-the-Art Local Probe Measurements. <i>Advanced Materials Interfaces</i> , 2022, 9, .	1.9	24
1325	The piezoelectricity of 2D Janus ZnBrI: Multiscale prediction. <i>Chemical Physics Letters</i> , 2022, 794, 139506.	1.2	6
1326	Biodegradable silk fibroin-based bio-piezoelectric/triboelectric nanogenerators as self-powered electronic devices. <i>Nano Energy</i> , 2022, 96, 107101.	8.2	41
1327	Tungsten disulfide nanosheets for piezoelectric nanogenerator and human-machine interface applications. <i>Nano Energy</i> , 2022, 97, 107172.	8.2	15
1328	A love-mode surface acoustic wave aptasensor with dummy fingers based on monolayer MoS <sub>2</sub> /Au NPs nanocomposites for alpha-fetoprotein detection. <i>Talanta</i> , 2022, 243, 123328.	2.9	12
1329	Piezo-phototronic spin laser based on wurtzite quantum wells. <i>Nano Energy</i> , 2022, 96, 107100.	8.2	5

#	ARTICLE	IF	CITATIONS
1330	Piezoelectric potential-enhanced output and nonlinear response range for self-powered sensor on curved surface. <i>Nano Energy</i> , 2022, 96, 107103.	8.2	9
1331	Lattice origin of few-layer edge-on MoS <sub>2</sub> @TiO <sub>2</sub> octahedral clusters for piezoelectric enhancement. <i>Applied Surface Science</i> , 2022, 588, 152942.	3.1	8
1332	Investigation of phase transition and the effect of stress on piezoelectric coefficients in three 2D structures of $\text{In}_2\text{Se}_3$ . <i>Solid State Communications</i> , 2022, 348-349, 114733.	0.9	1
1333	Porous cellulose composite aerogel films with super piezoelectric properties for energy harvesting. <i>Carbohydrate Polymers</i> , 2022, 288, 119407.	5.1	45
1334	Integrated unit-cell-thin MXene and Schottky electric field into piezo-photocatalyst for enhanced photocarrier separation and hydrogen evolution. <i>Chemical Engineering Journal</i> , 2022, 439, 135640.	6.6	25
1335	Piezo-promoted regeneration of Fe <sup>2+</sup> boosts peroxydisulfate activation by Bi <sub>2</sub> Fe <sub>4</sub> O <sub>9</sub> nanosheets. <i>Applied Catalysis B: Environmental</i> , 2022, 310, 121330.	10.8	45
1336	Flexoelectric properties of multilayer two-dimensional material MoS <sub>2</sub> . <i>Journal Physics D: Applied Physics</i> , 2022, 55, 125302.	1.3	10
1337	Recent Development of Flexible Tactile Sensors and Their Applications. <i>Sensors</i> , 2022, 22, 50.	2.1	39
1338	Piezoelectricity in Monolayer and Multilayer Ti <sub>3</sub> C <sub>2</sub> Tx MXenes: Implications for Piezoelectric Devices. <i>ACS Applied Nano Materials</i> , 2022, 5, 1034-1046.	2.4	19
1339	Possible way to achieve anomalous valley Hall effect by piezoelectric effect in a $\text{GdCl}_2$ monolayer. <i>Physical Review B</i> , 2021, 104, .	0.6	1
1340	Fabry-Perot interference and piezo-phototronic effect enhanced flexible MoS <sub>2</sub> photodetector. <i>Nano Research</i> , 2022, 15, 4395-4402.	5.8	19
1341	Optical Harmonic Generation in 2D Materials. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	42
1342	Low-Dimensional In <sub>2</sub> Se <sub>3</sub> Compounds: From Material Preparations to Device Applications. <i>ACS Nano</i> , 2021, 15, 18683-18707.	7.3	48
1343	Skin bioelectronics towards long-term, continuous health monitoring. <i>Chemical Society Reviews</i> , 2022, 51, 3759-3793.	18.7	85
1344	Enhanced charge separation in La <sub>2</sub> NiO <sub>4</sub> nanoplates by coupled piezocatalysis and photocatalysis for efficient H <sub>2</sub> evolution. <i>Nanoscale</i> , 2022, 14, 7083-7095.	2.8	16
1345	Unconventional optical properties of 2D janus SMOSe induced by structural asymmetry. <i>2D Materials</i> , 0, , .	2.0	1
1346	Highly stretchable, durable, and breathable thermoelectric fabrics for human body energy harvesting and sensing. , 2022, 4, 621-632.		74
1347	Changes in the Electrical Conduction of Glass, Quartz, and Au, C, and MoS <sub>2</sub> Films under Continuous Proton Injection. <i>Inorganic Materials: Applied Research</i> , 2022, 13, 466-472.	0.1	0

#	ARTICLE	IF	CITATIONS
1348	High performance quantum piezotronic tunneling transistor based on edge states of MoS <sub>2</sub> nanoribbon. Nano Energy, 2022, 98, 107275.	8.2	10
1350	Nanoampere-Level Piezoelectric Energy Harvesting Performance of Lithography-Free Centimeter-Scale MoS <sub>2</sub> Monolayer Film Generators. Small, 2022, 18, e2200184.	5.2	4
1351	Piezoelectric Potential-Enhanced Output and Nonlinear Response Range for Self-Powered Sensor on Curved Surface. SSRN Electronic Journal, 0, , .	0.4	0
1352	Ti <sub>3</sub> C <sub>2</sub> Mxene with Out-of-Plane Electromechanical Response as Substrate of Molybdenum Disulfide for Enhanced Piezocatalysis. SSRN Electronic Journal, 0, , .	0.4	0
1353	Nanogenerators-Based Self-Powered Sensors. Advanced Materials Technologies, 2022, 7, .	3.0	13
1354	Flexible self-charging power sources. Nature Reviews Materials, 2022, 7, 870-886.	23.3	159
1355	Piezoelectric-Induced Internal Electric Field in Bi <sub>2</sub> WO <sub>6</sub> Nanoplates for Boosting the Photocatalytic Degradation of Organic Pollutants. ACS Applied Nano Materials, 2022, 5, 7588-7597.	2.4	33
1356	Performance Enhancement of Highly Flexible SnS(p)/MoS <sub>2</sub> (n) Heterostructure based Broadband Photodetector by Piezo-phototronic Effect. FlatChem, 2022, 33, 100379.	2.8	9
1357	Tribo-Piezoelectricity in Group III Nitride Bilayers: A Density Functional Theory Investigation. ACS Applied Materials & Interfaces, 2022, 14, 20856-20865.	4.0	7
1358	The era of nano-bionic: 2D materials for wearable and implantable body sensors. Advanced Drug Delivery Reviews, 2022, 186, 114315.	6.6	18
1359	Strong piezoelectric response in layered CuInP <sub>2</sub> S <sub>6</sub> nanosheets for piezoelectric nanogenerators. Nano Energy, 2022, 99, 107371.	8.2	19
1360	Triboelectric UV patterning for wearable one-terminal tactile sensor array to perceive dynamic contact motions. Nano Energy, 2022, 98, 107320.	8.2	15
1361	Strain engineering of anisotropic light-matter interactions in one-dimensional P-P chain of SiP <sub>2</sub> . Nano Research, 2022, 15, 7378-7383.	5.8	6
1362	2D Transition Metal Dichalcogenide with Increased Entropy for Piezoelectric Electronics. Advanced Materials, 2022, 34, e2201630.	11.1	15
1363	Atomic and structural modifications of two-dimensional transition metal dichalcogenides for various advanced applications. Chemical Science, 2022, 13, 7707-7738.	3.7	28
1364	Electromechanical response of stacked h-BN layers: A computational study. Diamond and Related Materials, 2022, , 109126.	1.8	1
1365	Piezoelectric polarization of BiOCl via capturing mechanical energy for catalytic H <sub>2</sub> evolution. Surfaces and Interfaces, 2022, 31, 102056.	1.5	15
1366	Ultrarobust, hierarchically anisotropic structured piezoelectric nanogenerators for self-powered sensing. Nano Energy, 2022, 99, 107379.	8.2	25

#	ARTICLE	IF	CITATIONS
1367	Ballistic Thermal Transport of Janus Monolayer Mosse. SSRN Electronic Journal, 0, , .	0.4	0
1368	Micro/nanoarrays and their applications in flexible sensors: A review. Materials Today Nano, 2022, 19, 100224.	2.3	9
1369	Inhalation-Driven Vertical Flutter Triboelectric Nanogenerator with Amplified Output as a Gas-Mask-Integrated Self-Powered Multifunctional System. Advanced Energy Materials, 2022, 12, .	10.2	9
1370	Intelligent Nanomaterials for Wearable and Stretchable Strain Sensor Applications: The Science behind Diverse Mechanisms, Fabrication Methods, and Real-Time Healthcare. Polymers, 2022, 14, 2219.	2.0	5
1371	Ferroelectricity in untwisted heterobilayers of transition metal dichalcogenides. Science, 2022, 376, 973-978.	6.0	105
1372	The photoluminescence responses of two-dimensional atomic layers of MoS <sub>2</sub> excited by surface acoustic wave device. Modern Physics Letters B, 0, , .	1.0	2
1373	Recent advances in molybdenum disulfide-based advanced oxidation processes. , 2022, , .		3
1374	Rb <sub>2</sub> FeGe <sub>3</sub> S <sub>8</sub> and Cs <sub>2</sub> FeGe <sub>3</sub> S <sub>8</sub> : New layered chalcogenides in A <sub>2</sub> M <sub>II</sub> M <sub>IV</sub> Q <sub>8</sub> family with antiferromagnetic property. Journal of Solid State Chemistry, 2022, 313, 123276.	1.4	2
1375	Ultrahigh sensitivity and ultrafast piezotronic and piezophototronic avalanche devices. Nano Energy, 2022, 100, 107450.	8.2	1
1376	Piezo-Electrocatalysis for CO <sub>2</sub> Reduction Driven by Vibration. Advanced Energy Materials, 2022, 12, .	10.2	55
1377	Quadrupling the stored charge by extending the accessible density of states. Chem, 2022, 8, 2410-2418.	5.8	4
1379	Hydraulic-driven piezoelectric ozonation process for nitrobenzene degradation: synergy, energy consumption, impact factors, mechanism, and application potential. Environmental Science: Water Research and Technology, 2022, 8, 1803-1813.	1.2	1
1380	A penta-BCP sheet with strong piezoelectricity and a record high positive Poisson's ratio. Journal of Materials Chemistry C, 2022, 10, 10302-10309.	2.7	6
1381	Anisotropic Mechanics of 2D Materials. Advanced Engineering Materials, 2022, 24, .	1.6	8
1382	Boosting charge transfers in cadmium sulfide nanorods with a few layered Ni-doped MoS <sub>2</sub> nanosheets for enhanced photocatalytic hydrogen evolution. International Journal of Hydrogen Energy, 2022, 47, 40218-40226.	3.8	11
1383	Mechanical Modulation of 2D Electronic Devices at Atto-Joule Energy via Flexotronic Effect. Advanced Functional Materials, 2022, 32, .	7.8	12
1386	Large out-of-plane piezoelectric response in ferromagnetic monolayer NiCl <sub>2</sub> . Applied Physics Letters, 2022, 120, .	1.5	20
1387	Effects of the aspect ratio on the piezocatalytic performance of self-assembled hierarchical MoS <sub>2</sub> nanotubes for degradation of sulfamethazine. Inorganic Chemistry Communication, 2022, 143, 109605.	1.8	1

#	ARTICLE	IF	CITATIONS
1388	Janus two-dimensional transition metal dichalcogenides. Journal of Applied Physics, 2022, 131, .	1.1	21
1389	Novel sandwich-type electrochemiluminescence aptasensor based on luminol functionalized aptamer as signal probe for kanamycin detection. Bioelectrochemistry, 2022, 147, 108174.	2.4	8
1390	Ti3C2 quantum dots modified on BiOBr surface for sewage disposal: The induction of the piezo-phototronic effect from edge to whole. Applied Surface Science, 2022, 599, 153911.	3.1	13
1391	Pseudo Janus Based on Rhombohedral Homobilayer Transition Metal Dichalcogenides. Journal of Materials Chemistry C, 0, , .	2.7	0
1392	2D materialsâ€™ polymer composites for developing piezoelectric energy-harvesting devices. , 2022, , 99-128.		2
1393	Bifunctional NiFe LDH as a piezoelectric nanogenerator and asymmetric pseudo-supercapacitor. Materials Chemistry Frontiers, 2022, 6, 2297-2308.	3.2	17
1394	Mechanically Induced Highly Efficient Hydrogen Evolution from Water over Piezoelectric SnSe nanosheets. Small, 2022, 18, .	5.2	22
1395	Giant Manipulation of Phonon Hydrodynamics in Ferroelectric Bilayer Boron Nitride at Room Temperature and Beyond. ACS Applied Energy Materials, 2022, 5, 8781-8790.	2.5	4
1396	Two-dimensional ferroelectricity and antiferroelectricity for next-generation computing paradigms. Matter, 2022, 5, 1999-2014.	5.0	3
1397	Enhanced Piezoelectric Properties Enabled by Engineered Low-Dimensional Nanomaterials. ACS Applied Nano Materials, 2022, 5, 12126-12142.	2.4	18
1398	Piezoelectric materials in sensors: Bibliometric and visualization analysis. Materials Today: Proceedings, 2022, 65, 3780-3786.	0.9	4
1399	Local dipole enhancement of space-charge piezophototronic catalysts of core-shell polytetrafluoroethylene@TiO2 nanospheres. Nano Energy, 2022, 102, 107619.	8.2	16
1400	Selectively Strong Coupling of $S$ Excitons to a Metamaterial at Room Temperature. Physical Review Applied, 2022, 18, .	1.5	0
1401	Self-powered and flexible piezo-sensors based on conductivity-controlled GaN nanowire-arrays for mimicking rapid- and slow-adapting mechanoreceptors. Npj Flexible Electronics, 2022, 6, .	5.1	6
1402	Significant variation of structural, electronic, magnetic, and polarized properties induced by strain in armchair MoSTe nanoribbon. Journal of Applied Physics, 2022, 132, 015101.	1.1	0
1403	Photodetectors based on two-dimensional MoS2 and its assembled heterostructures. , 2022, 1, 100017.		25
1404	Signatures of bright-to-dark exciton conversion in corrugated MoS2 monolayers. Applied Surface Science, 2022, 600, 154078.	3.1	4
1405	Systematic investigation of the piezocatalysisâ€™ adsorption duality of polymorphic MoS2 nanoflowers. Applied Catalysis B: Environmental, 2022, 317, 121717.	10.8	35

#	ARTICLE	IF	CITATIONS
1406	2D Materials (WS <sub>2</sub> , MoS <sub>2</sub> , MoSe <sub>2</sub> ) Enhanced Polyacrylamide Gels for Multifunctional Applications. Gels, 2022, 8, 465.	2.1	6
1407	Tuning Positive and Negative Transconductance in Multilayer $\text{MoS}_2$ with Indium Contacts. Physical Review Applied, 2022, 18, .	1.5	1
1408	Tri-MX: New group-IV monochalcogenide monolayers with excellent piezoelectricity and special optical properties. Applied Surface Science, 2022, 602, 154391.	3.1	4
1409	A dual optimization approach for photoreduction of CO <sub>2</sub> to alcohol in g-C <sub>3</sub> N <sub>4</sub> /BaTiO <sub>3</sub> system: Heterojunction construction and ferroelectric polarization. Applied Surface Science, 2022, 602, 154310.	3.1	11
1410	Strain-Engineered Piezotronic Effects in Flexible Monolayer Mos <sub>2</sub> Continuous Thin Films. SSRN Electronic Journal, 0, , .	0.4	0
1411	Harvesting mechanical energy induces piezoelectric polarization of MIL-100(Fe) for cocatalyst-free hydrogen production. Chemical Communications, 2022, 58, 10723-10726.	2.2	20
1413	Fully auxetic and multifunctional of two-dimensional $\text{GeS}$ and $\text{GeSe}$ . Physical Review B, 2022, 106, .	1.1	5
1414	Recent progress in the edge reconstruction of two-dimensional materials. Journal Physics D: Applied Physics, 2022, 55, 414003.	1.3	3
1415	Recent Progress in Strain Engineering on Van der Waals 2D Materials: Tunable Electrical, Electrochemical, Magnetic, and Optical Properties. Advanced Materials, 2023, 35, .	11.1	40
1416	Piezoelectricity across 2D Phase Boundaries. Advanced Materials, 2022, 34, .	11.1	11
1417	Pulsed hydraulic-pressure-responsive self-cleaning membrane. Nature, 2022, 608, 69-73.	13.7	52
1418	Roadmap on bio-derived materials for wearable triboelectric devices. Materials Today Sustainability, 2022, 20, 100219.	1.9	5
1419	Distinct optical and acoustic phonon temperatures in nm-thick suspended WS <sub>2</sub> : Direct differentiating via acoustic phonon thermal field invariant. Materials Today Physics, 2022, 27, 100816.	2.9	2
1420	Integrated Self-Powered Sensors Based on 2D Material Devices. Advanced Functional Materials, 2022, 32, .	7.8	42
1421	Low-Temperature Plasma-Assisted Growth of Large-Area MoS <sub>2</sub> for Transparent Phototransistors. Advanced Functional Materials, 2022, 32, .	7.8	19
1422	Extraordinary Nonlinear Optical Interaction from Strained Nanostructures in van der Waals CuInP <sub>2</sub> S <sub>6</sub> . ACS Nano, 2022, 16, 13959-13968.	7.3	10
1423	Incorporation of ZnO encapsulated MoS <sub>2</sub> to fabricate flexible piezoelectric nanogenerator and sensor. Nano Energy, 2022, 102, 107635.	8.2	28
1424	Effect of flexoelectricity on a bilayer molybdenum disulfide Schottky contact. Nano Energy, 2022, 102, 107701.	8.2	7

#	ARTICLE	IF	CITATIONS
1425	Titanium carbide MXene with out-of-plane electromechanical response as substrate of molybdenum disulfide for enhanced piezocatalysis. <i>Journal of Alloys and Compounds</i> , 2022, 925, 166638.	2.8	3
1426	Strain engineering on the electronic properties and interface contact of graphene/GeN <sub>3</sub> van der Waals heterostructure. <i>Applied Surface Science</i> , 2022, 604, 154540.	3.1	13
1427	Strong Anisotropic Optical Properties by Rolling up MoS <sub>2</sub> Nanoflake. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 8409-8415.	2.1	4
1428	Mesoscopic sliding ferroelectricity enabled photovoltaic random access memory for material-level artificial vision system. <i>Nature Communications</i> , 2022, 13, .	5.8	24
1429	Non-centrosymmetric features in nanostructured MoS <sub>2</sub> and WS <sub>2</sub> exfoliated in liquid phase. <i>Optical Materials</i> , 2022, 133, 112890.	1.7	0
1430	Janus B <sub>2</sub> XY (X, Y=As, Se, Te) monolayers as piezoelectric Materials: A First-Principle study. <i>Chemical Physics Letters</i> , 2022, 806, 140007.	1.2	3
1431	Suppression of extra carriers for enhanced intrinsic piezoelectric properties of ultrathin MoS <sub>2</sub> through various metal dopants. <i>Composites Part B: Engineering</i> , 2022, 246, 110205.	5.9	1
1432	Performance and mechanism on hydrogen evolution of two-dimensional boron nitride under mechanical vibration. <i>Fuel</i> , 2023, 331, 125765.	3.4	6
1433	Research progress of neuromorphic devices based on two-dimensional layered materials. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2022, 71, 218504.	0.2	1
1434	Coexistence of In- and Out-of-Plane Piezoelectricity in Janus Xssin <sub>2</sub> (X=Cr, Mo, W) Monolayers. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
1435	A piezoelectric quantum spin Hall insulator VCClBr monolayer with a pure out-of-plane piezoelectric response. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 19965-19974.	1.3	3
1436	Unusual nanoscale piezoelectricity-driven high current generation from a self S-defect-neutralised few-layered MoS <sub>2</sub> nanosheet-based flexible nanogenerator. <i>Nanoscale</i> , 2022, 14, 12885-12897.	2.8	6
1437	Next Generation Electronics Based on Anisotropic 2D Materials. <i>RSC Nanoscience and Nanotechnology</i> , 2022, , 168-187.	0.2	0
1438	Highly Enhanced Many-body Interactions in Anisotropic 2D Semiconductors. <i>RSC Nanoscience and Nanotechnology</i> , 2022, , 76-125.	0.2	1
1439	Significant enhancement of piezoelectricity induced by oxygen adsorption in monolayer and multilayer MoS <sub>2</sub> . <i>Journal of Materials Chemistry C</i> , 0, , .	2.7	0
1440	Review on Innovative Piezoelectric Materials for Mechanical Energy Harvesting. <i>Energies</i> , 2022, 15, 6227.	1.6	21
1441	Boosted on-chip energy storage with transistors. <i>National Science Review</i> , 0, , .	4.6	0
1442	Evolution Application of Two-Dimensional MoS <sub>2</sub> -Based Field-Effect Transistors. <i>Nanomaterials</i> , 2022, 12, 3233.	1.9	7



#	ARTICLE	IF	CITATIONS
1443	Emerging low-dimensional materials for nanoelectromechanical systems resonators. <i>Materials Research Letters</i> , 2023, 11, 21-52.	4.1	6
1444	2D-materials-integrated optoelectromechanics: recent progress and future perspectives. <i>Reports on Progress in Physics</i> , 2023, 86, 026402.	8.1	4
1446	Extraordinary piezoelectric effect induced in two-dimensional rare earth monochalcogenides via reducing system dimensionality. <i>Journal of Materiomics</i> , 2023, 9, 72-81.	2.8	4
1447	Carbon Nanotube Ink Dispersed by Chitin Nanocrystals for Thermoelectric Converter for Self-Powering Multifunctional Wearable Electronics. <i>Advanced Science</i> , 2022, 9, .	5.6	20
1448	Strain-engineered piezotronic effects in flexible monolayer MoS <sub>2</sub> continuous thin films. <i>Nano Energy</i> , 2022, 103, 107863.	8.2	6
1449	Controllably grown single-crystal films as flexoelectric nanogenerators for continuous direct current output. <i>Npj Flexible Electronics</i> , 2022, 6, .	5.1	10
1450	Tunable long-lived exciton lifetime in single-layer two-dimensional $\text{LiAlTe}_2$ . <i>Physical Review Materials</i> , 2022, 6, .	1.1	1
1451	Class-Assisted CVD-Grown Monolayer MoS <sub>2</sub> : Effective Control of Size Distribution via Surface Patterning. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 0, , .	0.8	2
1452	Patterned 2D Ferroelectric Perovskite Single-Crystal Arrays for Self-Powered UV Photodetector Boosted by Combining Ferro-Pyro-Phototronic and Piezo-Phototronic Effects. <i>Nano Letters</i> , 2022, 22, 8241-8249.	4.5	16
1453	Roadmap on nanogenerators and piezotronics. <i>APL Materials</i> , 2022, 10, .	2.2	22
1454	Active Asymmetric Electron-Transfer Effect on the Enhanced Piezoelectricity in MoTO (T = S, Se, or Te) Monolayers and Bilayers. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 9654-9663.	2.1	10
1455	2D tribotronic transistors. <i>JPhys Energy</i> , 2023, 5, 012002.	2.3	3
1456	2D Materials towards sensing technology: From fundamentals to applications. <i>Sensing and Bio-Sensing Research</i> , 2022, 38, 100540.	2.2	27
1457	High performance piezotronic thermoelectric devices based on zigzag MoS <sub>2</sub> nanoribbon. <i>Nano Energy</i> , 2022, 104, 107888.	8.2	6
1458	Enhanced photocatalytic hydrogen evolution by piezoelectric effects based on MoSe <sub>2</sub> /Se-decorated CdS nanowire edge-on heterostructure. <i>Journal of Colloid and Interface Science</i> , 2023, 630, 460-472.	5.0	19
1459	Surface acoustic wave induced phenomena in two-dimensional materials. <i>Nanoscale Horizons</i> , 2023, 8, 158-175.	4.1	10
1460	Coexistence of in- and out-of-plane piezoelectricity in Janus XSSiN <sub>2</sub> (X=Cr, Mo, W) monolayers. <i>Applied Surface Science</i> , 2023, 610, 155586.	3.1	13
1461	Bond-Orbital-Resolved Piezoelectricity in Sp <sup>2</sup> -Hybridized Monolayer Semiconductors. <i>Materials</i> , 2022, 15, 7788.	1.3	0

#	ARTICLE	IF	CITATIONS
1462	Emerging 2D Metal Oxides: From Synthesis to Device Integration. <i>Advanced Materials</i> , 2023, 35, .	11.1	18
1463	A review of piezoelectric materials for nanogenerator applications. <i>Journal of Materials Science: Materials in Electronics</i> , 2022, 33, 26633-26677.	1.1	8
1464	Recent Advances in Rolling 2D TMDs Nanosheets into 1D TMDs Nanotubes/Nanoscrolls. <i>Small</i> , 2023, 19, .	5.2	18
1465	Highly Efficient Flexocatalysis of Two-dimensional Semiconductors. <i>Advanced Materials</i> , 2023, 35, .	11.1	13
1466	Smart electronics based on 2D materials for wireless healthcare monitoring. <i>Applied Physics Reviews</i> , 2022, 9, .	5.5	7
1467	Electronic properties and storage capability of two-dimensional nitridosilicate $\text{MnSi}_2\text{N}_4$ from first-principles. <i>AIP Advances</i> , 2022, 12, 115127.	0.6	0
1468	A computational framework for guiding the MOCVD-growth of wafer-scale 2D materials. <i>Npj Computational Materials</i> , 2022, 8, .	3.5	7
1469	Piezoelectric 1T Phase $\text{MoSe}_2$ Nanoflowers and Crystallographically Textured Electrodes for Enhanced Low-temperature Zinc Ion Storage. <i>Advanced Materials</i> , 2023, 35, .	11.1	11
1470	Piezoelectric ferromagnetism in Janus monolayer YBrI: a first-principles prediction. <i>Physical Chemistry Chemical Physics</i> , 2022, 25, 796-805.	1.3	2
1471	Design strategies and effect comparisons toward efficient piezocatalytic system. <i>Nano Energy</i> , 2023, 107, 108093.	8.2	30
1472	Piezo-photocatalysts based on a ferroelectric high-entropy oxide. <i>Applied Catalysis B: Environmental</i> , 2023, 324, 122204.	10.8	16
1473	Nano Flex Screen Protectors for 2D Material Piezotronics. <i>IEEE Nanotechnology Magazine</i> , 2023, 22, 1-7.	1.1	0
1474	Piezoelectricity-modulated optical recombination dynamics of monolayer- $\text{MoS}_2$ /GaN-film heterostructures. <i>Nanoscale</i> , 0, , .	2.8	0
1475	A Robust Constant-Voltage DC Triboelectric Nanogenerator Using the Ternary Dielectric Triboelectrification Effect. <i>Advanced Energy Materials</i> , 2023, 13, .	10.2	24
1476	$\text{SnS}_2$ Nanosheets as a Template for 2D $\text{SnO}_2$ Sensitive Material: Nanostructure and Surface Composition Effects. <i>Materials</i> , 2022, 15, 8213.	1.3	0
1477	Pulsed Carrier Gas Assisted High-Quality Synthetic 3R-Phase Sword-like $\text{MoS}_2$ : A Versatile Optoelectronic Material. <i>ACS Nano</i> , 2022, 16, 21366-21376.	7.3	4
1478	All Organic Aqueous Processable Piezophototronic Ink for Strain Modulated Photoresponse. <i>Advanced Materials Technologies</i> , 2023, 8, .	3.0	2
1479	A Review of Perovskite-Based Photodetectors and Their Applications. <i>Nanomaterials</i> , 2022, 12, 4390.	1.9	19

#	ARTICLE	IF	CITATIONS
1480	Piezo-Activated Atomic-Thin Molybdenum Disulfide/MXene Nanoenzyme for Integrated and Efficient Tumor Therapy via Ultrasound-Triggered Schottky Electric Field. <i>Small</i> , 2023, 19, .	5.2	17
1481	Retina-inspired in-sensor broadband image preprocessing for accurate recognition via the flexophototronic effect. <i>Matter</i> , 2023, 6, 537-553.	5.0	12
1482	Synthesis and enhanced piezoelectric response of CVD-grown SnSe layered nanosheets for flexible nanogenerators. <i>Nano Research</i> , 0, , .	5.8	2
1483	Research Trends of Piezoelectric Nanomaterials in Biomedical Engineering. <i>Advanced NanoBiomed Research</i> , 2023, 3, .	1.7	11
1484	Hierarchical MoS <sub>2</sub> Hollow Microspheres with High Piezoelectric Catalytic Performance Prepared by Hydrothermal Method. <i>Inorganic Chemistry Communication</i> , 2022, , 110349.	1.8	0
1485	A review of the synthesis, properties, and applications of 2D transition metal dichalcogenides and their heterostructures. <i>Materials Chemistry and Physics</i> , 2023, 297, 127332.	2.0	29
1486	Two-Dimensional Ferroelasticity and Domain-Wall Flexoelectricity in HgX <sub>2</sub> (X = Br or I) Monolayers. <i>Journal of Physical Chemistry Letters</i> , 2023, 14, 420-429.	2.1	2
1487	Directly Measuring Flexoelectric Coefficients of the van der Waals Materials. <i>Materials Horizons</i> , 0, , .	6.4	1
1488	Roadway Embedded Smart Illumination Charging System for Electric Vehicles. <i>Energies</i> , 2023, 16, 835.	1.6	0
1489	Recent progress of 2-dimensional layered thermoelectric materials. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2023, 72, 057301.	0.2	2
1490	Monolayer group-V binary compounds $\text{BiP}$ and $\text{SbP}$ with ultrahigh piezoelectricity and stability. <i>Physical Review Materials</i> , 2023, 7, .	0.9	4
1491	Amorphous NiMo <sub>3</sub> S <sub>13</sub> /nickel foam integrated anode for lithium-ion batteries. <i>Tungsten</i> , 2024, 6, 438-446.	2.0	5
1492	Layered Chalcogenides: Evolution from Bulk to Nano-Dimension for Renewable Energy Perspectives. , 2023, , 177-204.		1
1493	Piezoelectricity of strain-induced overall water splitting of Ni(OH) <sub>2</sub> /MoS <sub>2</sub> heterostructure. <i>Journal of Materials Chemistry A</i> , 2023, 11, 3481-3492.	5.2	11
1494	Low-frequency vibration induced piezoelectric boost to photocatalytic hydrogen evolution through 2D-2D-stacked MoS <sub>2</sub> -carbon nitride. <i>Applied Surface Science</i> , 2023, 614, 156147.	3.1	6
1495	Spinel LiMn <sub>2</sub> O <sub>4</sub> as a Capacitive Deionization Electrode Material with High Desalination Capacity: Experiment and Simulation. <i>International Journal of Environmental Research and Public Health</i> , 2023, 20, 517.	1.2	0
1496	Enabling Room-Temperature Triferroic Coupling in Dual Transition-Metal Dichalcogenide Monolayers Via Electronic Asymmetry. <i>Journal of the American Chemical Society</i> , 2023, 145, 2485-2491.	6.6	14
1497	Wearable chemical sensors based on 2D materials for healthcare applications. <i>Nanoscale</i> , 2023, 15, 3079-3105.	2.8	7

#	ARTICLE	IF	CITATIONS
1498	Design of Atomic Ordering in Mo <sub>2</sub> Nb <sub>2</sub> C <sub>3</sub> T <sub>x</sub> MXenes for Hydrogen Evolution Electrocatalysis. Nano Letters, 2023, 23, 931-938.	4.5	6
1499	The effects of spin-orbit coupling on optical properties of monolayer $\text{MoS}_2$ due to mechanical strains. Scientific Reports, 2023, 13, .	1.6	0
1500	Ferro-piezoelectricity in emerging Janus monolayer BMX <sub>2</sub> (M = Ga, In and X = S, Se): <i>ab initio</i> investigations. Nanoscale Advances, 2023, 5, 1425-1432.	2.2	5
1501	Characterization of 2D transition metal dichalcogenides. , 2023, , 97-139.		1
1502	Flexible Piezoelectric Devices and Wearable Applications. Wuji Cailiao Xuebao/Journal of Inorganic Materials, 2023, , 549.	0.6	0
1503	Advances in wearable flexible piezoelectric energy harvesters: materials, structures, and fabrication. Journal of Materials Science: Materials in Electronics, 2023, 34, .	1.1	5
1504	Emerging Trends in 2D TMDs Photodetectors and Piezo-Phototronic Devices. Small, 2023, 19, .	5.2	29
1505	Characteristic analysis of the MoS <sub>2</sub> /SiO <sub>2</sub> interface field-effect transistor with varying MoS <sub>2</sub> layers. Journal of Materials Science: Materials in Electronics, 2023, 34, .	1.1	2
1506	Ion implantation as an approach for tuning of electronic structure, optical, morphological and electrical transport properties of sputtered molybdenum disulfide thin films. Materials Science in Semiconductor Processing, 2023, 158, 107326.	1.9	1
1508	Spin-polarization anisotropy controlled by bending in tungsten diselenide nanoribbons and tunable excitonic states. Journal of Materials Chemistry C, 2023, 11, 4711-4727.	2.7	2
1509	Enhanced out-of-plane piezoelectricity and carrier mobility in Janus $\text{X}_3\text{Sn}_2\text{XY}$ (X = Ga, In, Y = S, Se, Te) monolayers: A first-principles prediction. Applied Physics Letters, 2023, 122, .		18
1510	Ultrafast Piezocatalysts Enabled By Interfacial Interaction of Reduced Graphene Oxide/MoS <sub>2</sub> Heterostructures. Advanced Materials, 2023, 35, .	11.1	26
1511	Band Position-Independent Piezo-Electrocatalysis for Ultrahigh CO <sub>2</sub> Conversion. Advanced Materials, 2023, 35, .	11.1	31
1512	Mechanistic insights into the deformation and degradation of a 2D metal organic framework. Npj 2D Materials and Applications, 2023, 7, .	3.9	1
1513	Two-Dimensional Ultrahigh Unconventional Piezoelectricity Driven by Charge Screening. Journal of Physical Chemistry Letters, 2023, 14, 3430-3435.	2.1	0
1514	Nucleation and Growth of Monolayer MoS <sub>2</sub> at Multisteps of MoO <sub>2</sub> Crystals by Sulfurization. ACS Nano, 2023, 17, 7865-7871.	7.3	7
1515	A Review of Ultrathin Piezoelectric Films. Materials, 2023, 16, 3107.	1.3	0
1516	Boost the voltage of a magnetoelastic generator via tuning the magnetic induction layer resistance. Nano Energy, 2023, 109, 108298.	8.2	5

#	ARTICLE	IF	CITATIONS
1517	Straining techniques for strain engineering of 2D materials towards flexible straintronic applications. <i>Nano Energy</i> , 2023, 109, 108278.	8.2	12
1518	Piezo-electrocatalytic oxidation of methanol with UV-ozone treated wurtzite zinc oxide nanostructures. <i>Nano Energy</i> , 2023, 109, 108311.	8.2	3
1519	Piezodynamic therapy: Mechanisms and biomedical applications. <i>Nano Energy</i> , 2023, 110, 108342.	8.2	6
1520	Material processing, performance and reliability of MoS <sub>2</sub> field effect transistor (FET) technology- A critical review. <i>Materials Science in Semiconductor Processing</i> , 2023, 160, 107397.	1.9	8
1521	Rapid and ratiometric fluorescent detection of hypochlorite by glutathione functionalized molybdenum disulfide quantum dots. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2023, 295, 122649.	2.0	3
1522	Sensitivity enhancement of the surface plasmon resonance sensor with nobel structure based on PtSe <sub>2</sub> and 2D materials. , 2023, , .		2
1523	A critical review of fabrication challenges and reliability issues in top/bottom gated MoS <sub>2</sub> field-effect transistors. <i>Nanotechnology</i> , 2023, 34, 232001.	1.3	4
1524	2D janus niobium oxydihalide NbOXY: Multifunctional piezoelectric semiconductor for electronics, photonics, sensing and sustainable energy applications. <i>Materials Today Physics</i> , 2023, 31, 101001.	2.9	11
1525	Origin of electrically induced defects in monolayer MoS <sub>2</sub> grown by chemical vapor deposition. <i>Communications Materials</i> , 2023, 4, .	2.9	5
1526	Ultra-High Interfacial Thermal Conductance via Double hBN Encapsulation for Efficient Thermal Management of 2D Electronics. <i>Small</i> , 2023, 19, .	5.2	5
1527	Monolayer group IV monochalcogenides T-MX (M = Sn, Ge; X = S, Se) with fine piezoelectric performance and stability. <i>Applied Physics Letters</i> , 2023, 122, .	1.5	5
1528	Gate-Tunable Electrostatic Friction of Grain Boundary in Chemical-Vapor-Deposited MoS <sub>2</sub> . <i>Nano Letters</i> , 2023, 23, 3085-3089.	4.5	1
1529	Influence of manganese addition in ZnO-based piezoelectric nanogenerator for mechanical energy harvesting. <i>Journal of Materials Science: Materials in Electronics</i> , 2023, 34, .	1.1	2
1530	Impact of PVDF and its copolymer-based nanocomposites for flexible and wearable energy harvesters. <i>Nano Structures Nano Objects</i> , 2023, 34, 100949.	1.9	17
1531	CVD growth of large-area monolayer WS <sub>2</sub> film on sapphire through tuning substrate environment and its application for high-sensitive strain sensor. , 2023, 18, .		3
1532	Recent progress in three-terminal artificial synapses based on 2D materials: from mechanisms to applications. <i>Microsystems and Nanoengineering</i> , 2023, 9, .	3.4	19
1533	Performance Design of an Extensional Piezo-Semiconductive Fiber from the Structural Perspective. , 2022, , .		0
1534	Theoretical design and discovery of two-dimensional materials for next-generation flexible piezotronics and energy conversion. , 2023, 2, .		2

#	ARTICLE	IF	CITATIONS
1535	Ferroelectric field effect transistors for electronics and optoelectronics. Applied Physics Reviews, 2023, 10, .	5.5	13
1536	Variant Plateau <sup>TM</sup> s law in atomically thin transition metal dichalcogenide dome networks. Nature Communications, 2023, 14, .	5.8	4
1537	Advances in Wearable Strain Sensors Based on Electrospun Fibers. Advanced Functional Materials, 2023, 33, .	7.8	31
1538	Textile-based piezocatalytic platform for organics degradation under low-frequency water flow. Journal of Materials Chemistry A, 2023, 11, 7596-7604.	5.2	6
1539	Large-scale fabrication and Mo vacancy-induced robust room-temperature ferromagnetism of MoSe <sub>2</sub> thin films. Nanoscale, 2023, 15, 6844-6852.	2.8	4
1540	Electrically Inspired Flexible Electrochemical Film Power Supply for Long-Term Epidermal Sensors. Micromachines, 2023, 14, 650.	1.4	1
1541	Laser induced transfer of 2D materials for optoelectronic applications. , 2023, , .		0
1543	Roadmap on energy harvesting materials. JPhys Materials, 2023, 6, 042501.	1.8	19
1544	Hexagonal warping effect in the Janus group-VIA binary monolayers with large Rashba spin splitting and piezoelectricity. Physical Chemistry Chemical Physics, 2023, 25, 10827-10835.	1.3	0
1545	Ultraflexible and Transparent MoS <sub>2</sub> / $\sqrt{2}$ -Ga <sub>2</sub> O <sub>3</sub> Heterojunction-Based Photodiode with Enhanced Photoresponse by Piezo-Phototronic Effect. ACS Applied Electronic Materials, 2023, 5, 2296-2308.	2.0	6
1546	Remarkable Pyro-Catalysis of g-C <sub>3</sub> N <sub>4</sub> Nanosheets for Dye Decoloration under Room-Temperature Cold <sup>TM</sup> Hot Cycle Excitation. Nanomaterials, 2023, 13, 1124.	1.9	5
1547	Tuning Piezoelectricity via Thermal Annealing at a Freestanding Ferroelectric Membrane. Nano Letters, 2023, 23, 2808-2815.	4.5	5
1548	Recent developments in 2D materials for energy harvesting applications. JPhys Energy, 2023, 5, 032001.	2.3	4
1549	Piezoelectric substrate-induced strain engineering on tuning polarized Raman spectra of crystalline black phosphorus. Applied Physics Letters, 2023, 122, .	1.5	2
1550	Ferroelectric Polarization <sup>TM</sup> Enhanced Performance of Flexible CuInP <sub>2</sub> S <sub>6</sub> Piezoelectric Nanogenerator for Biomechanical Energy Harvesting and Voice Recognition Applications. Advanced Functional Materials, 2023, 33, .	7.8	12
1551	In Situ Device <sup>TM</sup> Level TEM Characterization Based on Ultra <sup>TM</sup> Flexible Multilayer MoS <sub>2</sub> Micro <sup>TM</sup> Cantilever. Advanced Materials, 2023, 35, .	11.1	4
1552	Triboelectric nanogenerators: the beginning of blue dream. Frontiers of Chemical Science and Engineering, 2023, 17, 635-678.	2.3	21
1553	Balloon Catheter-Integrated Piezoelectric Micropyramid Arrays for Measuring Vascular Stiffness. ACS Applied Materials & Interfaces, 2023, 15, 17653-17663.	4.0	0

#	ARTICLE	IF	CITATIONS
1554	Valley piezoelectricity promoted by spin-orbit coupling in quantum materials. Science China: Physics, Mechanics and Astronomy, 2023, 66, .	2.0	1
1555	X-ray diffraction and the symmetry of ultrathin crystalline materials between two-dimensional and three-dimensional crystals. Science Bulletin, 2023, , .	4.3	0
1556	Transition metal dichalcogenides nanomaterials based piezocatalytic activity: recent progresses and outlook. Nanotechnology, 2023, 34, 282001.	1.3	6
1557	Silicon flexoelectronic transistors. Science Advances, 2023, 9, .	4.7	11
1558	Ultrahigh photoresponse in strain- and domain-engineered large-scale MoS <sub>2</sub> monolayer films. Journal of Materials Chemistry A, 0, , .	5.2	0
1559	Prospective applications of two-dimensional materials beyond laboratory frontiers: A review. Science, 2023, 26, 106671.	1.9	18
1560	Recent advances, properties, fabrication and opportunities in two-dimensional materials for their potential sustainable applications. Energy Storage Materials, 2023, 59, 102780.	9.5	12
1561	On the Photoâ€Carriers Dynamic Regulation by Piezoâ€Phototronic Effect in Metalâ€Oxideâ€Semiconductor Tunneling Junction. Advanced Materials Interfaces, 2023, 10, .	1.9	0
1562	Hybrid energy harvesting systems for self-powered sustainable water purification by harnessing ambient energy. Frontiers of Environmental Science and Engineering, 2023, 17, .	3.3	6
1563	Exploring the candidacy of MoS <sub>2</sub> monolayer for piezocatalytic activity: recent progresses and outlook. Nanotechnology, 2023, 34, 282001.		

#	ARTICLE	IF	CITATIONS
1639	MoS <sub>2</sub> /WS <sub>2</sub> quantum dots co-doped two-dimensional carbon nanosheets with high lithium ion conductivity. MRS Communications, 0, , .	0.8	0
1650	Nanogenerators and piezotronics: From scientific discoveries to technology breakthroughs. MRS Bulletin, 2023, 48, 1014-1025.	1.7	5
1652	Seeing single-layer semiconductor properties in bulk. , 0, , .		0
1661	Characterization of SBS Gain Spectrum Lineshape in Fiber. , 2023, , .		0
1662	Establishment and Research of a Janus SbBiSi <sub>2</sub> Monolayer Structure Model. , 2023, , .		0
1670	Electron/hole piezocatalysis in chemical reactions. Materials Advances, 2023, 4, 6092-6117.	2.6	0
1678	MEMS Pressure Sensor Based on Piezoresistive Effect of MoS <sub>2</sub> Film. , 2023, , .		0
1680	Emerging dissolving strategy of cellulose nanomaterial for flexible electronics sensors in wearable devices: a review. Cellulose, 2024, 31, 27-60.	2.4	1
1713	Advancing piezoelectric 2D nanomaterials for applications in drug delivery systems and therapeutic approaches. Nanoscale Horizons, 2024, 9, 365-383.	4.1	0
1716	Flexoelectricity in two-dimensional boron nitride and other materials. , 2024, , 397-436.		0
1726	Unleashing the Potential. Advances in Chemical and Materials Engineering Book Series, 2024, , 138-169.	0.2	0