

Jun He

List of Publications by Year in descending order

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102
papers

9,582
citations

34105

52
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37204

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102
times ranked

11862
citing authors

#	ARTICLE	IF	CITATIONS
1	High-Performance Memristors Based on Ultrathin 2D Copper Chalcogenides. <i>Advanced Materials</i> , 2022, 34, e2108313.	21.0	45
2	Nonvolatile reconfigurable broadband photodiodes based on BP/In ₂ Se ₃ ferroelectric junctions. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	21
3	Intercalated Gold Nanoparticle in 2D Palladium Nanosheet Avoiding CO Poisoning for Formate Production under a Wide Potential Window. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 10344-10352.	8.0	5
4	High-performance ultraviolet photodetectors based on 2D layered In ₄ /3P ₂ Se ₆ nanoflakes. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	7
5	A Ferroelectric Heterostructure for Highly Enhanced Short-Circuit Current Density and Self-Powered Photodetection. <i>Advanced Electronic Materials</i> , 2022, 8, .	5.1	17
6	Controllable Synthesis Quadratic-Dependent Unsaturated Magnetoresistance of Two-Dimensional Nonlayered FeS ₈ with Robust Environmental Stability. <i>ACS Nano</i> , 2022, 16, 8301-8308.	14.6	12
7	Functional annotation of creeping bentgrass protein sequences based on convolutional neural network. <i>BMC Plant Biology</i> , 2022, 22, 227.	3.6	0
8	Van der waals epitaxial growth of two-dimensional PbSe and its high-performance heterostructure devices. <i>Science Bulletin</i> , 2022, . .	9.0	9
9	Few-layered CuInP ₂ S ₆ nanosheet with sulfur vacancy boosting photocatalytic hydrogen evolution. <i>CrystEngComm</i> , 2021, 23, 591-598.	2.6	25
10	Elimination of Interlayer Potential Barriers of Chromium Sulfide by Self-Intercalation for Enhanced Hydrogen Evolution Reaction. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 13055-13062.	8.0	17
11	Recent Advances in 2D Materials for Photodetectors. <i>Advanced Electronic Materials</i> , 2021, 7, 2001125.	5.1	89
12	Nonlayered Tin Thiohypodiphosphate Nanosheets: Controllable Growth and Solar-Light-Driven Water Splitting. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 13392-13399.	8.0	15
13	Modulation of Negative Differential Resistance in Black Phosphorus Transistors. <i>Advanced Materials</i> , 2021, 33, e2008329.	21.0	18
14	Self-intercalated two-dimensional magnetic semiconductor V ₈ (S _{1-x} Se _x) ₁₅ . <i>Applied Physics Letters</i> , 2021, 118, 221903.	3.3	2
15	Emerging 2D Memory Devices for In-Memory Computing. <i>Advanced Materials</i> , 2021, 33, e2007081.	21.0	92
16	Using ferroelectric polarization to regulate and preserve the valley polarization in a HfN ₂ /In ₂ Se ₃ heterotrilaier. <i>Physical Review B</i> , 2021, 103, .	3.2	16
17	High Carrier Separation Efficiency in Morphology-Controlled BiOBr/C Schottky Junctions for Photocatalytic Overall Water Splitting. <i>ACS Nano</i> , 2021, 15, 13209-13219.	14.6	72
18	Hidden and doubly heavy molecular states from interactions $D^*_{(s)}\{ar\{D\}\}^*_{(s)}$ and $D^*_{(s)}\{ar\{B\}\}^*_{(s)}$ and $D^*_{(s)}\{ar\{D\}\}^*_{(s)}$ and $D^*_{(s)}\{ar\{B\}\}^*_{(s)}$. <i>European Physical Journal C</i> , 2021, 81, 1.	3.9	24

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19	Recent progress on emergent two-dimensional magnets and heterostructures. <i>Nanotechnology</i> , 2021, 32, 472001.	2.6	25
20	Reconfigurable photovoltaic effect for optoelectronic artificial synapse based on ferroelectric p-n junction. <i>Nano Research</i> , 2021, 14, 4328-4335.	10.4	33
21	Logic and in-memory computing achieved in a single ferroelectric semiconductor transistor. <i>Science Bulletin</i> , 2021, 66, 2288-2296.	9.0	23
22	Controlled synthesis and Raman study of a 2D antiferromagnetic P-type semiconductor: Î±-MnSe . <i>Nanoscale</i> , 2021, 13, 6953-6964.	5.6	20
23	Phase-Tunable Synthesis and Etching-Free Transfer of Two-Dimensional Magnetic FeTe. <i>ACS Nano</i> , 2021, 15, 19089-19097.	14.6	18
24	Defect-mediated ferromagnetism in correlated two-dimensional transition metal phosphorus trisulfides. <i>Science Advances</i> , 2021, 7, eabj4086.	10.3	35
25	Two-Dimensional Palladium Nanosheet Intercalated with Gold Nanoparticles for Plasmon-Enhanced Electrocatalysis. <i>ACS Catalysis</i> , 2021, 11, 13721-13732.	11.2	21
26	Bridging the van der Waals Interface for Advanced Optoelectronic Devices. <i>Advanced Materials</i> , 2020, 32, e1906874.	21.0	31
27	Speeding protons with metal vacancies. <i>Science</i> , 2020, 370, 525-526.	12.6	3
28	Two-Dimensional Unipolar Memristors with Logic and Memory Functions. <i>Nano Letters</i> , 2020, 20, 4144-4152.	9.1	50
29	Gateâ€Couplingâ€Enabled Robust Hysteresis for Nonvolatile Memory and Programmable Rectifier in Van der Waals Ferroelectric Heterojunctions. <i>Advanced Materials</i> , 2020, 32, e1908040.	21.0	84
30	Tunable Room-Temperature Ferromagnetism in Two-Dimensional Cr_2Te_3 . <i>Nano Letters</i> , 2020, 20, 3130-3139.	9.1	175
31	Subthermionic field-effect transistors with sub-5Ånm gate lengths based on van der Waals ferroelectric heterostructures. <i>Science Bulletin</i> , 2020, 65, 1444-1450.	9.0	17
32	Recent Progress in CVD Growth of 2D Transition Metal Dichalcogenides and Related Heterostructures. <i>Advanced Materials</i> , 2019, 31, e1901694.	21.0	250
33	Valleytronics in transition metal dichalcogenides materials. <i>Nano Research</i> , 2019, 12, 2695-2711.	10.4	155
34	Growth and Raman Scattering Investigation of a New 2D MOX Material: YbOCl. <i>Advanced Functional Materials</i> , 2019, 29, 1903017.	14.9	21
35	Synthesis and Optoelectronic Applications of a Stable p-Type 2D Material: Î±-MnS . <i>ACS Nano</i> , 2019, 13, 12662-12670.	14.6	54
36	Multibit Optoelectronic Memory in Topâ€Floatingâ€Gated van der Waals Heterostructures. <i>Advanced Functional Materials</i> , 2019, 29, 1902890.	14.9	69

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37	Newly developed two-dimensional materials for efficient photocatalytic hydrogen evolution. <i>Science Bulletin</i> , 2019, 64, 958-960.	9.0	4
38	Robust trap effect in transition metal dichalcogenides for advanced multifunctional devices. <i>Nature Communications</i> , 2019, 10, 4133.	12.8	39
39	2D electric-double-layer phototransistor for photoelectronic and spatiotemporal hybrid neuromorphic integration. <i>Nanoscale</i> , 2019, 11, 1360-1369.	5.6	195
40	Hierarchically heterostructured metal hydr(oxy)oxides for efficient overall water splitting. <i>Nanoscale</i> , 2019, 11, 11736-11743.	5.6	14
41	Anti-Ambipolar Transport with Large Electrical Modulation in 2D Heterostructured Devices. <i>Advanced Materials</i> , 2019, 31, e1901144.	21.0	28
42	Oriented layered Bi ₂ O ₂ Se nanowire arrays for ultrasensitive photodetectors. <i>Applied Physics Letters</i> , 2019, 114, .	3.3	31
43	Controlling Injection Barriers for Ambipolar 2D Semiconductors via Quasi-van der Waals Contacts. <i>Advanced Science</i> , 2019, 6, 1801841.	11.2	17
44	Van der Waals integration of 2D atomic crystals for advanced multifunctional devices. <i>Science Bulletin</i> , 2019, 64, 1033-1035.	9.0	6
45	Ultrathin Magnetic 2D Single-Crystal CrSe. <i>Advanced Materials</i> , 2019, 31, e1900056.	21.0	154
46	Sub-millimeter-Scale Growth of One-Unit-Cell-Thick Ferrimagnetic Cr ₂ S ₃ Nanosheets. <i>Nano Letters</i> , 2019, 19, 2154-2161.	9.1	110
47	A unipolar nonvolatile resistive switching behavior in a layered transition metal oxide. <i>Nanoscale</i> , 2019, 11, 20497-20506.	5.6	24
48	Gapless van der Waals Heterostructures for Infrared Optoelectronic Devices. <i>ACS Nano</i> , 2019, 13, 14519-14528.	14.6	24
49	Van der Waals Heterostructure Devices with Dynamically Controlled Conduction Polarity and Multifunctionality. <i>Advanced Functional Materials</i> , 2019, 29, 1804897.	14.9	23
50	Earth abundant materials beyond transition metal dichalcogenides: A focus on electrocatalyzing hydrogen evolution reaction. <i>Nano Energy</i> , 2019, 58, 244-276.	16.0	298
51	Uncovering the Conduction Behavior of van der Waals Ambipolar Semiconductors. <i>Advanced Materials</i> , 2019, 31, e1805317.	21.0	19
52	Heterostructures Based on 2D Materials: A Versatile Platform for Efficient Catalysis. <i>Advanced Materials</i> , 2019, 31, e1804828.	21.0	142
53	High Crystal Quality 2D Manganese Phosphorus Trichalcogenide Nanosheets and their Photocatalytic Activity. <i>Advanced Functional Materials</i> , 2018, 28, 1800548.	14.9	116
54	Nonvolatile infrared memory in MoS ₂ /PbS van der Waals heterostructures. <i>Science Advances</i> , 2018, 4, eaap7916.	10.3	161

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55	The Role of Active Oxide Species for Electrochemical Water Oxidation on the Surface of 3d-Metal Phosphides. <i>Advanced Energy Materials</i> , 2018, 8, 1703290.	19.5	104
56	High-Performance Near-Infrared Photodetector Based on Ultrathin Bi ₂ O ₂ Se Nanosheets. <i>Advanced Functional Materials</i> , 2018, 28, 1706437.	14.9	201
57	Nonvolatile and Programmable Photodoping in MoTe ₂ for Photoresist-Free Complementary Electronic Devices. <i>Advanced Materials</i> , 2018, 30, e1804470.	21.0	70
58	High-Yield Production of Monolayer FePS ₃ Quantum Sheets via Chemical Exfoliation for Efficient Photocatalytic Hydrogen Evolution. <i>Advanced Materials</i> , 2018, 30, e1707433.	21.0	110
59	New Frontiers on van der Waals Layered Metal Phosphorous Trichalcogenides. <i>Advanced Functional Materials</i> , 2018, 28, 1802151.	14.9	223
60	2D library beyond graphene and transition metal dichalcogenides: a focus on photodetection. <i>Chemical Society Reviews</i> , 2018, 47, 6296-6341.	38.1	207
61	Impact of Thickness on Contact Issues for Pinning Effect in Black Phosphorus Field-Effect Transistors. <i>Advanced Functional Materials</i> , 2018, 28, 1801398.	14.9	39
62	Edge-Epitaxial Growth of 2D NbS ₂ -WS ₂ Lateral Metal-Semiconductor Heterostructures. <i>Advanced Materials</i> , 2018, 30, e1803665.	21.0	109
63	High-performance, multifunctional devices based on asymmetric van der Waals heterostructures. <i>Nature Electronics</i> , 2018, 1, 356-361.	26.0	197
64	Sub-10 nm Nanopattern Architecture for 2D Material Field-Effect Transistors. <i>Nano Letters</i> , 2017, 17, 1065-1070.	9.1	172
65	Efficient Catalysis of Hydrogen Evolution Reaction from WS ₂ (1-x)W _x P ₂ (1-x)W _x Nanoribbons. <i>Small</i> , 2017, 13, 1603706.	10.0	60
66	Multifunctional tunneling devices based on graphene/h-BN/MoSe ₂ van der Waals heterostructures. <i>Applied Physics Letters</i> , 2017, 110, .	3.3	49
67	Van der Waals Epitaxial Growth of Atomic Layered HfS ₂ Crystals for Ultrasensitive Near-Infrared Phototransistors. <i>Advanced Materials</i> , 2017, 29, 1700439.	21.0	96
68	2D MoS ₂ Neuromorphic Devices for Brain-Like Computational Systems. <i>Small</i> , 2017, 13, 1700933.	10.0	268
69	Ferroelectric-induced carrier modulation for ambipolar transition metal dichalcogenide transistors. <i>Applied Physics Letters</i> , 2017, 110, .	3.3	22
70	Dendritic growth of monolayer ternary WS ₂ (1-x)Se _{2x} flakes for enhanced hydrogen evolution reaction. <i>Nanoscale</i> , 2017, 9, 5641-5647.	5.6	31
71	Interface Engineered WC@WS ₂ Nanostructure for Enhanced Hydrogen Evolution Catalysis. <i>Advanced Functional Materials</i> , 2017, 27, 1605802.	14.9	122
72	Two-dimensional metal phosphorus trisulfide nanosheet with solar hydrogen-evolving activity. <i>Nano Energy</i> , 2017, 40, 673-680.	16.0	91

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73	Efficient Photocatalytic Hydrogen Evolution via Band Alignment Tailoring: Controllable Transition from Type-II to Type-III. <i>Small</i> , 2017, 13, 1702163.	10.0	47
74	High-Performance Ultraviolet Photodetector Based on a Few-Layered 2D NiPS ₃ Nanosheet. <i>Advanced Functional Materials</i> , 2017, 27, 1701342.	14.9	220
75	Ultrathin Single-Crystalline CdTe Nanosheets Realized via Van der Waals Epitaxy. <i>Advanced Materials</i> , 2017, 29, 1703122.	21.0	118
76	Two-Dimensional Non-Layered Materials: Synthesis, Properties and Applications. <i>Advanced Functional Materials</i> , 2017, 27, 1603254.	14.9	161
77	Configuration-Dependent Electrically Tunable Van der Waals Heterostructures Based on MoTe ₂ /MoS ₂ . <i>Advanced Functional Materials</i> , 2016, 26, 5499-5506.	14.9	95
78	Engineering the Electronic Structure of 2D WS ₂ Nanosheets Using Co Incorporation as Co _x W _(1-x) S ₂ for Conspicuously Enhanced Hydrogen Generation. <i>Small</i> , 2016, 12, 3802-3809.	10.0	60
79	High-Performance Phototransistor of Epitaxial PbS Nanoplate-Graphene Heterostructure with Edge Contact. <i>Advanced Materials</i> , 2016, 28, 6497-6503.	21.0	51
80	Selenium-Enriched Nickel Selenide Nanosheets as a Robust Electrocatalyst for Hydrogen Generation. <i>Angewandte Chemie</i> , 2016, 128, 7033-7038.	2.0	65
81	Ultrahigh sensitive MoTe ₂ phototransistors driven by carrier tunneling. <i>Applied Physics Letters</i> , 2016, 108, .	3.3	95
82	Strong electrically tunable MoTe ₂ /graphene van der Waals heterostructures for high-performance electronic and optoelectronic devices. <i>Applied Physics Letters</i> , 2016, 109, .	3.3	51
83	Ultrafast and ultrasensitive phototransistors based on few-layered HfSe ₂ . <i>Applied Physics Letters</i> , 2016, 109, .	3.3	60
84	Carbon dots decorated vertical SnS ₂ nanosheets for efficient photocatalytic oxygen evolution. <i>Applied Physics Letters</i> , 2016, 109, .	3.3	20
85	Integrated High-Performance Infrared Phototransistor Arrays Composed of Nonlayered PbS/MoS ₂ Heterostructures with Edge Contacts. <i>Nano Letters</i> , 2016, 16, 6437-6444.	9.1	98
86	High-Crystalline 2D Layered PbI ₂ with Ultrasmooth Surface: Liquid-Phase Synthesis and Application of High-Speed Photon Detection. <i>Advanced Electronic Materials</i> , 2016, 2, 1600291.	5.1	98
87	Epitaxial 2D PbS Nanoplates Arrays with Highly Efficient Infrared Response. <i>Advanced Materials</i> , 2016, 28, 8051-8057.	21.0	93
88	Rational Design of Ultralarge Pb _{1-x} Sn _x Te Nanoplates for Exploring Crystalline Symmetry-Protected Topological Transport. <i>Advanced Materials</i> , 2016, 28, 617-623.	21.0	38
89	Electrostatically tunable lateral MoTe ₂ p-n junction for use in high-performance optoelectronics. <i>Nanoscale</i> , 2016, 8, 13245-13250.	5.6	49
90	Enhanced Electrochemical H ₂ Evolution by Few-Layered Metallic WS ₂ /Se ₂ Nanoribbons. <i>Advanced Functional Materials</i> , 2015, 25, 6077-6083.	14.9	111

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91	Low-Dimensional Topological Crystalline Insulators. <i>Small</i> , 2015, 11, 4613-4624.	10.0	24
92	van der Waals Epitaxial Ultrathin Two-Dimensional Nonlayered Semiconductor for Highly Efficient Flexible Optoelectronic Devices. <i>Nano Letters</i> , 2015, 15, 1183-1189.	9.1	127
93	A vertical-oriented WS ₂ nanosheet sensitized by graphene: an advanced electrocatalyst for hydrogen evolution reaction. <i>Nanoscale</i> , 2015, 7, 14760-14765.	5.6	88
94	Highly sensitive and fast phototransistor based on large size CVD-grown SnS ₂ nanosheets. <i>Nanoscale</i> , 2015, 7, 14093-14099.	5.6	126
95	High-performance flexible photodetectors based on GaTe nanosheets. <i>Nanoscale</i> , 2015, 7, 7252-7258.	5.6	126
96	Recent advances in transition-metal dichalcogenide based nanomaterials for water splitting. <i>Nanoscale</i> , 2015, 7, 19764-19788.	5.6	327
97	Tunable GaTe-MoS ₂ van der Waals p-n Junctions with Novel Optoelectronic Performance. <i>Nano Letters</i> , 2015, 15, 7558-7566.	9.1	369
98	Component-Controllable WS ₂ (1-x)/Se ₂ (x) Nanotubes for Efficient Hydrogen Evolution Reaction. <i>ACS Nano</i> , 2014, 8, 8468-8476.	14.6	317
99	Van der Waals Epitaxy and Photoresponse of Hexagonal Tellurium Nanoplates on Flexible Mica Sheets. <i>ACS Nano</i> , 2014, 8, 7497-7505.	14.6	259
100	Role of Ga Vacancy on a Multilayer GaTe Phototransistor. <i>ACS Nano</i> , 2014, 8, 4859-4865.	14.6	162
101	Visible light driven type II heterostructures and their enhanced photocatalysis properties: a review. <i>Nanoscale</i> , 2013, 5, 8326.	5.6	950
102	Low-Dimensional Te-Based Nanostructures. <i>Advanced Materials</i> , 2013, 25, 3915-3921.	21.0	31