

Jun He

List of Publications by Year in descending order

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102
papers

9,582
citations

34105

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all docs

102
docs citations

102
times ranked

11862
citing authors

#	ARTICLE	IF	CITATIONS
1	Visible light driven type II heterostructures and their enhanced photocatalysis properties: a review. <i>Nanoscale</i> , 2013, 5, 8326.	5.6	950
2	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
3	Recent advances in transition-metal dichalcogenide based nanomaterials for water splitting. <i>Nanoscale</i> , 2015, 7, 19764-19788.	5.6	327
4	Component-Controllable WS ₂ /Se ₂ Nanotubes for Efficient Hydrogen Evolution Reaction. <i>ACS Nano</i> , 2014, 8, 8468-8476.	14.6	317
5	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
6	2D MoS ₂ Neuromorphic Devices for Brain-Like Computational Systems. <i>Small</i> , 2017, 13, 1700933.	10.0	268
7	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
8	Recent Progress in CVD Growth of 2D Transition Metal Dichalcogenides and Related Heterostructures. <i>Advanced Materials</i> , 2019, 31, e1901694.	21.0	250
9	New Frontiers on van der Waals Layered Metal Phosphorous Trichalcogenides. <i>Advanced Functional Materials</i> , 2018, 28, 1802151.	14.9	223
10	High-Performance Ultraviolet Photodetector Based on a Few-Layered 2D NiPS ₃ Nanosheet. <i>Advanced Functional Materials</i> , 2017, 27, 1701342.	14.9	220
11	2D library beyond graphene and transition metal dichalcogenides: a focus on photodetection. <i>Chemical Society Reviews</i> , 2018, 47, 6296-6341.	38.1	207
12	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
13	High-performance, multifunctional devices based on asymmetric van der Waals heterostructures. <i>Nature Electronics</i> , 2018, 1, 356-361.	26.0	197
14	2D electric-double-layer phototransistor for photoelectronic and spatiotemporal hybrid neuromorphic integration. <i>Nanoscale</i> , 2019, 11, 1360-1369.	5.6	195
15	Tunable Room-Temperature Ferromagnetism in Two-Dimensional Cr ₂ Te ₃ . <i>Nano Letters</i> , 2020, 20, 3130-3139.	9.1	175
16	Sub-10 nm Nanopattern Architecture for 2D Material Field-Effect Transistors. <i>Nano Letters</i> , 2017, 17, 1065-1070.	9.1	172
17	Role of Ga Vacancy on a Multilayer GaTe Phototransistor. <i>ACS Nano</i> , 2014, 8, 4859-4865.	14.6	162
18	Two-Dimensional Non-Layered Materials: Synthesis, Properties and Applications. <i>Advanced Functional Materials</i> , 2017, 27, 1603254.	14.9	161

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19	Nonvolatile infrared memory in MoS ₂ /PbS van der Waals heterostructures. Science Advances, 2018, 4, eaap7916.	10.3	161
20	Valleytronics in transition metal dichalcogenides materials. Nano Research, 2019, 12, 2695-2711.	10.4	155
21	Ultrathin Magnetic 2D Single-Crystal CrSe. Advanced Materials, 2019, 31, e1900056.	21.0	154
22	Heterostructures Based on 2D Materials: A Versatile Platform for Efficient Catalysis. Advanced Materials, 2019, 31, e1804828.	21.0	142
23	van der Waals Epitaxial Ultrathin Two-Dimensional Nonlayered Semiconductor for Highly Efficient Flexible Optoelectronic Devices. Nano Letters, 2015, 15, 1183-1189.	9.1	127
24	Highly sensitive and fast phototransistor based on large size CVD-grown SnS ₂ nanosheets. Nanoscale, 2015, 7, 14093-14099.	5.6	126
25	High-performance flexible photodetectors based on GaTe nanosheets. Nanoscale, 2015, 7, 7252-7258.	5.6	126
26	Interface Engineered W _x C@WS ₂ Nanostructure for Enhanced Hydrogen Evolution Catalysis. Advanced Functional Materials, 2017, 27, 1605802.	14.9	122
27	Ultrathin Single-Crystalline CdTe Nanosheets Realized via Van der Waals Epitaxy. Advanced Materials, 2017, 29, 1703122.	21.0	118
28	High Crystal Quality 2D Manganese Phosphorus Trichalcogenide Nanosheets and their Photocatalytic Activity. Advanced Functional Materials, 2018, 28, 1800548.	14.9	116
29	Enhanced Electrochemical H ₂ Evolution by Few-Layered Metallic WS ₂ (1 st)/Se ₂ Nanoribbons. Advanced Functional Materials, 2015, 25, 6077-6083.	14.9	111
30	High-Yield Production of Monolayer FePS ₃ Quantum Sheets via Chemical Exfoliation for Efficient Photocatalytic Hydrogen Evolution. Advanced Materials, 2018, 30, e1707433.	21.0	110
31	Sub-millimeter-Scale Growth of One-Unit-Cell-Thick Ferrimagnetic Cr ₂ S ₃ Nanosheets. Nano Letters, 2019, 19, 2154-2161.	9.1	110
32	Edge-Epitaxial Growth of 2D NbS ₂ /WS ₂ Lateral Metal-Semiconductor Heterostructures. Advanced Materials, 2018, 30, e1803665.	21.0	109
33	The Role of Active Oxide Species for Electrochemical Water Oxidation on the Surface of 3d-Metal Phosphides. Advanced Energy Materials, 2018, 8, 1703290.	19.5	104
34	Integrated High-Performance Infrared Phototransistor Arrays Composed of Nonlayered PbS/MoS ₂ Heterostructures with Edge Contacts. Nano Letters, 2016, 16, 6437-6444.	9.1	98
35	High-Crystalline 2D Layered PbI ₂ with Ultrasoft Surface: Liquid-Phase Synthesis and Application of High-Speed Photon Detection. Advanced Electronic Materials, 2016, 2, 1600291.	5.1	98
36	Van der Waals Epitaxial Growth of Atomic Layered HfS ₂ Crystals for Ultrasensitive Near-Infrared Phototransistors. Advanced Materials, 2017, 29, 1700439.	21.0	96

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37	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
38	Ultra-high sensitive MoTe ₂ phototransistors driven by carrier tunneling. <i>Applied Physics Letters</i> , 2016, 108, .	3.3	95
39	Epitaxial 2D PbS Nanoplates Arrays with Highly Efficient Infrared Response. <i>Advanced Materials</i> , 2016, 28, 8051-8057.	21.0	93
40	Emerging 2D Memory Devices for In-Memory Computing. <i>Advanced Materials</i> , 2021, 33, e2007081.	21.0	92
41	Two-dimensional metal phosphorus trisulfide nanosheet with solar hydrogen-evolving activity. <i>Nano Energy</i> , 2017, 40, 673-680.	16.0	91
42	Recent Advances in 2D Materials for Photodetectors. <i>Advanced Electronic Materials</i> , 2021, 7, 2001125.	5.1	89
43	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
44	Gate-Coupling-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
45	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
46	Nonvolatile and Programmable Photodoping in MoTe ₂ for Photoresist-Free Complementary Electronic Devices. <i>Advanced Materials</i> , 2018, 30, e1804470.	21.0	70
47	Multibit Optoelectronic Memory in Top-Floating-Gated van der Waals Heterostructures. <i>Advanced Functional Materials</i> , 2019, 29, 1902890.	14.9	69
48	Selenium-Enriched Nickel Selenide Nanosheets as a Robust Electrocatalyst for Hydrogen Generation. <i>Angewandte Chemie</i> , 2016, 128, 7033-7038.	2.0	65
49	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
50	Ultrafast and ultrasensitive phototransistors based on few-layered HfSe ₂ . <i>Applied Physics Letters</i> , 2016, 109, .	3.3	60
51	Efficient Catalysis of Hydrogen Evolution Reaction from WS ₂ (1 st)/P ₂ Nanoribbons. <i>Small</i> , 2017, 13, 1603706.	10.0	60
52	Synthesis and Optoelectronic Applications of a Stable p-Type 2D Material: 1 st -MnS. <i>ACS Nano</i> , 2019, 13, 12662-12670.	14.6	54
53	High-Performance Phototransistor of Epitaxial PbS Nanoplate-Graphene Heterostructure with Edge Contact. <i>Advanced Materials</i> , 2016, 28, 6497-6503.	21.0	51
54	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

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55	Two-Dimensional Unipolar Memristors with Logic and Memory Functions. <i>Nano Letters</i> , 2020, 20, 4144-4152.	9.1	50
56	Electrostatically tunable lateral MoTe ₂ p-n junction for use in high-performance optoelectronics. <i>Nanoscale</i> , 2016, 8, 13245-13250.	5.6	49
57	Multifunctional tunneling devices based on graphene/h-BN/MoSe ₂ van der Waals heterostructures. <i>Applied Physics Letters</i> , 2017, 110, .	3.3	49
58	Efficient Photocatalytic Hydrogen Evolution via Band Alignment Tailoring: Controllable Transition from Type-II to Type-I. <i>Small</i> , 2017, 13, 1702163.	10.0	47
59	High-Performance Memristors Based on Ultrathin 2D Copper Chalcogenides. <i>Advanced Materials</i> , 2022, 34, e2108313.	21.0	45
60	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
61	Robust trap effect in transition metal dichalcogenides for advanced multifunctional devices. <i>Nature Communications</i> , 2019, 10, 4133.	12.8	39
62	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
63	Defect-mediated ferromagnetism in correlated two-dimensional transition metal phosphorus trisulfides. <i>Science Advances</i> , 2021, 7, eabj4086.	10.3	35
64	Reconfigurable photovoltaic effect for optoelectronic artificial synapse based on ferroelectric p-n junction. <i>Nano Research</i> , 2021, 14, 4328-4335.	10.4	33
65	Low-Dimensional Te-Based Nanostructures. <i>Advanced Materials</i> , 2013, 25, 3915-3921.	21.0	31
66	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
67	Oriented layered Bi ₂ O ₂ Se nanowire arrays for ultrasensitive photodetectors. <i>Applied Physics Letters</i> , 2019, 114, .	3.3	31
68	Bridging the van der Waals Interface for Advanced Optoelectronic Devices. <i>Advanced Materials</i> , 2020, 32, e1906874.	21.0	31
69	Anti-Ambipolar Transport with Large Electrical Modulation in 2D Heterostructured Devices. <i>Advanced Materials</i> , 2019, 31, e1901144.	21.0	28
70	Few-layered CuInP ₂ S ₆ nanosheet with sulfur vacancy boosting photocatalytic hydrogen evolution. <i>CrystEngComm</i> , 2021, 23, 591-598.	2.6	25
71	Recent progress on emergent two-dimensional magnets and heterostructures. <i>Nanotechnology</i> , 2021, 32, 472001.	2.6	25
72	Low-Dimensional Topological Crystalline Insulators. <i>Small</i> , 2015, 11, 4613-4624.	10.0	24

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73	A unipolar nonvolatile resistive switching behavior in a layered transition metal oxide. <i>Nanoscale</i> , 2019, 11, 20497-20506.	5.6	24
74	Gapless van der Waals Heterostructures for Infrared Optoelectronic Devices. <i>ACS Nano</i> , 2019, 13, 14519-14528.	14.6	24
75	Hidden and doubly heavy molecular states from interactions $D^{\{s\}}_{\{ar\{D\}}^{\{s\}}/B^{\{s\}}_{\{ar\{B\}}^{\{s\}}_{\{s\}}$ and $D^{\{s\}}_{\{s\}}D_{\{s\}}^{\{s\}}/B^{\{s\}}_{\{s\}}B_{\{s\}}^{\{s\}}$. <i>European Physical Journal C</i> , 2021, 81, 1.	3.9	24
76	Van der Waals Heterostructure Devices with Dynamically Controlled Conduction Polarity and Multifunctionality. <i>Advanced Functional Materials</i> , 2019, 29, 1804897.	14.9	23
77	Logic and in-memory computing achieved in a single ferroelectric semiconductor transistor. <i>Science Bulletin</i> , 2021, 66, 2288-2296.	9.0	23
78	Ferroelectric-induced carrier modulation for ambipolar transition metal dichalcogenide transistors. <i>Applied Physics Letters</i> , 2017, 110, .	3.3	22
79	Growth and Raman Scattering Investigation of a New 2D MOX Material: YbOCl. <i>Advanced Functional Materials</i> , 2019, 29, 1903017.	14.9	21
80	Two-Dimensional Palladium Nanosheet Intercalated with Gold Nanoparticles for Plasmon-Enhanced Electrocatalysis. <i>ACS Catalysis</i> , 2021, 11, 13721-13732.	11.2	21
81	Nonvolatile reconfigurable broadband photodiodes based on BP/ $\hat{\pm}$ -In ₂ Se ₃ ferroelectric p-n junctions. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	21
82	Carbon dots decorated vertical SnS ₂ nanosheets for efficient photocatalytic oxygen evolution. <i>Applied Physics Letters</i> , 2016, 109, .	3.3	20
83	Controlled synthesis and Raman study of a 2D antiferromagnetic P-type semiconductor: $\hat{\pm}$ -MnSe. <i>Nanoscale</i> , 2021, 13, 6953-6964.	5.6	20
84	Uncovering the Conduction Behavior of van der Waals Ambipolar Semiconductors. <i>Advanced Materials</i> , 2019, 31, e1805317.	21.0	19
85	Modulation of Negative Differential Resistance in Black Phosphorus Transistors. <i>Advanced Materials</i> , 2021, 33, e2008329.	21.0	18
86	Phase-Tunable Synthesis and Etching-Free Transfer of Two-Dimensional Magnetic FeTe. <i>ACS Nano</i> , 2021, 15, 19089-19097.	14.6	18
87	Controlling Injection Barriers for Ambipolar 2D Semiconductors via Quasi-van der Waals Contacts. <i>Advanced Science</i> , 2019, 6, 1801841.	11.2	17
88	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
89	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
90	A Ferroelectric p-n Heterostructure for Highly Enhanced Short-Circuit Current Density and Self-Powered Photodetection. <i>Advanced Electronic Materials</i> , 2022, 8, .	5.1	17

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91	Using ferroelectric polarization to regulate and preserve the valley polarization in a $\text{HfN}/\text{InN}/\text{GaN}$ heterotrilinear. <i>Physical Review B</i> , 2021, 103, .	16.3	16
92	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
93	Hierarchically heterostructured metal hydr(oxy)oxides for efficient overall water splitting. <i>Nanoscale</i> , 2019, 11, 11736-11743.	5.6	14
94	Controllable Synthesis Quadratic-Dependent Unsaturated Magnetoresistance of Two-Dimensional Nonlayered Fe_7S_8 with Robust Environmental Stability. <i>ACS Nano</i> , 2022, 16, 8301-8308.	14.6	12
95	Van der waals epitaxial growth of two-dimensional PbSe and its high-performance heterostructure devices. <i>Science Bulletin</i> , 2022, , .	9.0	9
96	High-performance ultraviolet photodetectors based on 2D layered $\text{In}_4/3\text{P}_2\text{Se}_6$ nanoflakes. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	7
97	Van der Waals integration of 2D atomic crystals for advanced multifunctional devices. <i>Science Bulletin</i> , 2019, 64, 1033-1035.	9.0	6
98	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
99	Newly developed two-dimensional materials for efficient photocatalytic hydrogen evolution. <i>Science Bulletin</i> , 2019, 64, 958-960.	9.0	4
100	Speeding protons with metal vacancies. <i>Science</i> , 2020, 370, 525-526.	12.6	3
101	Self-intercalated two-dimensional magnetic semiconductor $\text{V}_8(\text{S}_{1-x}\text{Se}_x)_{15}$. <i>Applied Physics Letters</i> , 2021, 118, 221903.	3.3	2
102	Functional annotation of creeping bentgrass protein sequences based on convolutional neural network. <i>BMC Plant Biology</i> , 2022, 22, 227.	3.6	0