

Heejun Yang

List of Publications by Year in descending order

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Version: 2024-02-01

61
papers

4,495
citations

279701

23
h-index

133188

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61
all docs

61
docs citations

61
times ranked

6688
citing authors

#	ARTICLE	IF	CITATIONS
1	Phase patterning for ohmic homojunction contact in MoTe ₂ . Science, 2015, 349, 625-628.	6.0	918
2	Graphene Barristor, a Triode Device with a Gate-Controlled Schottky Barrier. Science, 2012, 336, 1140-1143.	6.0	862
3	Bandgap opening in few-layered monoclinic MoTe ₂ . Nature Physics, 2015, 11, 482-486.	6.5	800
4	Structural and quantum-state phase transitions in van der Waals layered materials. Nature Physics, 2017, 13, 931-937.	6.5	280
5	In-sensor reservoir computing for language learning via two-dimensional memristors. Science Advances, 2021, 7, .	4.7	175
6	Self-selective van der Waals heterostructures for large scale memory array. Nature Communications, 2019, 10, 3161.	5.8	139
7	Synaptic Computation Enabled by Joule Heating of Single-Layered Semiconductors for Sound Localization. Nano Letters, 2018, 18, 3229-3234.	4.5	134
8	Active hydrogen evolution through lattice distortion in metallic MoTe ₂ . 2D Materials, 2017, 4, 025061.	2.0	103
9	Graphene for True Ohmic Contact at Metal-Semiconductor Junctions. Nano Letters, 2013, 13, 4001-4005.	4.5	101
10	Long-Range Lattice Engineering of MoTe ₂ by a 2D Electride. Nano Letters, 2017, 17, 3363-3368.	4.5	72
11	Passivation of Metal Surface States: Microscopic Origin for Uniform Monolayer Graphene by Low Temperature Chemical Vapor Deposition. ACS Nano, 2011, 5, 1915-1920.	7.3	58
12	Recent Progress in Synaptic Devices Based on 2D Materials. Advanced Intelligent Systems, 2020, 2, 1900167.	3.3	55
13	Ultralow switching voltage slope based on two-dimensional materials for integrated memory and neuromorphic applications. Nano Energy, 2020, 69, 104472.	8.2	50
14	Tunable Out-of-Plane Piezoelectricity in Thin-Layered MoTe ₂ by Surface Corrugation-Mediated Flexoelectricity. ACS Applied Materials & Interfaces, 2018, 10, 27424-27431.	4.0	44
15	Te vacancy-driven superconductivity in orthorhombic molybdenum ditelluride. 2D Materials, 2017, 4, 021030.	2.0	42
16	Vertical Heterophase for Electrical, Electrochemical, and Mechanical Manipulations of Layered MoTe ₂ . Advanced Functional Materials, 2019, 29, 1904504.	7.8	40
17	Role of anionic vacancy for active hydrogen evolution in WTe ₂ . Applied Surface Science, 2020, 515, 145972.	3.1	34
18	Atomic-scale symmetry breaking for out-of-plane piezoelectricity in two-dimensional transition metal dichalcogenides. Nano Energy, 2019, 58, 57-62.	8.2	33

#	ARTICLE	IF	CITATIONS
19	Post-patterning of an electronic homojunction in atomically thin monoclinic MoTe ₂ . 2D Materials, 2017, 4, 024004.	2.0	32
20	Polymorphic Spin, Charge, and Lattice Waves in Vanadium DiteLLuride. Advanced Materials, 2020, 32, e1906578.	11.1	29
21	Coherent Thermoelectric Power from Graphene Quantum Dots. Nano Letters, 2019, 19, 61-68.	4.5	25
22	Selective growth of monolayer semiconductors for diverse synaptic junctions. 2D Materials, 2019, 6, 015029.	2.0	25
23	Hybrid catalyst with monoclinic MoTe ₂ and platinum for efficient hydrogen evolution. APL Materials, 2019, 7, .	2.2	24
24	Ultrashort Vertical Channel van der Waals Semiconductor Transistors. Advanced Science, 2020, 7, 1902964.	5.6	24
25	Plasmonic-Based Subwavelength Graphene-on-hBN Modulator on Silicon Photonics. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-6.	1.9	23
26	Patterning of type-II Dirac semimetal PtTe ₂ for optimized interface of tellurene optoelectronic device. Nano Energy, 2021, 86, 106049.	8.2	22
27	Heterophase Boundary for Active Hydrogen Evolution in MoTe ₂ . Advanced Functional Materials, 2022, 32, 2105675.	7.8	21
28	Mixed-Phase (2H and 1T) MoS ₂ Catalyst for a Highly Efficient and Stable Si Photocathode. Catalysts, 2018, 8, 580.	1.6	20
29	Basal-Plane Catalytic Activity of Layered Metallic Transition Metal DiteLLurides for the Hydrogen Evolution Reaction. Applied Sciences (Switzerland), 2020, 10, 3087.	1.3	19
30	Active hydrogen evolution on the plasma-treated edges of WTe ₂ . APL Materials, 2021, 9, .	2.2	19
31	Chain Vacancies in 2D Crystals. Small, 2017, 13, 1601930.	5.2	18
32	Resonant Tunneling Spectroscopy to Probe the Giant Stark Effect in Atomically Thin Materials. Advanced Materials, 2020, 32, e1906942.	11.1	18
33	Semiconductor-less vertical transistor with ION/IOFF of 106. Nature Communications, 2021, 12, 1000.	5.8	18
34	In Operando Stacking of Reduced Graphene Oxide for Active Hydrogen Evolution. ACS Applied Materials & Interfaces, 2019, 11, 43460-43465.	4.0	17
35	Selective patterning of out-of-plane piezoelectricity in MoTe ₂ via focused ion beam. Nano Energy, 2021, 79, 105451.	8.2	17
36	Doping-Mediated Lattice Engineering of Monolayer ReS ₂ for Modulating In-Plane Anisotropy of Optical and Transport Properties. ACS Nano, 2021, 15, 13770-13780.	7.3	17

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37	Symmetry Dictated Grain Boundary State in a Two-Dimensional Topological Insulator. Nano Letters, 2020, 20, 5837-5843.	4.5	16
38	Phase-controllable laser thinning in MoTe ₂ . Applied Surface Science, 2021, 563, 150282.	3.1	16
39	In-plane electric field confinement engineering in graphene-based hybrid plasmonic waveguides. Applied Optics, 2019, 58, 7503.	0.9	15
40	Recent Progress in 1D Contacts for 2D Material-Based Devices. Advanced Materials, 2022, 34, e2202408.	11.1	13
41	Mitrofanovite, Layered Platinum Telluride, for Active Hydrogen Evolution. ACS Applied Materials & Interfaces, 2021, 13, 2437-2446.	4.0	10
42	Nanoporous Silver Telluride for Active Hydrogen Evolution. ACS Nano, 2021, 15, 6540-6550.	7.3	10
43	Proximity Engineering of the van der Waals Interaction in Multilayered Graphene. ACS Applied Materials & Interfaces, 2019, 11, 42528-42533.	4.0	9
44	Orbital Gating Driven by Giant Stark Effect in Tunneling Phototransistors. Advanced Materials, 2022, 34, e2106625.	11.1	9
45	Large-Area MoS ₂ via Colloidal Nanosheet Ink for Integrated Memtransistor. Small Methods, 2021, 5, 2100558.	4.6	8
46	Hydrogen bubble-assisted growth of Pt ₃ Te ₄ for electrochemical catalysts. Current Applied Physics, 2021, , .	1.1	6
47	Robust Quantum Oscillation of Dirac Fermions in a Single-Defect Resonant Transistor. ACS Nano, 2021, 15, 20013-20019.	7.3	6
48	Quantum Sensing of Thermoelectric Power in Low-Dimensional Materials. Advanced Materials, 2023, 35, e2106871.	11.1	6
49	Superconductivity in Te-deficient polymorphic MoTe ₂ and its derivatives: rich structural and electronic phase transitions. 2D Materials, 2018, 5, 031014.	2.0	5
50	Classical and quantum phases in hexagonal boron nitride-combined van der Waals heterostructures. Informa Mater, 2021, 3, 252-270.	8.5	5
51	Lifshitz Transition and Non-Fermi Liquid Behavior in Highly Doped Semimetals. Advanced Materials, 2021, 33, 2005742.	11.1	5
52	Thermomechanical Manipulation of Electric Transport in MoTe ₂ . Advanced Electronic Materials, 2021, 7, 2000823.	2.6	5
53	Bandgap modulation in the two-dimensional core-shell-structured monolayers of WS ₂ . IScience, 2022, 25, 103563.	1.9	4
54	Reshaped Weyl fermionic dispersions driven by Coulomb interactions in MoTe ₂ . Physical Review B, 2022, 105, .		

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55	Atomic and Electronic Manipulation of Robust Ferroelectric Polymorphs. <i>Advanced Materials</i> , 2022, 34, .	11.1	4
56	Harnessing Thermoelectric Puddles <i>via</i> the Stacking Order and Electronic Screening in Graphene. <i>ACS Nano</i> , 2021, 15, 5397-5404.	7.3	3
57	Near-field probing of dielectric screening by hexagonal boron nitride in graphene integrated on silicon photonics. <i>Nanotechnology</i> , 2021, 32, 315207.	1.3	3
58	Local phase transition at crack edges of $\text{Mo}_{1-x}\text{W}_x\text{Te}_2$ polymorphs. <i>Applied Surface Science</i> , 2022, , 153503.	3.1	3
59	Graphene traps. <i>Nature Physics</i> , 2016, 12, 994-995.	6.5	2
60	Applications of metal-semiconductor phase transition in 2D layered transition metal dichalcogenides. <i>Vacuum Magazine</i> , 2016, 3, 4-8.	0.0	0
61	Efficient hydrogen evolution reaction at the phase transition boundary of polymorphic $\text{Mo}_{1-x}\text{W}_x\text{Te}_2$. <i>APL Materials</i> , 2022, 10, 061107.	2.2	0