Haipeng Xie

List of Publications by Year
in descending order

96 papers	5,233 citations	126907 33 h-index	88630 70 g-index
97 all docs	97 docs citations	97 times ranked	7520 citing authors

#	Article	IF	Citations
1	Cation and anion immobilization through chemical bonding enhancement with fluorides for stable halide perovskite solar cells. Nature Energy, 2019, 4, 408-415.	39.5	831
2	Dopant-induced electron localization drives CO2 reduction to C2 hydrocarbons. Nature Chemistry, 2018, 10, 974-980.	13.6	781
3	Qualifying composition dependent p and n self-doping in CH3NH3PbI3. Applied Physics Letters, 2014, 105, .	3.3	518
4	2D MoS₂ Neuromorphic Devices for Brainâ€Like Computational Systems. Small, 2017, 13, 1700933.	10.0	268
5	Liquid medium annealing for fabricating durable perovskite solar cells with improved reproducibility. Science, 2021, 373, 561-567.	12.6	227
6	Interfacial electronic structure at the CH3NH3PbI3/MoOx interface. Applied Physics Letters, 2015, 106, .	3.3	152
7	Effects of Precursor Ratios and Annealing on Electronic Structure and Surface Composition of CH₃NH₃PbI₃ Perovskite Films. Journal of Physical Chemistry C, 2016, 120, 215-220.	3.1	108
8	Congeneric Incorporation of CsPbBr₃ Nanocrystals in a Hybrid Perovskite Heterojunction for Photovoltaic Efficiency Enhancement. ACS Energy Letters, 2018, 3, 30-38.	17.4	106
9	Highâ€Performance Broadband Perovskite Photodetectors Based on CH₃NH₃PbI₃/C8BTBT Heterojunction. Advanced Electronic Materials, 2017, 3, 1700058.	5.1	101
10	Promoting Energy Transfer via Manipulation of Crystallization Kinetics of Quasiâ€2D Perovskites for Efficient Green Lightâ€Emitting Diodes. Advanced Materials, 2021, 33, e2102246.	21.0	88
11	Hybrids of PtRu Nanoclusters and Black Phosphorus Nanosheets for Highly Efficient Alkaline Hydrogen Evolution Reaction. ACS Catalysis, 2019, 9, 10870-10875.	11.2	86
12	Rubidium Doping to Enhance Carrier Transport in CsPbBr₃ Single Crystals for High-Performance X-Ray Detection. ACS Applied Materials & Interfaces, 2020, 12, 989-996.	8.0	84
13	Reducing Energy Disorder in Perovskite Solar Cells by Chelation. Journal of the American Chemical Society, 2022, 144, 5400-5410.	13.7	72
14	Multilevel Nonvolatile Organic Photomemory Based on Vanadyl-Phthalocyanine/para-Sexiphenyl Heterojunctions. ACS Photonics, 2017, 4, 2573-2579.	6.6	68
15	Highly Efficient, Solution-Processed CsPbI₂Br Planar Heterojunction Perovskite Solar Cells via Flash Annealing. ACS Photonics, 2018, 5, 4104-4110.	6.6	64
16	Ion Migration Accelerated Reaction between Oxygen and Metal Halide Perovskites in Light and Its Suppression by Cesium Incorporation. Advanced Energy Materials, 2021, 11, 2002552.	19.5	64
17	Sandwiched electrode buffer for efficient and stable perovskite solar cells with dual back surface fields. Joule, 2021, 5, 2148-2163.	24.0	63
18	Irreversible light-soaking effect of perovskite solar cells caused by light-induced oxygen vacancies in titanium oxide. Applied Physics Letters, 2017, 111, .	3.3	56

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19	Large-scale roll-to-roll printed, flexible and stable organic bulk heterojunction photodetector. Npj Flexible Electronics, 2018, 2, .	10.7	54
20	Effects of annealing on structure and composition of LSMO thin films. Physica B: Condensed Matter, 2015, 477, 14-19.	2.7	47
21	Charge Transfer at the PTCDA/Black Phosphorus Interface. Journal of Physical Chemistry C, 2017, 121, 18084-18094.	3.1	46
22	Efficient organic photovoltaics using solution-processed, annealing-free TiO2 nanocrystalline particles as an interface modification layer. Organic Electronics, 2015, 17, 253-261.	2.6	45
23	Extremely low trap-state energy level perovskite solar cells passivated using NH2-POSS with improved efficiency and stability. Journal of Materials Chemistry A, 2018, 6, 6806-6814.	10.3	45
24	Accelerated electron extraction and improved UV stability of TiO2 based perovskite solar cells by SnO2 based surface passivation. Organic Electronics, 2018, 59, 184-189.	2.6	45
25	Creating a Dualâ€Functional 2D Perovskite Layer at the Interface to Enhance the Performance of Flexible Perovskite Solar Cells. Small, 2021, 17, e2102368.	10.0	44
26	Ultrafast fabrication of Cu oxide micro/nano-structures via laser ablation to promote oxygen evolution reaction. Chemical Engineering Journal, 2020, 383, 123086.	12.7	42
27	Efficient and stable inverted polymer solar cells using TiO2 nanoparticles and analysized by Mott-Schottky capacitance. Organic Electronics, 2014, 15, 1745-1752.	2.6	41
28	A homogeneous pâ€“n junction diode by selective doping of few layer MoSe₂ using ultraviolet ozone for high-performance photovoltaic devices. Nanoscale, 2019, 11, 13469-13476.	5.6	41
29	Probing Phase Distribution in 2D Perovskites for Efficient Device Design. ACS Applied Materials & Interfaces, 2020, 12, 3127-3133.	8.0	39
30	Thickness-Dependent Air-Exposure-Induced Phase Transition of CuPc Ultrathin Films to Well-Ordered One-Dimensional Nanocrystals on Layered Substrates. Journal of Physical Chemistry C, 2015, 119, 4217-4223.	3.1	36
31	MAPbI3/agarose photoactive composite for highly stable unencapsulated perovskite solar cells in humid environment. Nano Energy, 2020, 67, 104246.	16.0	36
32	Evolution of the electronic structure of C60/La0.67Sr0.33MnO3 interface. Applied Physics Letters, 2016, 108, .	3.3	35
33	Air-stable and high-performance organic field-effect transistors based on ordered, large-domain phthalocyanine copper thin film. Synthetic Metals, 2015, 210, 336-341.	3.9	34
34	The correlations of the electronic structure and film growth of 2,7-diocty[1]benzothieno[3,2-b]benzothiophene (C8-BTBT) on SiO₂. Physical Chemistry Chemical Physics, 2017, 19, 1669-1676.	2.8	34
35	Orientation-dependent energy level alignment and film growth of 2,7-diocty[1]benzothieno[3,2-b]benzothiophene (C8-BTBT) on HOPG. Journal of Chemical Physics, 2016, 144, 034701.	3.0	33
36	Efficient, stable and flexible perovskite solar cells using two-step solution-processed SnO2 layers as electron-transport-material. Organic Electronics, 2018, 58, 126-132.	2.6	31

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37	van der Waals epitaxial growth of ultrathin metallic NiSe nanosheets on WSe2 as high performance contacts for WSe2 transistors. Nano Research, 2019, 12, 1683-1689.	10.4	31
38	Interfacial electronic structures of MoOx/mixed perovskite photodetector. Organic Electronics, 2019, 65, 162-169.	2.6	30
39	Structural and electronic properties of atomically thin Bismuth on Au(111). Surface Science, 2019, 679, 147-153.	1.9	29
40	Energyâ€Level Modulation in Diboronâ€Modified SnO₂ for Highâ€Efficiency Perovskite Solar Cells. Solar Rrl, 2020, 4, 1900217.	5.8	28
41	Cobalt hydroxide-black phosphorus nanosheets: A superior electrocatalyst for electrochemical oxygen evolution. Electrochimica Acta, 2019, 297, 40-45.	5.2	27
42	The Role of Surface Termination in Halide Perovskites for Efficient Photocatalytic Synthesis. Angewandte Chemie - International Edition, 2020, 59, 12931-12937.	13.8	27
43	PbI₂â€“MoS₂ Heterojunction: van der Waals Epitaxial Growth and Energy Band Alignment. Journal of Physical Chemistry Letters, 2019, 10, 4203-4208.	4.6	25
44	In situ surface modification of TiO2 by CaTiO3 to improve the UV stability and power conversion efficiency of perovskite solar cells. Applied Physics Letters, 2019, 115, .	3.3	25
45	Rubidium Ions Enhanced Crystallinity for Ruddlesdenâ€“Popper Perovskites. Advanced Science, 2020, 7, 2002445.	11.2	25
46	Enormous enhancement in electrical performance of few-layered MoTe2 due to Schottky barrier reduction induced by ultraviolet ozone treatment. Nano Research, 2020, 13, 952-958.	10.4	25
47	Van Der Waals Heterostructures between Small Organic Molecules and Layered Substrates. Crystals, 2016, 6, 113.	2.2	24
48	Effects of CsPbBr3 nanocrystals concentration on electronic structure and surface composition of perovskite films. Organic Electronics, 2019, 73, 327-331.	2.6	22
49	All-inorganic, hole-transporting-layer-free, carbon-based CsPbIBr2 planar solar cells with ZnO as electron-transporting materials. Journal of Alloys and Compounds, 2020, 817, 152768.	5.5	22
50	All-inorganic, hole-transporting-layer-free, carbon-based CsPbIBr2 planar perovskite solar cells by a two-step temperature-control annealing process. Materials Science in Semiconductor Processing, 2020, 108, 104870.	4.0	21
51	Adjusting energy level alignment between HTL and CsPbI₂Br to improve solar cell efficiency. Journal of Semiconductors, 2021, 42, 030501.	3.7	21
52	Famatinite Cu₃SbS₄ nanocrystals as hole transporting material for efficient perovskite solar cells. Journal of Materials Chemistry C, 2018, 6, 7989-7993.	5.5	20
53	Type-II Interface Band Alignment in the vdW PbI₂â€“MoSe₂ Heterostructure. ACS Applied Materials & Interfaces, 2020, 12, 32099-32105.	8.0	20
54	Low-temperature synthesis of all-inorganic perovskite nanocrystals for UV-photodetectors. Journal of Materials Chemistry C, 2019, 7, 5488-5496.	5.5	19

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55	Tailoring the structure of supported Î´-MnO2 nanosheets to raise pseudocapacitance by surface-modified carbon cloth. Journal of Power Sources, 2020, 449, 227507.	7.8	19
56	Fully Doctor-bladed efficient perovskite solar cells in ambient condition via composition engineering. Organic Electronics, 2020, 83, 105736.	2.6	18
57	Interface electronic structure and morphology of 2,7-dioctyl[1]benzothieno[3,2-b]benzothiophene (C8-BTBT) on Au film. Applied Surface Science, 2017, 416, 696-703.	6.1	17
58	Energy level and thickness control on PEDOT:PSS layer for efficient planar heterojunction perovskite cells. Journal Physics D: Applied Physics, 2018, 51, 025110.	2.8	15
59	Fullerene (C60) interlayer modification on the electronic structure and the film growth of 2,7-diocty[1]benzothieno-[3,2-b]benzothiophene on SiO2. Synthetic Metals, 2017, 229, 1-6.	3.9	14
60	Energy Level Evolution and Oxygen Exposure of Fullerene/Black Phosphorus Interface. Journal of Physical Chemistry Letters, 2018, 9, 5254-5261.	4.6	13
61	Electronic structures at the interface between CuPc and black phosphorus. Journal of Chemical Physics, 2017, 147, 064702.	3.0	12
62	Interface Energy-Level Alignment between Black Phosphorus and F₁₆CuPc Molecular Films. Journal of Physical Chemistry C, 2019, 123, 10443-10450.	3.1	12
63	Dual-band metamaterial absorber with stable absorption performance based on fractal structure. Journal Physics D: Applied Physics, 2022, 55, 095003.	2.8	12
64	Enhancement of Electrochromic Properties of Polyaniline Induced by Copper Ions. Nanoscale Research Letters, 2022, 17, 51.	5.7	12
65	Temperature-dependent photoluminescence of Co-evaporated MAPbI3 ultrathin films. Results in Physics, 2022, 34, 105326.	4.1	11
66	Dual-function flexible metasurface for absorption and polarization conversion and its application for radar cross section reduction. Journal of Applied Physics, 2022, 131, .	2.5	11
67	Electronic structure evolution at DBBA/Au(111) interface W/O Bismuth insertion layer. Synthetic Metals, 2019, 251, 24-29.	3.9	10
68	Evolutions of morphology and electronic properties of few-layered MoS2 exposed to UVO. Results in Physics, 2020, 19, 103634.	4.1	10
69	Effective passivation of black phosphorus against atmosphere by quasi-monolayer of F4TCNQ molecules. Applied Physics Letters, 2020, 117, .	3.3	10
70	Ionic Liquidâ€Tuned Crystallization for Stable and Efficient Perovskite Solar Cells. Solar Rrl, 2022, 6, .	5.8	10
71	Photoemission studies of C8-BTBT/La0.67Sr0.33MnO3 interface. Synthetic Metals, 2020, 260, 116261.	3.9	9
72	One-pot synthesis of CuPt nanodendrites with enhanced activity towards methanol oxidation reaction. RSC Advances, 2018, 8, 9293-9298.	3.6	8

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73	Asymmetric Fermi velocity induced chiral magnetotransport anisotropy in the type-II Dirac semi-metal PtSe2. Communications Physics, 2020, 3, .	5.3	8
74	Emission properties of sequentially deposited ultrathin CH3NH3PbI3/MoS2 heterostructures. Current Applied Physics, 2022, 36, 27-33.	2.4	8
75	Interface Electronic Structure between Au and Black Phosphorus. Journal of Physical Chemistry C, 2018, 122, 18405-18411.	3.1	7
76	Effect of interfacial interaction on spin polarization at organic-cobalt interface. Organic Electronics, 2020, 78, 105567.	2.6	7
77	Large-scale Roll-to-Roll Micro-gravure Printed Flexible PBDB-T/IT-M Bulk Heterojunction Photodetectors. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	2.3	7
78	Interfaces between MoO_x and MoX ₂ (X = S, Se, and Te)*. Chinese Physics B, 2020, 29, 116802.	1.4	7
79	Triphenylamineâ€“Polystyrene Blends for Perovskite Solar Cells with Simultaneous Energy Loss Suppression and Stability Improvement. Solar Rrl, 2020, 4, 2000490.	5.8	6
80	SiO₂ nanoparticle-regulated crystallization of lead halide perovskite and improved efficiency of carbon-electrode-based low-temperature planar perovskite solar cells*. Chinese Physics B, 2020, 29, 078401.	1.4	6
81	Electronic structure and spin polarization of Co/black phosphorus interface. Journal of Magnetism and Magnetic Materials, 2020, 499, 166297.	2.3	5
82	Modification of C60 nano-interlayers on organic field-effect transistors based on 2,7-diocty[1]benzothieno-[3,2-b]benzothiophene (C8-BTBT)/SiO2. Results in Physics, 2020, 19, 103590.	4.1	5
83	Modification of an ultrathin C₆₀ interlayer on the electronic structure and molecular packing of C8-BTBT on HOPG. Physical Chemistry Chemical Physics, 2020, 22, 25264-25271.	2.8	4
84	Improved moisture resistance and interfacial recombination of perovskite solar cells by doping oleylamine in spiro-OMeTAD based hole-transport layer. Applied Physics Letters, 2022, 120, .	3.3	4
85	Cu@C core-shell nanoparticles with efficient optical absorption: DDA-based simulation and experimental validation. Results in Physics, 2020, 16, 102885.	4.1	3
86	Interface electronic structure between aluminum and black phosphorus. Results in Physics, 2020, 18, 103222.	4.1	3
87	Modification of FA0.85MA0.15Pb(I0.85Br0.15)3 Films by NH2-POSS. Crystals, 2021, 11, 1544.	2.2	3
88	Electronic Structures and Nanofilm Growth of 2,7-Dioctyl[1]Benzothieno[3,2-b]Benzothiophene on Black Phosphorus. Journal of Nanoscience and Nanotechnology, 2018, 18, 4332-4336.	0.9	2
89	The Role of Surface Termination in Halide Perovskites for Efficient Photocatalytic Synthesis. Angewandte Chemie, 2020, 132, 13031-13037.	2.0	2
90	Facile Surface Laser Modification of Nickel Foams for Efficient Water Oxidation Electrocatalysis. ChemElectroChem, 2021, 8, 2124-2128.	3.4	2

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91	Interfacial electronic structure at rubrene/NiFe heterostructure. Results in Physics, 2021, 29, 104692.	4.1	2
92	Hybridization-Induced Inversion of Spin Polarization at Rubrene/Ferromagnetic Cobalt Interface. Journal of Physical Chemistry C, 2021, 125, 20697-20705.	3.1	1
93	Effect of MoO3 buffer layer on the electronic structure of Al-BP interface. Journal Physics D: Applied Physics, 0, , .	2.8	1
94	Interfacial modification for high performance photodetector based on perovskite. , 2021, , .		0
95	Passivation effect of NTCDA nanofilm on black phosphorus. Results in Physics, 2022, 36, 105466.	4.1	0
96	Design of Real-Time Automatic Gain Control Circuit for Ultra-Low-Frequency (ULF) Communications. , 2022, , .		0