Xing Wang Zhang

List of Publications by Year
in descending order

73 papers	11,889 citations	126708 33 h-index	82410 72 g-index
76 all docs	76 docs citations	76 times ranked	11392 citing authors

#	Article	IF	Citations
1	Surface passivation of perovskite film for efficient solar cells. Nature Photonics, 2019, 13, 460-466.	15.6	3,458
2	Enhanced electron extraction using SnO2 for high-efficiency planar-structure HC(NH2)2PbI3-based perovskite solar cells. Nature Energy, 2017, 2, .	19.8	1,633
3	Planarâ€Structure Perovskite Solar Cells with Efficiency beyond 21%. Advanced Materials, 2017, 29, 1703852.	11.1	1,003
4	Efficient green light-emitting diodes based on quasi-two-dimensional composition and phase engineered perovskite with surface passivation. Nature Communications, 2018, 9, 570.	5.8	763
5	Ultra-bright and highly efficient inorganic based perovskite light-emitting diodes. Nature Communications, 2017, 8, 15640.	5.8	669
6	SnO₂: A Wonderful Electron Transport Layer for Perovskite Solar Cells. Small, 2018, 14, e1801154.	5.2	639
7	Solvent-controlled growth of inorganic perovskite films in dry environment for efficient and stable solar cells. Nature Communications, 2018, 9, 2225.	5.8	526
8	Recent Progresses on Defect Passivation toward Efficient Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 1902650.	10.2	516
9	Large cation ethylammonium incorporated perovskite for efficient and spectra stable blue light-emitting diodes. Nature Communications, 2020, 11, 4165.	5.8	217
10	Perovskite Lightâ€Emitting Diodes with External Quantum Efficiency Exceeding 22% via Smallâ€Molecule Passivation. Advanced Materials, 2021, 33, e2007169.	11.1	211
11	Cesium Lead Inorganic Solar Cell with Efficiency beyond 18% via Reduced Charge Recombination. Advanced Materials, 2019, 31, e1905143.	11.1	202
12	High-performance deep ultraviolet photodetectors based on few-layer hexagonal boron nitride. Nanoscale, 2018, 10, 5559-5565.	2.8	144
13	Enhanced Proton Conduction in Polymer Electrolyte Membranes as Synthesized by Polymerization of Protic Ionic Liquid-Based Microemulsions. Chemistry of Materials, 2009, 21, 1480-1484.	3.2	142
14	Nickel oxide for inverted structure perovskite solar cells. Journal of Energy Chemistry, 2021, 52, 393-411.	7.1	132
15	A high-performance photodetector based on an inorganic perovskiteâ€"ZnO heterostructure. Journal of Materials Chemistry C, 2017, 5, 6115-6122.	2.7	107
16	Highly efficient and stable planar heterojunction perovskite solar cells via a low temperature solution process. Journal of Materials Chemistry A, 2015, 3, 12133-12138.	5.2	86
17	Aligned Growth of Millimeterâ€Size Hexagonal Boron Nitride Singleâ€Crystal Domains on Epitaxial Nickel Thin Film. Small, 2017, 13, 1604179.	5.2	76
18	Synthesis of Largeâ€Sized Singleâ€Crystal Hexagonal Boron Nitride Domains on Nickel Foils by Ion Beam Sputtering Deposition. Advanced Materials, 2015, 27, 8109-8115.	11.1	74

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19	Controlled Growth of Fewâ€Layer Hexagonal Boron Nitride on Copper Foils Using Ion Beam Sputtering Deposition. Small, 2015, 11, 1542-1547.	5.2	70
20	Synthesis of in-plane and stacked graphene/hexagonal boron nitride heterostructures by combining with ion beam sputtering deposition and chemical vapor deposition. Nanoscale, 2015, 7, 16046-16053.	2.8	68
21	Stabilizing Î³â€CsPbI₃ Perovskite via Phenylethylammonium for Efficient Solar Cells with Openâ€Circuit Voltage over 1.3ÂV. Small, 2020, 16, e2005246.	5.2	67
22	Effects of Organic Cations on the Structure and Performance of Quasi-Two-Dimensional Perovskite-Based Light-Emitting Diodes. Journal of Physical Chemistry Letters, 2019, 10, 2892-2897.	2.1	56
23	Catalyst-free growth of two-dimensional hexagonal boron nitride few-layers on sapphire for deep ultraviolet photodetectors. Journal of Materials Chemistry C, 2019, 7, 14999-15006.	2.7	53
24	Selective Direct Growth of Atomic Layered HfS₂ on Hexagonal Boron Nitride for High Performance Photodetectors. Chemistry of Materials, 2018, 30, 3819-3826.	3.2	51
25	Recent Progress in Highâ€efficiency Planarâ€structure Perovskite Solar Cells. Energy and Environmental Materials, 2019, 2, 93-106.	7.3	45
26	Epitaxial growth of HfS ₂ on sapphire by chemical vapor deposition and application for photodetectors. 2D Materials, 2017, 4, 031012.	2.0	43
27	Optical absorption edge characteristics of cubic boron nitride thin films. Applied Physics Letters, 1999, 75, 10-12.	1.5	41
28	Largeâ€Area Synthesis of Layered HfS_{2(1âˆ’}<i>_x</i>₎Se₂<i>_x</i> Alloys with Fully Tunable Chemical Compositions and Bandgaps. Advanced Materials, 2018, 30, e1803285.	11.1	41
29	Stabilizing the black phase of cesium lead halide inorganic perovskite for efficient solar cells. Science China Chemistry, 2019, 62, 810-821.	4.2	40
30	Interface Engineering of High-Performance Perovskite Photodetectors Based on PVP/SnO₂ Electron Transport Layer. ACS Applied Materials & Interfaces, 2018, 10, 6505-6512.	4.0	37
31	Deep Ultraviolet Photodetectors Based on Carbon-Doped Two-Dimensional Hexagonal Boron Nitride. ACS Applied Materials & Interfaces, 2020, 12, 27361-27367.	4.0	37
32	Research progress in large-area perovskite solar cells. Photonics Research, 2020, 8, A1.	3.4	37
33	Two-dimensional hexagonal boronâ€“carbonâ€“nitrogen atomic layers. Nanoscale, 2019, 11, 10454-10462.	2.8	34
34	Emerging Lowâ€Dimensional Crystal Structure of Metal Halide Perovskite Optoelectronic Materials and Devices. Small Structures, 2021, 2, 2000133.	6.9	33
35	Recent progress in synthesis, properties, and applications of hexagonal boron nitride-based heterostructures. Nanotechnology, 2019, 30, 074003.	1.3	31
36	Epitaxial Liftoff of Waferâ€Scale VO₂ Nanomembranes for Flexible, Ultrasensitive Tactile Sensors. Advanced Materials Technologies, 2019, 4, 1800695.	3.0	30

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37	Controlled-Direction Growth of Planar InAsSb Nanowires on Si Substrates without Foreign Catalysts. Nano Letters, 2016, 16, 877-882.	4.5	29
38	Compositional Engineering of Mixed-Cation Lead Mixed-Halide Perovskites for High-Performance Photodetectors. ACS Applied Materials & Interfaces, 2019, 11, 28005-28012.	4.0	27
39	Self-catalyzed growth mechanism of InAs nanowires and growth of InAs/GaSb heterostructured nanowires on Si substrates. Journal of Crystal Growth, 2015, 426, 287-292.	0.7	25
40	Low-Temperature Direct Growth of Few-Layer Hexagonal Boron Nitride on Catalyst-Free Sapphire Substrates. ACS Applied Materials & Interfaces, 2022, 14, 7004-7011.	4.0	24
41	Direct growth of hexagonal boron nitride films on dielectric sapphire substrates by pulsed laser deposition for optoelectronic applications. Fundamental Research, 2021, 1, 677-683.	1.6	23
42	Remote heteroepitaxy of atomic layered hafnium disulfide on sapphire through hexagonal boron nitride. Nanoscale, 2019, 11, 9310-9318.	2.8	20
43	Recent Advances in Properties, Synthesis and Applications of Two-Dimensional HfS₂. Journal of Nanoscience and Nanotechnology, 2018, 18, 7319-7334.	0.9	19
44	Enhanced efficiency in polymer solar cells via hydrogen plasma treatment of ZnO electron transport layers. Journal of Materials Chemistry A, 2015, 3, 3719-3725.	5.2	16
45	Amplified Spontaneous Emission with a Low Threshold from Quasiâ€2D Perovskite Films via Phase Engineering and Surface Passivation. Advanced Optical Materials, 2022, 10, .	3.6	15
46	Quantum efficiency and temperature coefficients of GaInP/GaAs dual-junction solar cell. Science in China Series D: Earth Sciences, 2009, 52, 1176-1180.	0.9	14
47	Electrical bistability and negative differential resistance in diodes based on silver nanoparticle-poly(N-vinylcarbazole) composites. Journal of Applied Physics, 2010, 108, 094320.	1.1	13
48	Homogeneous InGaSb crystal grown under microgravity using Chinese recovery satellite SJ-10. Npj Microgravity, 2019, 5, 8.	1.9	12
49	Formation and local conduction of nanopits in BiFeO₃ epitaxial films. Journal of Materials Chemistry C, 2015, 3, 11250-11256.	2.7	10
50	Polymer hole-transport material improving thermal stability of inorganic perovskite solar cells. Frontiers of Optoelectronics, 2020, 13, 265-271.	1.9	10
51	Analysis of leakage current in GaAs micro-solar cell arrays. Science China Technological Sciences, 2010, 53, 1240-1246.	2.0	9
52	Enhanced piezoelectric response of the two-tetragonal-phase-coexisted BiFeO 3 epitaxial film. Solid State Communications, 2017, 252, 68-72.	0.9	9
53	Stabilization of thick, rhombohedral Hf0.5Zr0.5O2 epilayer on c-plane ZnO. Applied Physics Letters, 2021, 119, .	1.5	9
54	Epitaxial growth of large area ZrS2 2D semiconductor films on sapphire for optoelectronics. Nano Research, 2022, 15, 6628-6635.	5.8	9

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55	Evaluating the effect of dislocation on the photovoltaic performance of metamorphic tandem solar cells. Science China Technological Sciences, 2010, 53, 2569-2574.	2.0	8
56	Ag nanoparticles preparation and their light trapping performance. Science China Technological Sciences, 2013, 56, 109-114.	2.0	8
57	Electrical properties of sulfur-implanted cubic boron nitride thin films. Science Bulletin, 2014, 59, 1280-1284.	1.7	8
58	Recent progress of boron nitrides. , 2019, , 347-419.		7
59	Epitaxial growth of ZrSe₂nanosheets on sapphire<i>via</i>chemical vapor deposition for optoelectronic application. Journal of Materials Chemistry C, 2021, 9, 13954-13962.	2.7	7
60	Conjugated molecule doped polyaniline films as buffer layers in organic solar cells. Synthetic Metals, 2013, 178, 18-21.	2.1	6
61	Mode-locking operation of an Er-doped fiber laser with (PEA)₂(CsPbBr₃)_{<i>n</i>âˆ’1}PbBr₄ perovskite saturable absorbers. Journal of Materials Chemistry C, 2022, 10, 7504-7510.	2.7	6
62	Aluminum induced crystallization of strongly (111) oriented polycrystalline silicon thin film and nucleation analysis. Science China Technological Sciences, 2010, 53, 3002-3005.	2.0	5
63	Self-Seeded MOCVD Growth and Dramatically Enhanced Photoluminescence of InGaAs/InP Coreâ€“Shell Nanowires. Nanoscale Research Letters, 2018, 13, 269.	3.1	5
64	Defect-free InAsSb nanowire arrays on Si substrates grown by selective-area metalâ€“organic chemical vapor deposition. Nanotechnology, 2018, 29, 405601.	1.3	5
65	Persistent spin texture in tetragonal BiFeO3. Japanese Journal of Applied Physics, 2021, 60, 050906.	0.8	5
66	Quantifying the effectiveness of SiO2/Au light trapping nanoshells for thin film poly-Si solar cells. Science China Technological Sciences, 2010, 53, 2228-2231.	2.0	3
67	Controlled Growth of Unidirectionally Aligned Hexagonal Boron Nitride Domains on Single Crystal Ni (111)/MgO Thin Films. Crystal Growth and Design, 2019, 19, 453-459.	1.4	3
68	Metastable Tetragonal BiFeO3 Stabilized on Anisotropic a-Plane ZnO. Crystal Growth and Design, 2021, 21, 4372-4379.	1.4	3
69	Synthesis of silver quantum dots decorated TiO2 nanotubes and their incorporation in organic hybrid solar cells. Journal of Nanoparticle Research, 2013, 15, 1.	0.8	2
70	Enhancement of conductivity and photoluminescence in sulphur-doped C60 thin films. Journal of Materials Science Letters, 2001, 20, 449-451.	0.5	1
71	Improved performance of GaAs-based micro-solar cell with novel polyimide/SiO2/TiAu/SiO2 structure. Science China Technological Sciences, 2011, 54, 830-834.	2.0	1
72	Absence of auxeticity in CoFe₂O₄ epitaxial films. Japanese Journal of Applied Physics, 0, , .	0.8	1

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73	Domain matching epitaxy stabilized metastable, tetragonal BiFeO3 on symmetry-mismatched c-plane ZnO. Japanese Journal of Applied Physics, 2022, 61, 025501.	0.8	0