Zhiwen Jin

List of Publications by Year
in descending order

113 papers	9,176 citations	36303 51 h-index	39675 94 g-index
117 all docs	117 docs citations	117 times ranked	8264 citing authors

#	Article	IF	Citations
1	Perylene diimides: a thickness-insensitive cathode interlayer for high performance polymer solar cells. Energy and Environmental Science, 2014, 7, 1966.	30.8	672
2	Allâ€Inorganic CsPbX₃ Perovskite Solar Cells: Progress and Prospects. Angewandte Chemie - International Edition, 2019, 58, 15596-15618.	13.8	425
3	All-inorganic cesium lead iodide perovskite solar cells with stabilized efficiency beyond 15%. Nature Communications, 2018, 9, 4544.	12.8	379
4	Interstitial Mn²⁺-Driven High-Aspect-Ratio Grain Growth for Low-Trap-Density Microcrystalline Films for Record Efficiency CsPbI₂Br Solar Cells. ACS Energy Letters, 2018, 3, 970-978.	17.4	356
5	Graded Bandgap CsPbI2+Br1âˆ’ Perovskite Solar Cells with a Stabilized Efficiency of 14.4%. Joule, 2018, 2, 1500-1510.	24.0	307
6	3Dâ€“2Dâ€“0D Interface Profiling for Record Efficiency Allâ€Inorganic CsPbBrI₂ Perovskite Solar Cells with Superior Stability. Advanced Energy Materials, 2018, 8, 1703246.	19.5	301
7	Polymer Doping for Highâ€Efficiency Perovskite Solar Cells with Improved Moisture Stability. Advanced Energy Materials, 2018, 8, 1701757.	19.5	293
8	Graphdiyne:ZnO Nanocomposites for Highâ€Performance UV Photodetectors. Advanced Materials, 2016, 28, 3697-3702.	21.0	258
9	Energy-Down-Shift CsPbCl₃:Mn Quantum Dots for Boosting the Efficiency and Stability of Perovskite Solar Cells. ACS Energy Letters, 2017, 2, 1479-1486.	17.4	221
10	E-beam evaporated Nb2O5 as an effective electron transport layer for large flexible perovskite solar cells. Nano Energy, 2017, 36, 1-8.	16.0	215
11	Âµâ€Graphene Crosslinked CsPbI₃ Quantum Dots for High Efficiency Solar Cells with Much Improved Stability. Advanced Energy Materials, 2018, 8, 1800007.	19.5	198
12	Temperature-assisted crystallization for inorganic CsPbI2Br perovskite solar cells to attain high stabilized efficiency 14.81%. Nano Energy, 2018, 52, 408-415.	16.0	186
13	Graphdiyne: An Efficient Hole Transporter for Stable Highâ€Performance Colloidal Quantum Dot Solar Cells. Advanced Functional Materials, 2016, 26, 5284-5289.	14.9	172
14	All-Ambient Processed Binary CsPbBr₃â€“CsPb₂Br₅ Perovskites with Synergistic Enhancement for High-Efficiency Csâ€“Pbâ€“Br-Based Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 7145-7154.	8.0	171
15	Chlorine doping for black Î³-CsPbI3 solar cells with stabilized efficiency beyond 16%. Nano Energy, 2019, 58, 175-182.	16.0	170
16	Halide perovskites for high-performance X-ray detector. Materials Today, 2021, 48, 155-175.	14.2	163
17	Halide Perovskite, a Potential Scintillator for Xâ€Ray Detection. Small Methods, 2020, 4, 2000506.	8.6	160
18	Progress of the key materials for organic solar cells. Science China Chemistry, 2020, 63, 758-765.	8.2	158

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19	A chlorinated copolymer donor demonstrates a 18.13% power conversion efficiency. Journal of Semiconductors, 2021, 42, 010501.	3.7	158
20	High-performance flexible ultraviolet photoconductors based on solution-processed ultrathin ZnO/Au nanoparticle composite films. Scientific Reports, 2014, 4, 4268.	3.3	153
21	Ultrafast photonics application of graphdiyne in the optical communication region. Carbon, 2019, 149, 336-341.	10.3	153
22	An Electrically Modulated Singleâ€Color/Dualâ€Color Imaging Photodetector. Advanced Materials, 2020, 32, e1907257.	21.0	145
23	Graphdiyne-WS2 2D-Nanohybrid electrocatalysts for high-performance hydrogen evolution reaction. Carbon, 2018, 129, 228-235.	10.3	124
24	Crystallization Kinetics in 2D Perovskite Solar Cells. Advanced Energy Materials, 2020, 10, 2002558.	19.5	124
25	Strategies for Improving the Stability of Tinâ€Based Perovskite (ASnX₃) Solar Cells. Advanced Science, 2020, 7, 1903540.	11.2	123
26	CsPb(I Br1âˆ’)3 solar cells. Science Bulletin, 2019, 64, 1532-1539.	9.0	114
27	Nitrogen-doped graphene quantum dots for 80% photoluminescence quantum yield for inorganic Î³-CsPbI₃ perovskite solar cells with efficiency beyond 16%. Journal of Materials Chemistry A, 2019, 7, 5740-5747.	10.3	113
28	Ruddlesdenâ€"Popper 2D Component to Stabilize Î³â€CsPbI₃ Perovskite Phase for Stable and Efficient Photovoltaics. Advanced Energy Materials, 2019, 9, 1902529.	19.5	111
29	ITIC surface modification to achieve synergistic electron transport layer enhancement for planar-type perovskite solar cells with efficiency exceeding 20%. Journal of Materials Chemistry A, 2017, 5, 9514-9522.	10.3	103
30	Unveiling the Effects of Hydrolysisâ€Derived DMAI/DMAPbI<i>_x</i> Intermediate Compound on the Performance of CsPbI₃ Solar Cells. Advanced Science, 2020, 7, 1902868.	11.2	97
31	Approaches for thermodynamically stabilized CsPbI3 solar cells. Nano Energy, 2020, 71, 104634.	16.0	95
32	Stable ultra-fast broad-bandwidth photodetectors based on Î±-CsPbI₃ perovskite and NaYF₄:Yb,Er quantum dots. Nanoscale, 2017, 9, 6278-6285.	5.6	93
33	Perovskite-based tandem solar cells. Science Bulletin, 2021, 66, 621-636.	9.0	91
34	High-performance transparent ultraviolet photodetectors based on inorganic perovskite CsPbCl₃ nanocrystals. RSC Advances, 2017, 7, 36722-36727.	3.6	90
35	Iodineâ€Optimized Interface for Inorganic CsPbI₂Br Perovskite Solar Cell to Attain High Stabilized Efficiency Exceeding 14%. Advanced Science, 2018, 5, 1801123.	11.2	90
36	Detecting trap states in planar PbS colloidal quantum dot solar cells. Scientific Reports, 2016, 6, 37106.	3.3	80

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37	Application of perovskite nanocrystals (NCs)/quantum dots (QDs) in solar cells. Nano Energy, 2020, 73, 104757.	16.0	77
38	Graphdiyne Quantum Dots for Much Improved Stability and Efficiency of Perovskite Solar Cells. Advanced Materials Interfaces, 2018, 5, 1701117.	3.7	76
39	Cesium Lead Mixed-Halide Perovskites for Low-Energy Loss Solar Cells with Efficiency Beyond 17%. Chemistry of Materials, 2019, 31, 6231-6238.	6.7	76
40	Solution-processed transparent coordination polymer electrode for photovoltaic solar cells. Nano Energy, 2017, 40, 376-381.	16.0	74
41	Amine group functionalized fullerene derivatives as cathode buffer layers for high performance polymer solar cells. Journal of Materials Chemistry A, 2013, 1, 9624.	10.3	69
42	Synergy of Hydrophobic Surface Capping and Lattice Contraction for Stable and Highâ€Efficiency Inorganic CsPbI₂Br Perovskite Solar Cells. Solar Rrl, 2018, 2, 1800216.	5.8	68
43	CsPbCl₃â€Driven Lowâ€Trapâ€Density Perovskite Grain Growth for >20% Solar Cell Efficiency. Advanced Science, 2018, 5, 1800474.	11.2	65
44	Over 16% efficiency from thick-film organic solar cells. Science Bulletin, 2020, 65, 1979-1982.	9.0	62
45	Origin, Influence, and Countermeasures of Defects in Perovskite Solar Cells. Small, 2021, 17, e2005495.	10.0	61
46	Optical Management with Nanoparticles for a Light Conversion Efficiency Enhancement in Inorganic Î³-CsPbI₃ Solar Cells. Nano Letters, 2019, 19, 1796-1804.	9.1	58
47	Mn Doping of CsPbI₃ Film Towards High-Efficiency Solar Cell. ACS Applied Energy Materials, 2020, 3, 5190-5197.	5.1	56
48	Constructing binary electron transport layer with cascade energy level alignment for efficient CsPbI2Br solar cells. Nano Energy, 2020, 71, 104604.	16.0	56
49	Flexible perovskite solar cells based on green, continuous roll-to-roll printing technology. Journal of Energy Chemistry, 2018, 27, 971-989.	12.9	55
50	5H-dithieno[3,2-b:2â€²,3â€²-d]pyran-5-one unit yields efficient wide-bandgap polymer donors. Science Bulletin, 2019, 64, 1655-1657.	9.0	55
51	The humidity-insensitive fabrication of efficient CsPbI₃ solar cells in ambient air. Journal of Materials Chemistry A, 2019, 7, 26776-26784.	10.3	54
52	Efficiency-Enhanced Planar Perovskite Solar Cells via an Isopropanol/Ethanol Mixed Solvent Process. ACS Applied Materials & Interfaces, 2016, 8, 23837-23843.	8.0	53
53	Pseudohalide (SCN^{âˆ’})-doped CsPbI₃ for high-performance solar cells. Journal of Materials Chemistry C, 2019, 7, 13736-13742.	5.5	53
54	Interface engineering gifts CsPbI2.25Br0.75 solar cells high performance. Science Bulletin, 2019, 64, 1743-1746.	9.0	51

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55	Photophysics in Zeroâ€Dimensional Potassiumâ€Doped Cesium Copper Chloride Cs₃Cu₂Cl₅ Nanosheets and Its Application for Highâ€Performance Flexible Xâ€Ray Detection. Advanced Optical Materials, 2022, 10, .	7.3	49
56	PIN architecture for ultrasensitive organic thin film photoconductors. Scientific Reports, 2014, 4, 5331.	3.3	42
57	Decreasing energy loss and optimizing band alignment for high performance CsPbI₃solar cells through guanidine hydrobromide post-treatment. Journal of Materials Chemistry A, 2020, 8, 10346-10353.	10.3	40
58	Poly(ethylene glycol) modified [60]fullerene as electron buffer layer for high-performance polymer solar cells. Applied Physics Letters, 2013, 102, .	3.3	39
59	Cesium Lead Halide Nanocrystals based Flexible Xâ€Ray Imaging Screen and Visible Dose Rate Indication on Paper Substrate. Advanced Optical Materials, 2022, 10, .	7.3	39
60	Single crystalline indene-C₆₀ bisadduct: isolation and application in polymer solar cells. Journal of Materials Chemistry A, 2015, 3, 14991-14995.	10.3	38
61	Conductive graphene-based E-textile for highly sensitive, breathable, and water-resistant multimodal gesture-distinguishable sensors. Journal of Materials Chemistry A, 2020, 8, 14778-14787.	10.3	38
62	Fused-ring bislactone building blocks for polymer donors. Science Bulletin, 2020, 65, 1792-1795.	9.0	35
63	Flexible high-performance ultraviolet photoconductor with zinc oxide nanorods and 8-hydroxyquinoline. Journal of Materials Chemistry C, 2014, 2, 1966.	5.5	34
64	Organic nonvolatile resistive memory devices based on thermally deposited Au nanoparticle. AIP Advances, 2013, 3, .	1.3	33
65	Multiple conformation locks gift polymer donor high efficiency. Nano Energy, 2020, 77, 105161.	16.0	33
66	<i>N</i>â€methylâ€2â€pyrrolidone Iodide as Functional Precursor Additive for Record Efficiency 2D Ruddlesdenâ€Popper (PEA)₂(Cs)<i>_n</i>_{â^'1}Pb<i>_n</i>I₃<i>_n</i><sub>+1</su Solar Cells. Advanced Functional Materials, 2021, 31, 2106380.	14.9	29
67	Beach-Chair-Shaped Energy Band Alignment for High-Performance Î²-CsPbI3 Solar Cells. Cell Reports Physical Science, 2020, 1, 100180.	5.6	28
68	Research and progress of black metastable phase CsPbI₃solar cells. Materials Chemistry Frontiers, 2021, 5, 1221-1235.	5.9	28
69	Environmentally stable one-dimensional copper halide based ultra-flexible composite film for low-cost X-ray imaging screens. Chemical Engineering Journal, 2022, 430, 132826.	12.7	28
70	The <i>J</i>â€"<i>V</i> Hysteresis Behavior and Solutions in Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000586.	5.8	27
71	Enhancing performance and uniformity of CH3NH3PbI3â^'xClx perovskite solar cells by air-heated-oven assisted annealing under various humidities. Scientific Reports, 2016, 6, 21257.	3.3	26
72	Graphdiyne for multilevel flexible organic resistive random access memory devices. Materials Chemistry Frontiers, 2017, 1, 1338-1341.	5.9	26

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73	Intermediates transformation for efficient perovskite solar cells. Journal of Energy Chemistry, 2021, 52, 102-114.	12.9	26
74	Bilayer Heterostructured PThTPTI/WS2 Photodetectors with High Thermal Stability in Ambient Environment. ACS Applied Materials & Interfaces, 2016, 8, 33043-33050.	8.0	25
75	Shapeâ€•and Trapâ€Controlled Nanocrystals for Giantâ€Performance Improvement of Allâ€Inorganic Perovskite Photodetectors. Particle and Particle Systems Characterization, 2018, 35, 1700363.	2.3	24
76	Interface engineering, the trump-card for CsPbX3 (XËł, Br) perovskite solar cells development. Nano Energy, 2021, 79, 105490.	16.0	22
77	Toward stable and efficient Sn-containing perovskite solar cells. Science Bulletin, 2020, 65, 786-790.	9.0	21
78	Anorganische CsPbX₃â€Perowskitâ€Solarzellen: Fortschritte und Perspektiven. Angewandte Chemie, 2019, 131, 15742-15765.	2.0	20
79	Exploring the film growth in perovskite solar cells. Journal of Materials Chemistry A, 2021, 9, 6029-6049.	10.3	20
80	High-responsivity solution-processed organicâ€"inorganic hybrid bilayer thin film photoconductors. Journal of Materials Chemistry C, 2013, 1, 7996.	5.5	19
81	Crumpled graphene prepared by a simple ultrasonic pyrolysis method for fast photodetection. Carbon, 2018, 128, 117-124.	10.3	19
82	HI hydrolysis-derived intermediate as booster for CsPbI₃ perovskite: from crystal structure, film fabrication to device performance. Journal of Semiconductors, 2020, 41, 051202.	3.7	19
83	Fine coverage and uniform phase distribution in 2D (PEA)2Cs3Pb4I13 solar cells with a record efficiency beyond 15%. Nano Energy, 2022, 92, 106790.	16.0	19
84	Manipulate energy transport via fluorinated spacers towards record-efficiency 2D Dion-Jacobson CsPbI3 solar cells. Science Bulletin, 2022, 67, 1352-1361.	9.0	19
85	A trilayer architecture for polymer photoconductors. Applied Physics Letters, 2013, 102, .	3.3	17
86	An efficient medium-bandgap nonfullerene acceptor for organic solar cells. Journal of Materials Chemistry A, 2020, 8, 8857-8861.	10.3	17
87	Strategies from small-area to scalable fabrication for perovskite solar cells. Journal of Energy Chemistry, 2021, 57, 567-586.	12.9	17
88	Engineering of the alkyl chain branching point on a lactone polymer donor yields 17.81% efficiency. Journal of Materials Chemistry A, 2022, 10, 3314-3320.	10.3	17
89	A Novel Multipleâ€Ring Aromatic Spacer Based 2D Ruddlesdenâ€"Popper CsPbI₃Solar Cell with Record Efficiency Beyond 16%. Advanced Functional Materials, 2022, 32, .	14.9	16
90	Advances in perovskite quantum-dot solar cells. Journal of Energy Chemistry, 2021, 52, 351-353.	12.9	13

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91	Low-Trap-Density CsPbX₃ Film for High-Efficiency Indoor Photovoltaics. ACS Applied Materials & Interfaces, 2022, 14, 11528-11537.	8.0	13
92	Perovskite quantum dots integrated with vertically aligned graphene toward ambipolar multifunctional photodetectors. Journal of Materials Chemistry C, 2021, 9, 609-619.	5.5	12
93	Two-dimensional BA₂PbBr₄-based wafer for X-rays imaging application. Materials Chemistry Frontiers, 2022, 6, 1310-1316.	5.9	12
94	Realization of nonvolatile organic memory device without using semiconductor. Applied Physics Letters, 2014, 104, 023303.	3.3	10
95	Self-assembled template-confined growth of ultrathin CsPbBr3 nanowires. Applied Materials Today, 2020, 18, 100449.	4.3	10
96	Single-crystalline perovskite wafers with a Cr blocking layer for broad and stable light detection in a harsh environment. RSC Advances, 2018, 8, 14848-14853.	3.6	9
97	Unveiling the Effects of Intrinsic and Extrinsic Factors That Induced a Phase Transition for CsPbI3. ACS Applied Energy Materials, 2020, 3, 8184-8189.	5.1	9
98	Deuterated <i>N</i>,<i>N</i>-dimethylformamide (DMF-d7) as an additive to enhance the CsPbI₃ solar cell efficiency. Journal of Materials Chemistry C, 2022, 10, 1746-1753.	5.5	9
99	All-solution-processed PIN architecture for ultra-sensitive and ultra-flexible organic thin film photodetectors. Science China Chemistry, 2016, 59, 1258-1263.	8.2	8
100	Unveiling the origin of performance enhancement of photovoltaic devices by upconversion nanoparticles. Journal of Energy Chemistry, 2022, 65, 524-531.	12.9	8
101	Progress of the key materials for organic solar cells. Scientia Sinica Chimica, 2020, 50, 437-446.	0.4	8
102	Nonvolatile resistive memory devices based on Ag. Journal of Materials Chemistry C, 2013, 1, 3282.	5.5	7
103	Cellular Architectureâ€Based Allâ€Polymer Flexible Thinâ€Film Photodetectors with High Performance and Stability in Harsh Environment. Advanced Materials Technologies, 2017, 2, 1700185.	5.8	7
104	Improving the photocurrent of a PBDTTT-CF and PCBM based organic thin film photoconductor by forming a bilayer structure. RSC Advances, 2015, 5, 84680-84684.	3.6	5
105	Light Management via Tuning the Fluorineâ€Doped Tin Oxide Glass Hazeâ€Drives Highâ€Efficiency CsPbI 3 Solar Cells. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900602.	1.8	5
106	Ordered Element Distributed C₃N Quantum Dots Manipulated Crystallization Kinetics for 2D CsPbI₃ Solar Cells with Ultraâ€High Performance. Small, 2022, 18, e2108090.	10.0	5
107	Guanidium-assisted crystallization engineering for highly efficient CsPbI₃solar cells. Journal of Materials Chemistry C, 2022, 10, 8234-8240.	5.5	4
108	Suppressed light-induced phase transition of CsPbBr2I: Strategies, progress and applications in the photovoltaic field. Journal of Semiconductors, 2021, 42, 071901.	3.7	3

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109	Doubleâ€Layer Quantum Dots as Interfacial Layer to Enhance the Performance of CsPbI ₃ Solar Cells. Advanced Materials Interfaces, 0, , 2200813.	3.7	3
110	The integration structure enhances performance of perovskite solar cells. Science Bulletin, 2021, 66, 310-313.	9.0	2
111	Metalâ€Free PAZEâ€NH₄X₃â‹…H₂O Perovskite for Flexible Transparent Xâ€ray Detection and Imaging. Angewandte Chemie, 2022, 134, .	2.0	2
112	Low-Dimensional Semiconductor Materials for X-Ray Detection. , 2023, , 23-49.		1
113	Ordered Element Distributed C₃N Quantum Dots Manipulated Crystallization Kinetics for 2D CsPbI₃ Solar Cells with Ultraâ€High Performance (Small 15/2022). Small, 2022, 18, .	10.0	0