Weidong Xu

List of Publications by Year
in descending order

		117625	98798
73	5,878	34	67
papers	citations	h-index	g-index

77	77	77	7849
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Rational molecular passivation for high-performance perovskite light-emitting diodes. Nature Photonics, 2019, 13, 418-424.	31.4	970
2	Metal halide perovskites for light-emitting diodes. Nature Materials, 2021, 20, 10-21.	27.5	800
3	Self-powered textile for wearable electronics by hybridizing fiber-shaped nanogenerators, solar cells, and supercapacitors. Science Advances, 2016, 2, e1600097.	10.3	705
4	High Performance and Stable Allâ€Inorganic Metal Halide Perovskiteâ€Based Photodetectors for Optical Communication Applications. Advanced Materials, 2018, 30, e1803422.	21.0	342
5	Mixed halide perovskites for spectrally stable and high-efficiency blue light-emitting diodes. Nature Communications, 2021, 12, 361.	12.8	268
6	Hybrid Grapheneâ€"Perovskite Phototransistors with Ultrahigh Responsivity and Gain. Advanced Optical Materials, 2015, 3, 1389-1396.	7.3	240
7	Generation of long-lived charges in organic semiconductor heterojunction nanoparticles for efficient photocatalytic hydrogen evolution. Nature Energy, 2022, 7, 340-351.	39.5	164
8	Unveiling the synergistic effect of precursor stoichiometry and interfacial reactions for perovskite light-emitting diodes. Nature Communications, 2019, 10, 2818.	12.8	129
9	Bidirectional optical signal transmission between two identical devices using perovskite diodes. Nature Electronics, 2020, 3, 156-164.	26.0	126
10	The progress and prospects of non-fullerene acceptors in ternary blend organic solar cells. Materials Horizons, 2018, 5, 206-221.	12.2	122
11	Hotâ€Electron Injection in a Sandwiched TiO<i>_x</i>â€"Auâ€"TiO<i>_x</i> Structure for Highâ€Performance Planar Perovskite Solar Cells. Advanced Energy Materials, 2015, 5, 1500038.	19.5	119
12	Solution-Processed Highly Conductive PEDOT:PSS/AgNW/GO Transparent Film for Efficient Organic-Si Hybrid Solar Cells. ACS Applied Materials & Interfaces, 2015, 7, 3272-3279.	8.0	107
13	A solvent-based surface cleaning and passivation technique for suppressing ionic defects in high-mobility perovskite field-effect transistors. Nature Electronics, 2020, 3, 694-703.	26.0	99
14	Critical role of additive-induced molecular interaction on the operational stability of perovskite light-emitting diodes. Joule, 2021, 5, 618-630.	24.0	99
15	Additiveâ€Free, Lowâ€Temperature Crystallization of Stable Î±â€FAPbI₃ Perovskite. Advanced Materials, 2022, 34, e2107850.	21.0	71
16	Light-intensity and thickness dependent efficiency of planar perovskite solar cells: charge recombination<i>versus</i>extraction. Journal of Materials Chemistry C, 2020, 8, 12648-12655.	5.5	70
17	Precisely Controlling the Grain Sizes with an Ammonium Hypophosphite Additive for Highâ€Performance Perovskite Solar Cells. Advanced Functional Materials, 2018, 28, 1802320.	14.9	65
18	Manipulating crystallization dynamics through chelating molecules for bright perovskite emitters. Nature Communications, 2021, 12, 4831.	12.8	56

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19	p-Doping of organic hole transport layers in pâ€“iâ€“n perovskite solar cells: correlating open-circuit voltage and photoluminescence quenching. Journal of Materials Chemistry A, 2019, 7, 18971-18979.	10.3	55
20	A Comparison of Charge Carrier Dynamics in Organic and Perovskite Solar Cells. Advanced Materials, 2022, 34, e2101833.	21.0	55
21	Annealing Induced Re-crystallization in CH3NH3PbI3â˜’xClx for High Performance Perovskite Solar Cells. Scientific Reports, 2017, 7, 46724.	3.3	53
22	Pyreneâ€Capped Conjugated Amorphous Starbursts: Synthesis, Characterization, and Stable Lasing Properties in Ambient Atmosphere. Advanced Functional Materials, 2015, 25, 4617-4625.	14.9	51
23	Degradation and self-repairing in perovskite light-emitting diodes. Matter, 2021, 4, 3710-3724.	10.0	51
24	Fully Solutionâ€Processed nâ€“iâ€“pâ€Like Perovskite Solar Cells with Planar Junction: How the Charge Extracting Layer Determines the Openâ€Circuit Voltage. Advanced Materials, 2017, 29, 1604493.	21.0	50
25	Dissociation of Methylammonium Cations in Hybrid Organicâ€“Inorganic Perovskite Solar Cells. Nano Letters, 2016, 16, 4720-4725.	9.1	49
26	Origin of Openâ€Circuit Voltage Enhancements in Planar Perovskite Solar Cells Induced by Addition of Bulky Organic Cations. Advanced Functional Materials, 2020, 30, 1906763.	14.9	47
27	Combined Precursor Engineering and Grain Anchoring Leading to MAâ€Free, Phaseâ€Pure, and Stable Î±â€Formamidinium Lead Iodide Perovskites for Efficient Solar Cells. Angewandte Chemie - International Edition, 2021, 60, 27299-27306.	13.8	46
28	Phosphorene Nanoribbon-Augmented Optoelectronics for Enhanced Hole Extraction. Journal of the American Chemical Society, 2021, 143, 21549-21559.	13.7	44
29	Enhanced Crystalline Phase Purity of CH₃NH₃PbI_{3â€“<i>x</i>}Cl<i>_x</i> Film for High-Efficiency Hysteresis-Free Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 23141-23151.	8.0	41
30	High Efficiency Inverted Organic Solar Cells with a Neutral Fulleropyrrolidine Electron-Collecting Interlayer. ACS Applied Materials & Interfaces, 2016, 8, 14293-14300.	8.0	40
31	Well-Defined Star-Shaped Conjugated Macroelectrolytes as Efficient Electron-Collecting Interlayer for Inverted Polymer Solar Cells. ACS Applied Materials & Interfaces, 2015, 7, 452-459.	8.0	38
32	Approximately 800-nm-Thick Pinhole-Free Perovskite Films via Facile Solvent Retarding Process for Efficient Planar Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 34446-34454.	8.0	36
33	Lewis Base Passivation Mediates Charge Transfer at Perovskite Heterojunctions. Journal of the American Chemical Society, 2021, 143, 12230-12243.	13.7	36
34	Understanding the Light Soaking Effects in Inverted Organic Solar Cells Functionalized with Conjugated Macroelectrolyte Electronâ€Collecting Interlayers. Advanced Science, 2016, 3, 1500245.	11.2	35
35	Iodomethane-Mediated Organometal Halide Perovskite with Record Photoluminescence Lifetime. ACS Applied Materials & Interfaces, 2016, 8, 23181-23189.	8.0	35
36	The Lightâ€Induced Fieldâ€Effect Solar Cell Concept â€“ Perovskite Nanoparticle Coating Introduces Polarization Enhancing Silicon Cell Efficiency. Advanced Materials, 2017, 29, 1606370.	21.0	35

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37	Fluorene-based cathode interlayer polymers for high performance solution processed organic optoelectronic devices. Organic Electronics, 2014, 15, 1244-1253.	2.6	33
38	A small molecule/fullerene binary acceptor system for high-performance polymer solar cells with enhanced light-harvesting properties and balanced carrier mobility. Journal of Materials Chemistry A, 2017, 5, 2460-2465.	10.3	33
39	Wideâ€Bandgap Small Molecular Acceptors Based on a Weak Electronâ€Withdrawing Moiety for Efficient Polymer Solar Cells. Solar Rrl, 2018, 2, 1800120.	5.8	30
40	Thermal-induced interface degradation in perovskite light-emitting diodes. Journal of Materials Chemistry C, 2020, 8, 15079-15085.	5.5	30
41	A hydrophilic monodisperse conjugated starburst macromolecule with multidimensional topology as electron transport/injection layer for organic electronics. Polymer Chemistry, 2014, 5, 2942-2950.	3.9	29
42	Room Temperature Synthesis of Phosphineâ€Capped Lead Bromide Perovskite Nanocrystals without Coordinating Solvents. Particle and Particle Systems Characterization, 2020, 37, 1900391.	2.3	27
43	Solution-processed anthracene-based molecular glasses as stable blue-light-emission laser gain media. Organic Electronics, 2015, 18, 95-100.	2.6	26
44	Homologous Bromides Treatment for Improving the Openâ€Circuit Voltage of Perovskite Solar Cells. Advanced Materials, 2022, 34, e2106280.	21.0	26
45	Saturated and stabilized white electroluminescence with simultaneous three-color emission from a six-armed star-shaped single-polymer system. Polymer Chemistry, 2015, 6, 8019-8028.	3.9	25
46	Efficient perovskite light-emitting diodes based on a solution-processed tin dioxide electron transport layer. Journal of Materials Chemistry C, 2018, 6, 6996-7002.	5.5	25
47	Efficient and Tunable Electroluminescence from In Situ Synthesized Perovskite Quantum Dots. Small, 2019, 15, e1804947.	10.0	23
48	Aerosol Assisted Solvent Treatment: A Universal Method for Performance and Stability Enhancements in Perovskite Solar Cells. Advanced Energy Materials, 2021, 11, 2101420.	19.5	21
49	Pyrene-capped starburst emitters as gain media for organic lasers: design, synthesis, and stabilized lasing properties. Journal of Materials Chemistry C, 2016, 4, 7546-7553.	5.5	17
50	Improving the exciton dissociation of polymer/fullerene interfaces with a minimal loading amount of energy cascading molecular dopant. Journal of Materials Chemistry A, 2018, 6, 15977-15984.	10.3	17
51	Ï€â€"Ï€ Stacking Distance and Phase Separation Controlled Efficiency in Stable All-Polymer Solar Cells. Polymers, 2019, 11, 1665.	4.5	17
52	Correlating the Active Layer Structure and Composition with the Device Performance and Lifetime of Amino-Acid-Modified Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 43505-43515.	8.0	17
53	Efficient amplified spontaneous emission from oligofluorene-pyrene starbursts with improved electron affinity property. Optics Express, 2015, 23, A465.	3.4	14
54	Efficient blue organic light-emitting devices based on solution-processed starburst macromolecular electron injection layer. Journal of Luminescence, 2016, 170, 50-55.	3.1	14

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55	2D Phase Purity Determines Charge-Transfer Yield at 3D/2D Lead Halide Perovskite Heterojunctions. Journal of Physical Chemistry Letters, 2021, 12, 3312-3320.	4.6	13
56	White Electroluminescence with Simultaneous Threeâ€Color Emission from a Fourâ€Armed Starâ€Shaped Singleâ€Polymer System. Chinese Journal of Chemistry, 2015, 33, 873-880.	4.9	11
57	Combined precursor engineering and grain anchoring leading to MAâ€free, phaseâ€pure and stable Î±â€formamidinium lead iodide perovskites for efficient solar cells. Angewandte Chemie, 0, , .	2.0	11
58	Overcoming Nanoscale Inhomogeneities in Thin-Film Perovskites via Exceptional Post-annealing Grain Growth for Enhanced Photodetection. Nano Letters, 2022, 22, 979-988.	9.1	9
59	Asymmetric charge carrier transfer and transport in planar lead halide perovskite solar cells. Cell Reports Physical Science, 2022, 3, 100890.	5.6	9
60	Donorâ€“Acceptor Star-Shaped Conjugated Macroelectrolytes: Synthesis, Light-Harvesting Properties, and Self-Assembly-Induced FÃ¶rster Resonance Energy Transfer. Journal of Physical Chemistry B, 2015, 119, 6730-6739.	2.6	8
61	Significant Lowering Optical Loss of Electrodes via using Conjugated Polyelectrolytes Interlayer for Organic Laser in Electrically Driven Device Configuration. Scientific Reports, 2016, 6, 25810.	3.3	8
62	Efficient phosphorescent polymer light-emitting devices using a conjugated starburst macromolecule as a cathode interlayer. RSC Advances, 2016, 6, 10326-10333.	3.6	8
63	Photodetectors: High Performance and Stable All-Inorganic Metal Halide Perovskite-Based Photodetectors for Optical Communication Applications (Adv. Mater. 38/2018). Advanced Materials, 2018, 30, 1870288.	21.0	8
64	Multipulse Terahertz Spectroscopy Unveils Hot Polaron Photoconductivity Dynamics in Metal-Halide Perovskites. Journal of Physical Chemistry Letters, 2021, 12, 8732-8739.	4.6	8
65	Impact of Amine Additives on Perovskite Precursor Aging: A Case Study of Light-Emitting Diodes. Journal of Physical Chemistry Letters, 2021, 12, 5836-5843.	4.6	6
66	Inverted polymer light-emitting devices using a conjugated starburst macromolecule as an interlayer. RSC Advances, 2016, 6, 84342-84347.	3.6	3
67	Dimensional Tailoring of Ultrahigh Vacuum Annealing-Assisted Quantum Wells for the Efficiency Enhancement of Perovskite Light-Emitting Diodes. ACS Applied Materials & Interfaces, 2020, 12, 24965-24970.	8.0	2
68	Asymmetric Charge Carrier Transfer and Transport in Planar Lead Halide Perovskite Solar Cells. , 0, , .		0
69	Mixed Halide Perovskites for Spectrally Stable and High-Efficiency Blue Light-Emitting Diodes. , 0, , .		0
70	Manipulating crystallization dynamics through chelating molecules for bright perovskite emitters. , 0, , .		0
71	High-Performance Organic-Inorganic Hybrid Solar Cells Based on Crystalline Silicon. Current Organic Chemistry, 2014, 18, 2430-2441.	1.6	0
72	Charge Carrier Behaviour in Organic Planar Heterojunctions by Long-range Exciton Diffusion in Non-fullerene Acceptors. , 0, , .		0

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73	Operando-photoluminescence spectroscopy for accessing radiative and non-radiative losses in perovskite solar cells. , 0, , .		0