Mingyang Wei

List of Publications by Year
in descending order

48 papers	8,228 citations	109137 35 h-index	223531 46 g-index
49 all docs	49 docs citations	49 times ranked	7932 citing authors

#	Article	IF	Citations
1	Managing grains and interfaces via ligand anchoring enables 22.3%-efficiency inverted perovskite solar cells. Nature Energy, 2020, 5, 131-140.	19.8	894
2	Monolithic all-perovskite tandem solar cells with 24.8% efficiency exploiting comproportionation to suppress Sn(ii) oxidation in precursor ink. Nature Energy, 2019, 4, 864-873.	19.8	736
3	Ultra-bright and highly efficient inorganic based perovskite light-emitting diodes. Nature Communications, 2017, 8, 15640.	5.8	669
4	All-perovskite tandem solar cells with improved grain surface passivation. Nature, 2022, 603, 73-78.	13.7	544
5	Efficient tandem solar cells with solution-processed perovskite on textured crystalline silicon. Science, 2020, 367, 1135-1140.	6.0	525
6	All-perovskite tandem solar cells with 24.2% certified efficiency and area over 1â€‰cm2 using surface-anchoring zwitterionic antioxidant. Nature Energy, 2020, 5, 870-880.	19.8	497
7	Spin control in reduced-dimensional chiral perovskites. Nature Photonics, 2018, 12, 528-533.	15.6	371
8	Regulating strain in perovskite thin films through charge-transport layers. Nature Communications, 2020, 11, 1514.	5.8	346
9	One-Step Synthesis of SnI₂Â·(DMSO)_{<i>x</i>} Adducts for High-Performance Tin Perovskite Solar Cells. Journal of the American Chemical Society, 2021, 143, 10970-10976.	6.6	280
10	2D matrix engineering for homogeneous quantum dot coupling in photovoltaic solids. Nature Nanotechnology, 2018, 13, 456-462.	15.6	252
11	Dipolar cations confer defect tolerance in wide-bandgap metal halide perovskites. Nature Communications, 2018, 9, 3100.	5.8	237
12	Quantum-size-tuned heterostructures enable efficient and stable inverted perovskite solar cells. Nature Photonics, 2022, 16, 352-358.	15.6	233
13	Quantum Dots Supply Bulk- and Surface-Passivation Agents for Efficient and Stable Perovskite Solar Cells. Joule, 2019, 3, 1963-1976.	11.7	222
14	Chlorine Vacancy Passivation in Mixed Halide Perovskite Quantum Dots by Organic Pseudohalides Enables Efficient Rec. 2020 Blue Light-Emitting Diodes. ACS Energy Letters, 2020, 5, 793-798.	8.8	208
15	Enhanced optical path and electron diffusion length enable high-efficiency perovskite tandems. Nature Communications, 2020, 11, 1257.	5.8	180
16	Combining Efficiency and Stability in Mixed Tinâ€"Lead Perovskite Solar Cells by Capping Grains with an Ultrathin 2D Layer. Advanced Materials, 2020, 32, e1907058.	11.1	148
17	In Situ Backâ€Contact Passivation Improves Photovoltage and Fill Factor in Perovskite Solar Cells. Advanced Materials, 2019, 31, e1807435.	11.1	143
18	Monolayer Perovskite Bridges Enable Strong Quantum Dot Coupling for Efficient Solar Cells. Joule, 2020, 4, 1542-1556.	11.7	143

#	Article	IF	Citations
19	Chemically Addressable Perovskite Nanocrystals for Lightâ€Emitting Applications. Advanced Materials, 2017, 29, 1701153.	11.1	139
20	Ultrafast narrowband exciton routing within layered perovskite nanoplatelets enables low-loss luminescent solar concentrators. Nature Energy, 2019, 4, 197-205.	19.8	132
21	Suppressed Ion Migration in Reduced-Dimensional Perovskites Improves Operating Stability. ACS Energy Letters, 2019, 4, 1521-1527.	8.8	130
22	Photochemically Cross-Linked Quantum Well Ligands for 2D/3D Perovskite Photovoltaics with Improved Photovoltage and Stability. Journal of the American Chemical Society, 2019, 141, 14180-14189.	6.6	107
23	Multi-cation perovskites prevent carrier reflection from grain surfaces. Nature Materials, 2020, 19, 412-418.	13.3	100
24	Grain Transformation and Degradation Mechanism of Formamidinium and Cesium Lead Iodide Perovskite under Humidity and Light. ACS Energy Letters, 2021, 6, 934-940.	8.8	90
25	Amideâ€Catalyzed Phaseâ€Selective Crystallization Reduces Defect Density in Wideâ€Bandgap Perovskites. Advanced Materials, 2018, 30, e1706275.	11.1	80
26	Pseudohalideâ€Exchanged Quantum Dot Solids Achieve Record Quantum Efficiency in Infrared Photovoltaics. Advanced Materials, 2017, 29, 1700749.	11.1	79
27	Butylamineâ€Catalyzed Synthesis of Nanocrystal Inks Enables Efficient Infrared CQD Solar Cells. Advanced Materials, 2018, 30, e1803830.	11.1	67
28	A Chemically Orthogonal Hole Transport Layer for Efficient Colloidal Quantum Dot Solar Cells. Advanced Materials, 2020, 32, e1906199.	11.1	59
29	Multibandgap quantum dot ensembles for solar-matched infrared energy harvesting. Nature Communications, 2018, 9, 4003.	5.8	56
30	Controlled Steric Hindrance Enables Efficient Ligand Exchange for Stable, Infrared-Bandgap Quantum Dot Inks. ACS Energy Letters, 2019, 4, 1225-1230.	8.8	54
31	Anchored Ligands Facilitate Efficient B-Site Doping in Metal Halide Perovskites. Journal of the American Chemical Society, 2019, 141, 8296-8305.	6.6	53
32	Solvent-Solute Coordination Engineering for Efficient Perovskite Luminescent Solar Concentrators. Joule, 2020, 4, 631-643.	11.7	53
33	Regioselective magnetization in semiconducting nanorods. Nature Nanotechnology, 2020, 15, 192-197.	15.6	51
34	Stabilizing Surface Passivation Enables Stable Operation of Colloidal Quantum Dot Photovoltaic Devices at Maximum Power Point in an Air Ambient. Advanced Materials, 2020, 32, e1906497.	11.1	47
35	Ligand-Assisted Reconstruction of Colloidal Quantum Dots Decreases Trap State Density. Nano Letters, 2020, 20, 3694-3702.	4.5	46
36	Facetâ€Oriented Coupling Enables Fast and Sensitive Colloidal Quantum Dot Photodetectors. Advanced Materials, 2021, 33, e2101056.	11.1	42

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37	Thiophene Cation Intercalation to Improve Bandâ€Edge Integrity in Reducedâ€Dimensional Perovskites. Angewandte Chemie - International Edition, 2020, 59, 13977-13983.	7.2	36
38	Control Over Ligand Exchange Reactivity in Hole Transport Layer Enables High-Efficiency Colloidal Quantum Dot Solar Cells. ACS Energy Letters, 2021, 6, 468-476.	8.8	32
39	Highly luminescent and stable layered perovskite as the emitter for light emitting diodes. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 2727-2732.	0.8	30
40	Defect Tolerance of Mixed B-Site Organicâ€“Inorganic Halide Perovskites. ACS Energy Letters, 2021, 6, 4220-4227.	8.8	30
41	Micromechanism of electroplex formation. Physica Status Solidi (B): Basic Research, 2015, 252, 1711-1716.	0.7	16
42	Thiophene Cation Intercalation to Improve Bandâ€Edge Integrity in Reducedâ€Dimensional Perovskites. Angewandte Chemie, 2020, 132, 14081-14087.	1.6	16
43	Color tunable halide perovskite CH3NH3PbBr3â^'Cl emission via annealing. Organic Electronics, 2015, 26, 260-264.	1.4	15
44	Heterogeneous Supersaturation in Mixed Perovskites. Advanced Science, 2020, 7, 1903166.	5.6	13
45	Band Engineering via Gradient Molecular Dopants for CsFA Perovskite Solar Cells. Advanced Functional Materials, 2021, 31, 2010572.	7.8	12
46	Peptide-Functionalized Nanostructured Microarchitectures Enable Rapid Mechanotransductive Differentiation. ACS Applied Materials & Interfaces, 2019, 11, 41030-41037.	4.0	10
47	Combining Efficiency and Stability in Mixed Tin-Lead Perovskite Solar Cells by Capping Grains with an Ultra-thin 2D layer. , 2020, , .		4
48	Vaporâ€Phase Deposition of Highly Luminescent Embedded Perovskite Nanocrystals. Advanced Optical Materials, 0, , 2102809.	3.6	1