Rui Wang

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/8227244/publications.pdf

Version: 2024-02-01

46 papers	6,759 citations	117453 34 h-index	205818 48 g-index
48 all docs	48 docs citations	48 times ranked	6603 citing authors

#	Article	IF	Citations
1	Constructive molecular configurations for surface-defect passivation of perovskite photovoltaics. Science, 2019, 366, 1509-1513.	6.0	846
2	A Review of Perovskites Solar Cell Stability. Advanced Functional Materials, 2019, 29, 1808843.	7.8	835
3	Caffeine Improves the Performance and Thermal Stability of Perovskite Solar Cells. Joule, 2019, 3, 1464-1477.	11.7	448
4	Enabling low voltage losses and high photocurrent in fullerene-free organic photovoltaics. Nature Communications, 2019, 10, 570.	5.8	377
5	Composition Stoichiometry of Cs₂AgBiBr₆ Films for Highly Efficient Lead-Free Perovskite Solar Cells. Nano Letters, 2019, 19, 2066-2073.	4.5	250
6	Tailored Phase Conversion under Conjugated Polymer Enables Thermally Stable Perovskite Solar Cells with Efficiency Exceeding 21%. Journal of the American Chemical Society, 2018, 140, 17255-17262.	6.6	235
7	Stability-limiting heterointerfaces of perovskite photovoltaics. Nature, 2022, 605, 268-273.	13.7	229
8	The surface of halide perovskites from nano to bulk. Nature Reviews Materials, 2020, 5, 809-827.	23.3	224
9	Prospects for metal halide perovskite-based tandem solar cells. Nature Photonics, 2021, 15, 411-425.	15.6	195
10	Surface Ligand Management for Stable FAPbI3 Perovskite Quantum Dot Solar Cells. Joule, 2018, 2, 1866-1878.	11.7	187
11	Reconfiguring the band-edge states of photovoltaic perovskites by conjugated organic cations. Science, 2021, 371, 636-640.	6.0	184
12	Shallow Iodine Defects Accelerate the Degradation of Î±-Phase Formamidinium Perovskite. Joule, 2020, 4, 2426-2442.	11.7	173
13	Crystalline Liquid-like Behavior: Surface-Induced Secondary Grain Growth of Photovoltaic Perovskite Thin Film. Journal of the American Chemical Society, 2019, 141, 13948-13953.	6.6	163
14	Rational Tuning of Molecular Interaction and Energy Level Alignment Enables Highâ€Performance Organic Photovoltaics. Advanced Materials, 2019, 31, e1904215.	11.1	162
15	Tailored Phase Transformation of CsPbI₂Br Films by Copper(II) Bromide for High-Performance All-Inorganic Perovskite Solar Cells. Nano Letters, 2019, 19, 5176-5184.	4.5	161
16	A Polymerizationâ€Assisted Grain Growth Strategy for Efficient and Stable Perovskite Solar Cells. Advanced Materials, 2020, 32, e1907769.	11.1	161
17	Molecular Interaction Regulates the Performance and Longevity of Defect Passivation for Metal Halide Perovskite Solar Cells. Journal of the American Chemical Society, 2020, 142, 20071-20079.	6.6	145
18	Steric Impediment of Ion Migration Contributes to Improved Operational Stability of Perovskite Solar Cells. Advanced Materials, 2020, 32, e1906995.	11.1	142

#	Article	IF	Citations
19	Unraveling Sunlight by Transparent Organic Semiconductors toward Photovoltaic and Photosynthesis. ACS Nano, 2019, 13, 1071-1077.	7.3	134
20	Single-crystalline TiO2 nanoparticles for stable and efficient perovskite modules. Nature Nanotechnology, 2022, 17, 598-605.	15.6	121
21	Unique Energy Alignments of a Ternary Material System toward Highâ€Performance Organic Photovoltaics. Advanced Materials, 2018, 30, e1801501.	11.1	116
22	Coreâ€“Shell ZnO@SnO₂ Nanoparticles for Efficient Inorganic Perovskite Solar Cells. Journal of the American Chemical Society, 2019, 141, 17610-17616.	6.6	113
23	Polarized Ferroelectric Polymers for Highâ€Performance Perovskite Solar Cells. Advanced Materials, 2019, 31, e1902222.	11.1	109
24	Surface Reconstruction of Halide Perovskites During Post-treatment. Journal of the American Chemical Society, 2021, 143, 6781-6786.	6.6	109
25	Ternary System with Controlled Structure: A New Strategy toward Efficient Organic Photovoltaics. Advanced Materials, 2018, 30, 1705243.	11.1	105
26	Opportunities and Challenges of Lead-Free Perovskite Optoelectronic Devices. Trends in Chemistry, 2019, 1, 368-379.	4.4	100
27	A Smallâ€Molecule â€œCharge Driverâ€•enables Perovskite Quantum Dot Solar Cells with Efficiency Approaching 13%. Advanced Materials, 2019, 31, e1900111.	11.1	92
28	Solid-phase hetero epitaxial growth of Î±-phase formamidinium perovskite. Nature Communications, 2020, 11, 5514.	5.8	71
29	Efficient Tandem Organic Photovoltaics with Tunable Rear Sub-cells. Joule, 2019, 3, 432-442.	11.7	65
30	Transparent Holeâ€Transporting Frameworks: A Unique Strategy to Design Highâ€Performance Semitransparent Organic Photovoltaics. Advanced Materials, 2020, 32, e2003891.	11.1	60
31	Hierarchical Structure with Highly Ordered Macroporous-Mesoporous Metal-Organic Frameworks as Dual Function for CO2 Fixation. IScience, 2019, 15, 514-523.	1.9	56
32	Efficient Flexible Inorganic Perovskite Light-Emitting Diodes Fabricated with CsPbBr₃ Emitters Prepared via Low-Temperature in Situ Dynamic Thermal Crystallization. Nano Letters, 2020, 20, 4673-4680.	4.5	55
33	Performance-limiting formation dynamics in mixed-halide perovskites. Science Advances, 2021, 7, eabj1799.	4.7	54
34	Realizing Efficient Charge/Energy Transfer and Charge Extraction in Fullerene-Free Organic Photovoltaics via a Versatile Third Component. Nano Letters, 2019, 19, 5053-5061.	4.5	47
35	Stable and Efficient Methylammoniumâ€, Cesiumâ€, and Bromideâ€Free Perovskite Solar Cells by Inâ€Situ Interlayer Formation. Advanced Functional Materials, 2021, 31, 2007520.	7.8	34
36	High Performance Indiumâ€Galliumâ€Zinc Oxide Thin Film Transistor via Interface Engineering. Advanced Functional Materials, 2020, 30, 2003285.	7.8	33

#	Article	IF	Citations
37	High Mobility Indium Oxide Electron Transport Layer for an Efficient Charge Extraction and Optimized Nanomorphology in Organic Photovoltaics. Nano Letters, 2018, 18, 5805-5811.	4.5	31
38	Noncovalent Ï€-stacked robust topological organic framework. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 20397-20403.	3.3	28
39	Enabling Highâ€Performance Tandem Organic Photovoltaic Cells by Balancing the Front and Rear Subcells. Advanced Materials, 2020, 32, e2002315.	11.1	25
40	Core Structure Engineering in Holeâ€Transport Materials to Achieve Highly Efficient Perovskite Solar Cells. ChemSusChem, 2019, 12, 1374-1380.	3.6	21
41	Enabling Efficient Tandem Organic Photovoltaics with High Fill Factor via Reduced Charge Recombination. ACS Energy Letters, 2019, 4, 1535-1540.	8.8	18
42	Design of a Rigid Scaffold Structure toward Efficient and Stable Organic Photovoltaics. Matter, 2019, 1, 402-411.	5.0	8
43	Halide Segregation in Mixed Halide Perovskites: Visualization and Mechanisms. Electronics (Switzerland), 2022, 11, 700.	1.8	7
44	Tailored Key Parameters of Perovskite for High-Performance Photovoltaics. Accounts of Materials Research, 2021, 2, 447-457.	5.9	5
45	Molecular Tuning of Titanium Complexes with Controllable Work Function for Efficient Organic Photovoltaics. Journal of Physical Chemistry C, 2019, 123, 20800-20807.	1.5	4
46	Quantitative Specifications to Avoid Degradation during E-Beam and Induced Current Microscopy of Halide Perovskite Devices. Journal of Physical Chemistry C, 2020, 124, 18961-18967.	1.5	4