Wanchun Xiang

List of Publications by Year
in descending order

67 papers	2,919 citations	218592 26 h-index	175177 52 g-index
68 all docs	68 docs citations	68 times ranked	3529 citing authors

#	Article	IF	Citations
1	Europium-Doped CsPbI2Br for Stable and Highly Efficient Inorganic Perovskite Solar Cells. Joule, 2019, 3, 205-214.	11.7	387
2	Review on Recent Progress of Allâ€Inorganic Metal Halide Perovskites and Solar Cells. Advanced Materials, 2019, 31, e1902851.	11.1	309
3	A review on the stability of inorganic metal halide perovskites: challenges and opportunities for stable solar cells. Energy and Environmental Science, 2021, 14, 2090-2113.	15.6	193
4	Rational Surfaceâ€Defect Control via Designed Passivation for Highâ€Efficiency Inorganic Perovskite Solar Cells. Angewandte Chemie - International Edition, 2021, 60, 23164-23170.	7.2	189
5	Ba-induced phase segregation and band gap reduction in mixed-halide inorganic perovskite solar cells. Nature Communications, 2019, 10, 4686.	5.8	105
6	Hydrazide Derivatives for Defect Passivation in Pure CsPbI₃ Perovskite Solar Cells. Angewandte Chemie - International Edition, 2022, 61, .	7.2	95
7	Intermediate Phase Enhances Inorganic Perovskite and Metal Oxide Interface for Efficient Photovoltaics. Joule, 2020, 4, 222-234.	11.7	88
8	Aqueous dye-sensitized solar cell electrolytes based on the cobalt(<scp>ii</scp>)/(<scp>iii</scp>) tris(bipyridine) redox couple. Energy and Environmental Science, 2013, 6, 121-127.	15.6	81
9	Stable high efficiency dye-sensitized solar cells based on a cobalt polymer gel electrolyte. Chemical Communications, 2013, 49, 8997.	2.2	76
10	Diatom frustules as light traps enhance DSSC efficiency. Nanoscale, 2013, 5, 873-876.	2.8	74
11	Interfaces and Interfacial Layers in Inorganic Perovskite Solar Cells. Angewandte Chemie - International Edition, 2021, 60, 26440-26453.	7.2	69
12	Intermediate phase engineering of halide perovskites for photovoltaics. Joule, 2022, 6, 315-339.	11.7	60
13	Rational Surfaceâ€Defect Control via Designed Passivation for Highâ€Efficiency Inorganic Perovskite Solar Cells. Angewandte Chemie, 2021, 133, 23348-23354.	1.6	58
14	Controlling Interfacial Recombination in Aqueous Dyeâ€Sensitized Solar Cells by Octadecyltrichlorosilane Surface Treatment. Angewandte Chemie - International Edition, 2014, 53, 6933-6937.	7.2	55
15	Improved air stability of perovskite hybrid solar cells via blending poly(dimethylsiloxane)â€“urea copolymers. Journal of Materials Chemistry A, 2017, 5, 5486-5494.	5.2	49
16	Cyanomethylbenzoic Acid: An Acceptor for Donorâ€“Ï€â€“Acceptor Chromophores Used in Dyeâ€Sensitized Solar Cells. ChemSusChem, 2013, 6, 256-260.	3.6	47
17	Surface State Recombination and Passivation in Nanocrystalline TiO2 Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2013, 117, 25118-25126.	1.5	46
18	The effect of direct amine substituted pushâ€“pull oligothiophene chromophores on dye-sensitized and bulk heterojunction solar cells performance. Tetrahedron, 2013, 69, 3584-3592.	1.0	46

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19	Introducing manganese complexes as redox mediators for dye-sensitized solar cells. Physical Chemistry Chemical Physics, 2014, 16, 12021.	1.3	45
20	High-performance novel acidic ionic liquid polymer/ionic liquid composite polymer electrolyte for dye-sensitized solar cells. Electrochemistry Communications, 2011, 13, 60-63.	2.3	34
21	Titania nanobundle networks as dye-sensitized solar cell photoanodes. Nanoscale, 2014, 6, 3704-3711.	2.8	34
22	Non-fullerene acceptors based on central naphthalene diimide flanked by rhodanine or 1,3-indanedione. Chemical Communications, 2017, 53, 7080-7083.	2.2	31
23	An H-shaped, small molecular non-fullerene acceptor for efficient organic solar cells with an impressive open-circuit voltage of 1.17 V. Materials Chemistry Frontiers, 2017, 1, 1600-1606.	3.2	30
24	Influences of poly(ether urethane) introduction on poly(ethylene oxide) based polymer electrolyte for solvent-free dye-sensitized solar cells. Electrochimica Acta, 2009, 54, 6645-6650.	2.6	28
25	Improved Performance of Planar Perovskite Solar Cells Using an Amino-Terminated Multifunctional Fullerene Derivative as the Passivation Layer. ACS Applied Materials & Interfaces, 2019, 11, 27145-27152.	4.0	28
26	Formation and Stabilization of Inorganic Halide Perovskites for Photovoltaics. Matter, 2021, 4, 528-551.	5.0	28
27	An efficient non-fullerene acceptor based on central and peripheral naphthalene diimides. Chemical Communications, 2018, 54, 5062-5065.	2.2	27
28	Porous rGO/ZnSe/CoSe₂dispersed in PEDOT:PSS as an efficient counter electrode for dye-sensitized solar cells. Materials Chemistry Frontiers, 2021, 5, 2702-2714.	3.2	27
29	Cyanopyridone flanked the tetraphenylethylene to generate an efficient, three-dimensional small molecule non-fullerene electron acceptor. Materials Chemistry Frontiers, 2017, 1, 2511-2518.	3.2	25
30	Yolk-shell m-SiO2@ Nitrogen doped carbon derived zeolitic imidazolate framework high efficient counter electrode for dye-sensitized solar cells. Electrochimica Acta, 2018, 292, 276-284.	2.6	25
31	Zeolitic-imidazolate-framework (ZIF-8)/PEDOT:PSS composite counter electrode for low cost and efficient dye-sensitized solar cells. New Journal of Chemistry, 2018, 42, 17303-17310.	1.4	25
32	Enhance photovoltaic performance of tris(2,2â€^{2}-bipyridine) cobalt(II)/(III) based dye-sensitized solar cells via modifying TiO 2 surface with metal-organic frameworks. Solar Energy, 2017, 147, 126-132.	2.9	24
33	Morphology control of perovskite film for efficient CsPbIBr2 based inorganic perovskite solar cells. Solar Energy Materials and Solar Cells, 2021, 221, 110878.	3.0	24
34	Synergetic surface defect passivation towards efficient and stable inorganic perovskite solar cells. Chemical Engineering Journal, 2022, 447, 137515.	6.6	24
35	The Effect of the Scattering Layer in Dyeâ€Sensitized Solar Cells Employing a Cobaltâ€Based Aqueous Gel Electrolyte. ChemSusChem, 2015, 8, 3704-3711.	3.6	23
36	Naphthalene diimide-based non-fullerene acceptors flanked by open-ended and aromatizable acceptor functionalities. Chemical Communications, 2017, 53, 11157-11160.	2.2	23

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37	Injection Kinetics and Electronic Structure at the N719/TiO₂ Interface Studied by Means of Ultrafast XUV Photoemission Spectroscopy. Journal of Physical Chemistry C, 2015, 119, 9099-9107.	1.5	22
38	Donorâ€"acceptorâ€"acceptor-based non-fullerene acceptors comprising terminal chromen-2-one functionality for efficient bulk-heterojunction devices. Dyes and Pigments, 2017, 146, 502-511.	2.0	22
39	Insertion of a naphthalenediimide unit in a metal-free donorâ€"acceptor organic sensitizer for efficiency enhancement of a dye-sensitized solar cell. Dyes and Pigments, 2016, 134, 83-90.	2.0	21
40	Si3N4/MoS2-PEDOT: PSS composite counter electrode for bifacial dye-sensitized solar cells. Solar Energy, 2018, 173, 1135-1143.	2.9	21
41	In situ quaterizable oligo-organophosphazene electrolyte with modified nanocomposite SiO2 for all-solid-state dye-sensitized solar cell. Electrochimica Acta, 2009, 54, 4186-4191.	2.6	19
42	Effect of TiO₂ microbead pore size on the performance of DSSCs with a cobalt based electrolyte. Nanoscale, 2014, 6, 13787-13794.	2.8	19
43	Small molecular non-fullerene acceptors based on naphthalenediimide and benzoisoquinoline-dione functionalities for efficient bulk-heterojunction devices. Dyes and Pigments, 2017, 143, 1-9.	2.0	19
44	Carbon black/silicon nitride nanocomposites as high-efficiency counter electrodes for dye-sensitized solar cells. New Journal of Chemistry, 2018, 42, 11715-11723.	1.4	19
45	Metal Chalcogenides (M_{<i>x</i>}E_{<i>y</i>}; Eâ€‰=â€‰S, Se, and Te) as Counter Electrodes for Dyeâ€"Sensitized Solar Cells: An Overview and Guidelines. Advanced Energy and Sustainability Research, 2021, 2, 2100056.	2.8	18
46	New organic sensitizers using 4-(cyanomethyl)benzoic acid as an acceptor group for dye-sensitized solar cell applications. Dyes and Pigments, 2015, 113, 280-288.	2.0	16
47	Aqueous p-type dye-sensitized solar cells based on a tris(1,2-diaminoethane)cobalt(<scp>ii</scp>)/(<scp>iii</scp>) redox mediator. Green Chemistry, 2016, 18, 6659-6665.	4.6	16
48	ZnO-nitrogen doped carbon derived from a zeolitic imidazolate framework as an efficient counter electrode in dye-sensitized solar cells. Sustainable Energy and Fuels, 2019, 3, 1976-1987.	2.5	16
49	High efficiency solid-state dye-sensitized solar cells using a cobalt(<scp>ii</scp>/<scp>iii</scp>) redox mediator. Journal of Materials Chemistry C, 2017, 5, 4875-4883.	2.7	14
50	Interfaces and Interfacial Layers in Inorganic Perovskite Solar Cells. Angewandte Chemie, 2021, 133, 26644-26657.	1.6	14
51	MoS2/ZIF-8 derived nitrogen doped carbon (NC)-PEDOT: PSS as optically transparent counter electrode for dye-sensitized solar cells. Solar Energy, 2021, 218, 117-128.	2.9	13
52	Polymerâ€"metal complex as gel electrolyte for quasi-solid-state dye-sensitized solar cells. Electrochimica Acta, 2011, 56, 1605-1610.	2.6	11
53	Probing the influence of lithium cation as electrolyte additive for the improved performance of p-type aqueous dye sensitized solar cells. Journal of Photochemistry and Photobiology A: Chemistry, 2017, 344, 199-205.	2.0	11
54	In Situ Formation of NiO<i>_x</i> Interlayer for Efficient nâ€"iâ€"p Inorganic Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 5977-5983.	2.5	11

#	ARTICLE	IF	CITATIONS
55	Efficient NiO Impregnated Walnut Shell-Derived Carbon for Dye-Sensitized Solar Cells. ACS Applied Electronic Materials, 2022, 4, 1063-1071.	2.0	10
56	Screen-printed carbon black/SiO2 composite counter electrodes for dye-sensitized solar cells. Solar Energy, 2021, 230, 902-911.	2.9	10
57	Surface, conformational and catalytic activity approach of Î±-chymotrypsin and trypsin in micellar media. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2015, 470, 188-193.	2.3	8
58	Robust Selfâ€Assembled Molecular Passivation for Highâ€Performance Perovskite Solar Cells. Angewandte Chemie, 2022, 134, .	1.6	8
59	High-conductivity thiocyanate ionic liquid interface engineering for efficient and stable perovskite solar cells. Chemical Communications, 2022, 58, 8384-8387.	2.2	8
60	The effect of oligo-organosiloxane on poly(ethylene oxide) electrolyte system for solid dye sensitized solar cells. Electrochimica Acta, 2013, 89, 29-34.	2.6	6
61	Polymer electrolyte using <i>in situ</i> quanternization for all solidâ€state dyeâ€sensitized solar cells. Polymers for Advanced Technologies, 2009, 20, 519-523.	1.6	4
62	Novel organic sensitizer based on directly linked oligothiophenes to donor nitrogen atom for efficient dye-sensitized solar cells. Synthetic Metals, 2014, 193, 102-109.	2.1	4
63	Phase stabilization of all-inorganic perovskite materials for photovoltaics. Current Opinion in Electrochemistry, 2018, 11, 141-145.	2.5	4
64	Enhanced Performance of Carbonâ€“Selenide Composite with La0.9Ce0.1NiO3 Perovskite Oxide for Outstanding Counter Electrodes in Platinum-Free Dye-Sensitized Solar Cells. Nanomaterials, 2022, 12, 961.	1.9	4
65	Hydrazide Derivatives for Defect Passivation in Pure CsPbI3 Perovskite Solar Cells. Angewandte Chemie, 0, , .	1.6	4
66	Enhanced charge collection in dye-sensitized solar cells utilizing collectorâ€“shell electrodes. Journal of Power Sources, 2015, 277, 343-349.	4.0	3
67	Direct connection of an amine to oligothiophene to generate push-pull chromophores for organic photovoltaic applications. Dyes and Pigments, 2019, 162, 315-323.	2.0	3