Wanchun Xiang

List of Publications by Year
in descending order

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67

papers

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citations

249298

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68

all docs

68

docs citations

68

times ranked

4093

citing authors

#	Article	IF	Citations
1	Intermediate phase engineering of halide perovskites for photovoltaics. Joule, 2022, 6, 315-339.	11.7	60
2	Efficient NiO Impregnated Walnut Shell-Derived Carbon for Dye-Sensitized Solar Cells. ACS Applied Electronic Materials, 2022, 4, 1063-1071.	2.0	10
3	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
4	Robust Selfâ€Assembled Molecular Passivation for Highâ€Performance Perovskite Solar Cells. Angewandte Chemie, 2022, 134, .	1.6	8
5	Hydrazide Derivatives for Defect Passivation in Pure CsPbI₃ Perovskite Solar Cells. Angewandte Chemie - International Edition, 2022, 61, .	7.2	95
6	Synergetic surface defect passivation towards efficient and stable inorganic perovskite solar cells. Chemical Engineering Journal, 2022, 447, 137515.	6.6	24
7	High-conductivity thiocyanate ionic liquid interface engineering for efficient and stable perovskite solar cells. Chemical Communications, 2022, 58, 8384-8387.	2.2	8
8	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
9	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
10	Formation and Stabilization of Inorganic Halide Perovskites for Photovoltaics. Matter, 2021, 4, 528-551.	5.0	28
11	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
12	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
13	Interfaces and Interfacial Layers in Inorganic Perovskite Solar Cells. Angewandte Chemie, 2021, 133, 26644-26657.	1.6	14
14	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
15	Interfaces and Interfacial Layers in Inorganic Perovskite Solar Cells. Angewandte Chemie - International Edition, 2021, 60, 26440-26453.	7.2	69
16	Rational Surfaceâ€Defect Control via Designed Passivation for Highâ€Efficiency Inorganic Perovskite Solar Cells. Angewandte Chemie, 2021, 133, 23348-23354.	1.6	58
17	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
18	Screen-printed carbon black/SiO2 composite counter electrodes for dye-sensitized solar cells. Solar Energy, 2021, 230, 902-911.	2.9	10

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19	Intermediate Phase Enhances Inorganic Perovskite and Metal Oxide Interface for Efficient Photovoltaics. Joule, 2020, 4, 222-234.	11.7	88
20	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
21	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
22	Review on Recent Progress of Allâ€Inorganic Metal Halide Perovskites and Solar Cells. Advanced Materials, 2019, 31, e1902851.	11.1	309
23	Ba-induced phase segregation and band gap reduction in mixed-halide inorganic perovskite solar cells. Nature Communications, 2019, 10, 4686.	5.8	105
24	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
25	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
26	Europium-Doped CsPbI2Br for Stable and Highly Efficient Inorganic Perovskite Solar Cells. Joule, 2019, 3, 205-214.	11.7	387
27	An efficient non-fullerene acceptor based on central and peripheral naphthalene diimides. Chemical Communications, 2018, 54, 5062-5065.	2.2	27
28	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
29	Phase stabilization of all-inorganic perovskite materials for photovoltaics. Current Opinion in Electrochemistry, 2018, 11, 141-145.	2.5	4
30	Si3N4/MoS2-PEDOT: PSS composite counter electrode for bifacial dye-sensitized solar cells. Solar Energy, 2018, 173, 1135-1143.	2.9	21
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	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
33	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
34	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
35	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
36	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

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37	Non-fullerene acceptors based on central naphthalene diimide flanked by rhodanine or 1,3-indanedione. Chemical Communications, 2017, 53, 7080-7083.	2.2	31
38	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
39	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
40	Naphthalene diimide-based non-fullerene acceptors flanked by open-ended and aromatizable acceptor functionalities. Chemical Communications, 2017, 53, 11157-11160.	2.2	23
41	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
42	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
43	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
44	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
45	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
46	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
47	Enhanced charge collection in dye-sensitized solar cells utilizing collectorâ€“shell electrodes. Journal of Power Sources, 2015, 277, 343-349.	4.0	3
48	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
49	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
50	Titania nanobundle networks as dye-sensitized solar cell photoanodes. Nanoscale, 2014, 6, 3704-3711.	2.8	34
51	Effect of TiO₂ microbead pore size on the performance of DSSCs with a cobalt based electrolyte. Nanoscale, 2014, 6, 13787-13794.	2.8	19
52	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
53	Controlling Interfacial Recombination in Aqueous Dyeâ€Sensitized Solar Cells by Octadecyltrichlorosilane Surface Treatment. Angewandte Chemie - International Edition, 2014, 53, 6933-6937.	7.2	55
54	Introducing manganese complexes as redox mediators for dye-sensitized solar cells. Physical Chemistry Chemical Physics, 2014, 16, 12021.	1.3	45

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55	Stable high efficiency dye-sensitized solar cells based on a cobalt polymer gel electrolyte. Chemical Communications, 2013, 49, 8997.	2.2	76
56	Surface State Recombination and Passivation in Nanocrystalline TiO2 Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2013, 117, 25118-25126.	1.5	46
57	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
58	Diatom frustules as light traps enhance DSSC efficiency. Nanoscale, 2013, 5, 873-876.	2.8	74
59	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
60	Cyanomethylbenzoic Acid: An Acceptor for Donorâ€“Ï€â€“Acceptor Chromophores Used in Dyeâ€Sensitized Solar Cells. ChemSusChem, 2013, 6, 256-260.	3.6	47
61	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
62	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
63	Polymerâ€“metal complex as gel electrolyte for quasi-solid-state dye-sensitized solar cells. Electrochimica Acta, 2011, 56, 1605-1610.	2.6	11
64	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
65	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
66	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
67	Hydrazide Derivatives for Defect Passivation in Pure CsPbI3 Perovskite Solar Cells. Angewandte Chemie, 0, , .	1.6	4