Xichuan Yang

List of Publications by Year
in descending order

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114 papers	6,956 citations	57758 44 h-index	60623 81 g-index
116 all docs	116 docs citations	116 times ranked	6377 citing authors

#	Article	IF	Citations
1	Phenothiazine derivatives for efficient organic dye-sensitized solar cells. Chemical Communications, 2007, , 3741.	4.1	446
2	Effect of Different Dye Baths and Dye-Structures on the Performance of Dye-Sensitized Solar Cells Based on Triphenylamine Dyes. Journal of Physical Chemistry C, 2008, 112, 11023-11033.	3.1	432
3	Effect of Tetrahydroquinoline Dyes Structure on the Performance of Organic Dye-Sensitized Solar Cells. Chemistry of Materials, 2007, 19, 4007-4015.	6.7	302
4	13.6% Efficient Organic Dye-Sensitized Solar Cells by Minimizing Energy Losses of the Excited State. ACS Energy Letters, 2019, 4, 943-951.	17.4	284
5	Structure Engineering of Holeâ€“Conductor Free Perovskite-Based Solar Cells with Low-Temperature-Processed Commercial Carbon Paste As Cathode. ACS Applied Materials & Interfaces, 2014, 6, 16140-16146.	8.0	245
6	Boosting the efficiency and the stability of low cost perovskite solar cells by using CuPc nanorods as hole transport material and carbon as counter electrode. Nano Energy, 2016, 20, 108-116.	16.0	240
7	Molecular Design of Anthracene-Bridged Metal-Free Organic Dyes for Efficient Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2010, 114, 9101-9110.	3.1	216
8	Photoinduced Intramolecular Charge Transfer and S₂ Fluorescence in Thiopheneâ€Ï€â€Conjugated Donorâ€“Acceptor Systems: Experimental and TDDFT Studies. Chemistry - A European Journal, 2008, 14, 6935-6947.	3.3	203
9	Tetrahydroquinoline dyes with different spacers for organic dye-sensitized solar cells. Journal of Photochemistry and Photobiology A: Chemistry, 2007, 189, 295-300.	3.9	170
10	Two Novel Carbazole Dyes for Dye-Sensitized Solar Cells with Open-Circuit Voltages up to 1 V Based on Br^{âˆ’}/Br₃^{âˆ’} Electrolytes. Organic Letters, 2009, 11, 5542-5545.	4.6	166
11	Influence of Ï€-Conjugation Units in Organic Dyes for Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2007, 111, 1853-1860.	3.1	160
12	Tuning of phenoxazine chromophores for efficient organic dye-sensitized solar cells. Chemical Communications, 2009, , 6288.	4.1	156
13	A metal-free â€œblack dyeâ€• for panchromatic dye-sensitized solar cells. Energy and Environmental Science, 2009, 2, 674.	30.8	153
14	Iodine/iodide-free redox shuttles for liquid electrolyte-based dye-sensitized solar cells. Energy and Environmental Science, 2012, 5, 9180.	30.8	146
15	Molecular Engineering of Copper Phthalocyanines: A Strategy in Developing Dopantâ€Free Holeâ€Transporting Materials for Efficient and Ambientâ€Stable Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803287.	19.5	138
16	A Triphenylamine Dye Model for the Study of Intramolecular Energy Transfer and Charge Transfer in Dyeâ€Sensitized Solar Cells. Advanced Functional Materials, 2008, 18, 3461-3468.	14.9	131
17	Polymeric, Cost-Effective, Dopant-Free Hole Transport Materials for Efficient and Stable Perovskite Solar Cells. Journal of the American Chemical Society, 2019, 141, 19700-19707.	13.7	119
18	Efficient near infrared Dâ€“Ï€â€“A sensitizers with lateral anchoring group for dye-sensitized solar cells. Chemical Communications, 2009, , 4031.	4.1	112

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19	Tuning the HOMO Energy Levels of Organic Dyes for Dyeâ€Sensitized Solar Cells Based on Br^{âˆ’}/Br₃^{âˆ’} Electrolytes. Chemistry - A European Journal, 2010, 16, 13127-13138.	3.3	112
20	Phenoxazineâ€Based Small Molecule Material for Efficient Perovskite Solar Cells and Bulk Heterojunction Organic Solar Cells. Advanced Energy Materials, 2015, 5, 1401720.	19.5	109
21	Novel Small Molecular Materials Based on Phenoxazine Core Unit for Efficient Bulk Heterojunction Organic Solar Cells and Perovskite Solar Cells. Chemistry of Materials, 2015, 27, 1808-1814.	6.7	100
22	Interfacial Molecular Doping and Energy Level Alignment Regulation for Perovskite Solar Cells with Efficiency Exceeding 23%. ACS Energy Letters, 2021, 6, 2690-2696.	17.4	96
23	Efficient and Stable Inverted Planar Perovskite Solar Cells Employing CuI as Holeâ€Transporting Layer Prepared by Solidâ€“Gas Transformation. Energy Technology, 2017, 5, 1836-1843.	3.8	94
24	Progress in hole-transporting materials for perovskite solar cells. Journal of Energy Chemistry, 2018, 27, 650-672.	12.9	90
25	Conformational and Compositional Tuning of Phenanthrocarbazole-Based Dopant-Free Hole-Transport Polymers Boosting the Performance of Perovskite Solar Cells. Journal of the American Chemical Society, 2020, 142, 17681-17692.	13.7	83
26	Passivation functionalized phenothiazine-based hole transport material for highly efficient perovskite solar cell with efficiency exceeding 22%. Chemical Engineering Journal, 2021, 410, 128328.	12.7	83
27	Engineering of hole-selective contact for low temperature-processed carbon counter electrode-based perovskite solar cells. Journal of Materials Chemistry A, 2015, 3, 24272-24280.	10.3	78
28	Photoinduced intramolecular charge-transfer state in thiophene-Ï€-conjugated donorâ€“acceptor molecules. Journal of Molecular Structure, 2008, 876, 102-109.	3.6	72
29	Tuning the HOMO and LUMO Energy Levels of Organic Dyes with <i>N</i>-Carboxomethylpyridinium as Acceptor To Optimize the Efficiency of Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2013, 117, 9076-9083.	3.1	72
30	Reverseâ€Graded 2D Ruddlesdenâ€“Popper Perovskites for Efficient Airâ€Stable Solar Cells. Advanced Energy Materials, 2019, 9, 1900612.	19.5	69
31	A solution-processable copper(<scp>ii</scp>) phthalocyanine derivative as a dopant-free hole-transporting material for efficient and stable carbon counter electrode-based perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 17862-17866.	10.3	67
32	One plus one greater than two: high-performance inverted planar perovskite solar cells based on a composite CuI/CuSCN hole-transporting layer. Journal of Materials Chemistry A, 2018, 6, 21435-21444.	10.3	64
33	Efficient Dyeâ€Sensitized Solar Cells Based on Hydroquinone/Benzoquinone as a Bioinspired Redox Couple. Angewandte Chemie - International Edition, 2012, 51, 9896-9899.	13.8	61
34	A facile route to grain morphology controllable perovskite thin films towards highly efficient perovskite solar cells. Nano Energy, 2018, 53, 405-414.	16.0	60
35	Anthraquinone dyes as photosensitizers for dye-sensitized solar cells. Solar Energy Materials and Solar Cells, 2007, 91, 1863-1871.	6.2	57
36	Dyeâ€Sensitized Solar Cells Based on a Donorâ€“Acceptor System with a Pyridine Cation as an Electronâ€Withdrawing Anchoring Group. Chemistry - A European Journal, 2012, 18, 16196-16202.	3.3	57

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37	Efficient dye-sensitized solar cells based on an iodine-free electrolyte using l-cysteine/l-cystine as a redox couple. Energy and Environmental Science, 2012, 5, 6290-6293.	30.8	56
38	Coâ€sensitization of Organic Dyes for Efficient Dyeâ€Sensitized Solar Cells. ChemSusChem, 2013, 6, 70-77.	6.8	56
39	Degradation of Cyanoacrylic Acidâ€Based Organic Sensitizers in Dyeâ€Sensitized Solar Cells. ChemSusChem, 2013, 6, 1270-1275.	6.8	56
40	Interfacial Engineering of Perovskite Solar Cells by Employing a Hydrophobic Copper Phthalocyanine Derivative as Holeâ€Transporting Material with Improved Performance and Stability. ChemSusChem, 2017, 10, 1838-1845.	6.8	54
41	High-Performance Regular Perovskite Solar Cells Employing Low-Cost Poly(ethylenedioxythiophene) as a Hole-Transporting Material. Scientific Reports, 2017, 7, 42564.	3.3	52
42	Red-Absorbing Cationic Acceptor Dyes for Photocathodes in Tandem Solar Cells. Journal of Physical Chemistry C, 2014, 118, 16536-16546.	3.1	51
43	Molecular Design and Performance of Hydroxylpyridium Sensitizers for Dye-Sensitized Solar Cells. ACS Applied Materials & Interfaces, 2013, 5, 5227-5231.	8.0	50
44	Efficient dye-sensitized solar cells with [copper(6,6â€²-dimethyl-2,2â€²-bipyridine)₂]^{2+/1+} redox shuttle. RSC Advances, 2017, 7, 4611-4615.	3.6	48
45	A photo-induced electron transfer study of an organic dye anchored on the surfaces of TiO2 nanotubes and nanoparticles. Physical Chemistry Chemical Physics, 2011, 13, 4032.	2.8	45
46	Engineering of highly efficient tetrahydroquinoline sensitizers for dye-sensitized solar cells. Tetrahedron, 2012, 68, 552-558.	1.9	42
47	Femtosecond to millisecond studies of electron transfer processes in a donorâ€“(Ï€-spacer)â€“acceptor series of organic dyes for solar cells interacting with titania nanoparticles and ordered nanotube array films. Physical Chemistry Chemical Physics, 2012, 14, 2816.	2.8	40
48	A highly efficient colourless sulfur/iodide-based hybrid electrolyte for dye-sensitized solar cells. RSC Advances, 2012, 2, 3625.	3.6	39
49	Boosting the power conversion efficiency of perovskite solar cells to 17.7% with an indolo[3,2-<i>b</i>]carbazole dopant-free hole transporting material by improving its spatial configuration. Journal of Materials Chemistry A, 2019, 7, 14835-14841.	10.3	39
50	Phenothiazine derivatives-based Dâ€“Ï€â€“A and Dâ€“Aâ€“Ï€â€“A organic dyes for dye-sensitized solar cells. RSC Advances, 2014, 4, 24377.	3.6	38
51	Effect of the acceptor on the performance of dye-sensitized solar cells. Physical Chemistry Chemical Physics, 2013, 15, 17452.	2.8	37
52	A new type of organic sensitizers with pyridine-N-oxide as the anchoring group for dye-sensitized solar cells. RSC Advances, 2013, 3, 13677.	3.6	35
53	Efficient Panchromatic Organic Sensitizers with Dihydrothiazole Derivative as Ï€-Bridge for Dye-Sensitized Solar Cells. ACS Applied Materials & Interfaces, 2013, 5, 10960-10965.	8.0	35
54	Construct efficient CsPbI2Br solar cells by minimizing the open-circuit voltage loss through controlling the peripheral substituents of hole-transport materials. Chemical Engineering Journal, 2021, 425, 131675.	12.7	34

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55	A Doubleâ€Band Tandem Organic Dyeâ€sensitized Solar Cell with an Efficiency of 11.5â€‰%. ChemSusChem, 2011, 4, 609-612.	6.8	33
56	Efficient organic dye sensitized solar cells based on modified sulfide/polysulfide electrolyte. Journal of Materials Chemistry, 2011, 21, 5573.	6.7	32
57	Efficient and Stable Dye-Sensitized Solar Cells Based on a Tetradentate Copper(II/I) Redox Mediator. ACS Applied Materials & Interfaces, 2018, 10, 30409-30416.	8.0	31
58	Molecular Design to Improve the Performance of Donorâ€"Ï€ Acceptor Nearâ€IR Organic Dyeâ€Sensitized Solar Cells. ChemSusChem, 2011, 4, 1601-1605.	6.8	30
59	Highly efficient iso-quinoline cationic organic dyes without vinyl groups for dye-sensitized solar cells. Journal of Materials Chemistry A, 2013, 1, 2441.	10.3	30
60	Electrogenerated Chemiluminescence of a Series of Donorâˆ'Acceptor Molecules and X-ray Crystallographic Evidence for the Reaction Mechanisms. Journal of Physical Chemistry C, 2007, 111, 9595-9602.	3.1	29
61	A crosslinked polymer as dopant-free hole-transport material for efficient n-i-p type perovskite solar cells. Journal of Energy Chemistry, 2021, 55, 211-218.	12.9	29
62	Solvent-free ionic liquid electrolytes without elemental iodine for dye-sensitized solar cells. Physical Chemistry Chemical Physics, 2012, 14, 11592.	2.8	28
63	A Perylenediimide Tetramerâ€Based 3D Electron Transport Material for Efficient Planar Perovskite Solar Cell. Solar Rrl, 2017, 1, 1700046.	5.8	28
64	High-efficiency perovskite solar cells employing a conjugated donorâ€"acceptor co-polymer as a hole-transporting material. RSC Advances, 2017, 7, 27189-27197.	3.6	27
65	Fine-Tuning by Triple Bond of Carbazole Derivative Dyes to Obtain High Efficiency for Dye-Sensitized Solar Cells with Copper Electrolyte. ACS Applied Materials & Interfaces, 2020, 12, 46397-46405.	8.0	27
66	Axial anchoring designed siliconâ€"porphyrin sensitizers for efficient dye-sensitized solar cells. Chemical Communications, 2013, 49, 11785.	4.1	26
67	Efficient Organic Dyeâ€Sensitized Solar Cells: Molecular Engineering of Donorâ€"Acceptorâ€"Acceptor cationic dyes. ChemSusChem, 2013, 6, 2322-2329.	6.8	26
68	Surface Defect Passivation and Energy Level Alignment Engineering with a Fluorine-Substituted Hole Transport Material for Efficient Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 13470-13477.	8.0	26
69	Application of Small Molecule Donor Materials Based on Phenothiazine Core Unit in Bulk Heterojunction Solar Cells. Journal of Physical Chemistry C, 2014, 118, 16851-16855.	3.1	24
70	Can aliphatic anchoring groups be utilised with dyes for p-type dye sensitized solar cells?. Dalton Transactions, 2016, 45, 7708-7719.	3.3	24
71	Improving energy transfer efficiency of dye-sensitized solar cell by fine tuning of dye planarity. Solar Energy, 2019, 187, 274-280.	6.1	24
72	Tuning band structures of dyes for dye-sensitized solar cells: effect of different Ï€-bridges on the performance of cells. RSC Advances, 2013, 3, 15734.	3.6	23

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73	Interrogating the ultrafast dynamics of an efficient dye for sunlight conversion. Physical Chemistry Chemical Physics, 2010, 12, 8098.	2.8	22
74	Construction of efficient perovskite solar cell through small-molecule synergistically assisted surface defect passivation and fluorescence resonance energy transfer. Chemical Engineering Journal, 2021, 426, 131358.	12.7	22
75	Phenoxazine-based panchromatic organic sensitizers for dye-sensitized solar cells. Dyes and Pigments, 2015, 116, 58-64.	3.7	21
76	Unveiling the light soaking effects of the CsPbI3 perovskite solar cells. Journal of Power Sources, 2020, 472, 228506.	7.8	21
77	Improved performance and air stability of perovskite solar cells based on low-cost organic hole-transporting material X60 by incorporating its dicationic salt. Science China Chemistry, 2018, 61, 172-179.	8.2	20
78	Electronâ€Withdrawing Anchor Group of Sensitizer for Dyeâ€Sensitized Solar Cells, Cyanoacrylic Acid, or Benzoic Acid?. Solar Rrl, 2020, 4, 1900436.	5.8	20
79	Dye-sensitized solar cells based on hydroquinone/benzoquinone as bio-inspired redox couple with different counter electrodes. Physical Chemistry Chemical Physics, 2013, 15, 15146.	2.8	19
80	Donorâ€"acceptor molecules containing thiophene chromophore: synthesis, spectroscopic study and electrogenerated chemiluminescence. Tetrahedron Letters, 2006, 47, 4961-4964.	1.4	16
81	Molecular engineering of small molecules donor materials based on phenoxazine core unit for solution-processed organic solar cells. Journal of Materials Chemistry A, 2014, 2, 10465-10469.	10.3	15
82	Facile synthesized fluorine substituted benzothiadiazole based dopant-free hole transport material for high efficiency perovskite solar cell. Dyes and Pigments, 2021, 184, 108786.	3.7	15
83	Molecular Design of Dâ€Ï€â€A Type II Organic Sensitizers for Dye Sensitized Solar Cells. Chinese Journal of Chemistry, 2012, 30, 2315-2321.	4.9	14
84	Efficient Organic Sensitizers with Pyridineâ€<i>N</i>â€oxide as an Anchor Group for Dyeâ€Sensitized Solar Cells. ChemSusChem, 2014, 7, 2640-2646.	6.8	14
85	Side-chain engineering of PEDOT derivatives as dopant-free hole-transporting materials for efficient and stable nâ€"iâ€"p structured perovskite solar cells. Journal of Materials Chemistry C, 2020, 8, 9236-9242.	5.5	14
86	Effect of fluorine substituents on benzothiadiazole-based Dâ€"Ï€â€"Aâ€²â€"Ï€â€"A photosensitizers for dye-sensitized solar cells. RSC Advances, 2020, 10, 9203-9209.	3.6	12
87	Copper redox mediators with alkoxy groups suppressing recombination for dye-sensitized solar cells. Electrochimica Acta, 2021, 368, 137564.	5.2	10
88	DDQ as an effective p-type dopant for the hole-transport material X1 and its application in stable solid-state dye-sensitized solar cells. Journal of Energy Chemistry, 2018, 27, 413-418.	12.9	9
89	Triazatruxene-based sensitizers for highly efficient solid-state dye-sensitized solar cells. Solar Energy, 2020, 212, 1-5.	6.1	9
90	Electrogenerated chemiluminescence of benzo 15â€crownâ€5 derivatives. Journal of Physical Organic Chemistry, 2009, 22, 1-8.	1.9	8

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91	Photo-induced electron transfer study of D-Ï€-A sensitizers with different type of anchoring groups for dye-sensitized solar cells. RSC Advances, 2012, 2, 6011.	3.6	8
92	Compositionally Designed 2D Ruddlesdenâ€“Popper Perovskites for Efficient and Stable Solar Cells. Solar Rrl, 2021, 5, 2000661.	5.8	8
93	Organic Dâ€“Ï€â€“A sensitizer with pyridinium as the acceptor group for dye-sensitized solar cells. RSC Advances, 2014, 4, 34644-34648.	3.6	7
94	High isotropic dispiro structure hole transporting materials for planar perovskite solar cells. Journal of Energy Chemistry, 2019, 32, 152-158.	12.9	7
95	Two-dimensional cyclohexane methylamine based perovskites as stable light absorbers for solar cells. Solar Energy, 2020, 201, 13-20.	6.1	7
96	Low-cost solution-processed digenite Cu₉S₅ counter electrode for dye-sensitized solar cells. RSC Advances, 2017, 7, 38452-38457.	3.6	6
97	Helical Copper Redox Mediator with Low Electron Recombination for Dye-Sensitized Solar Cells. ACS Sustainable Chemistry and Engineering, 2021, 9, 5252-5259.	6.7	6
98	Highly efficient organic dyes containing a benzopyran ring as a Ï€â€“bridge for DSSCs. RSC Advances, 2013, 3, 12688.	3.6	5
99	Influence of different methylene units on the performance of rhodanine organic dyes for dye-sensitized solar cells. RSC Advances, 2014, 4, 4811.	3.6	5
100	Enhancing the Energyâ€Conversion Efficiency of Solidâ€State Dyeâ€Sensitized Solar Cells with a Chargeâ€Transfer Complex based on 2,3â€Dichloroâ€5,6â€dicyanoâ€1,4â€benzoquinone. Energy Technology, 2018, 6, 752-758.	3.8	5
101	Bipolar Organic Material Assisted Surface and Boundary Defects Passivation for Highly Efficient MAPbI 3 â€Based Inverted Perovskite Solar Cells. Solar Rrl, 2020, 4, 2000369.	5.8	5
102	Effect of Side Substituents Incorporated into Ï€â€Bridges of Quinoxalineâ€Based Sensitizers for Dyeâ€Sensitized Solar Cells. Energy Technology, 2020, 8, 2000032.	3.8	5
103	<i>N</i>-Bromosuccinimide as a p-type dopant for a Spiro-OMeTAD hole transport material to enhance the performance of perovskite solar cells. Sustainable Energy and Fuels, 2021, 5, 2294-2300.	4.9	5
104	Thiophene-fused carbazole derivative dyes for high-performance dye-sensitized solar cells. Tetrahedron, 2021, 88, 132124.	1.9	5
105	Supramolecular Co-adsorption on TiO₂ to enhance the efficiency of dye-sensitized solar cells. Journal of Materials Chemistry A, 2021, 9, 13697-13703.	10.3	5
106	Natural Chlorophyll Derivative Assisted Defect Passivation and Hole Extraction for MAPbI₃ Perovskite Solar Cells with Efficiency Exceeding 20%. ACS Applied Energy Materials, 2022, 5, 1390-1396.	5.1	5
107	Analysis and optimization of alloyed Al-p⁺ region and rear contacts for highly efficient industrial n-type silicon solar cells. RSC Advances, 2019, 9, 6681-6688.	3.6	4
108	A novel analysis method to determine the surface recombination velocities on unequally passivated surfaces of a silicon wafer by the short wavelength spectrum excited quasi-steady-state photoconductance measurement. AIP Advances, 2018, 8, 065218.	1.3	3

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109	Benzo[1,2-<i>c</i>:4,5-<i>c</i>â€²]dithiophene-4,8-dione (BDD) Core Building Block Based Dopant-Free Hole-Transport Materials for Efficient and Stable Perovskite Solar Cell. ACS Applied Energy Materials, 2020, 3, 10333-10339.	5.1	3
110	Effect of Different Site Trifluoromethylbenzoic Acid Organic Photosensitizer for Dyeâ€sensitized Solar Cells. ChemistrySelect, 2021, 6, 4645-4650.	1.5	3
111	A carbazole-based dopant-free hole-transport material for perovskite solar cells by increasing the molecular conjugation. Organic Electronics, 2021, 96, 106244.	2.6	2
112	Copper Piperazine Complex with a High Diffusion Coefficient for Dye-Sensitized Solar Cells. ACS Applied Energy Materials, 2021, 4, 14004-14013.	5.1	2
113	A Dâ€“Ï€â€“A Organic Dye as a Passivator to Effectively Regulate the Performance of Perovskite Solar Cells. Energy Technology, 2022, 10, .	3.8	2
114	Perovskite Solar Cells: Reverseâ€Graded 2D Ruddlesdenâ€“Popper Perovskites for Efficient Airâ€Stable Solar Cells (Adv. Energy Mater. 21/2019). Advanced Energy Materials, 2019, 9, 1970075.	19.5	1