

Zhenxiao Pan

List of Publications by Year in descending order

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59
papers

5,878
citations

117453

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59
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59
all docs

59
docs citations

59
times ranked

4188
citing authors

#	ARTICLE	IF	CITATIONS
1	High-Efficiency "Green" Quantum Dot Solar Cells. <i>Journal of the American Chemical Society</i> , 2014, 136, 9203-9210.	6.6	547
2	Zn-Cu-In-Se Quantum Dot Solar Cells with a Certified Power Conversion Efficiency of 11.6%. <i>Journal of the American Chemical Society</i> , 2016, 138, 4201-4209.	6.6	537
3	Core/Shell Colloidal Quantum Dot Exciplex States for the Development of Highly Efficient Quantum-Dot-Sensitized Solar Cells. <i>Journal of the American Chemical Society</i> , 2013, 135, 15913-15922.	6.6	400
4	Near Infrared Absorption of CdSe _{1-x} Te _x Alloyed Quantum Dot Sensitized Solar Cells with More than 6% Efficiency and High Stability. <i>ACS Nano</i> , 2013, 7, 5215-5222.	7.3	374
5	Boosting Power Conversion Efficiencies of Quantum-Dot-Sensitized Solar Cells Beyond 8% by Recombination Control. <i>Journal of the American Chemical Society</i> , 2015, 137, 5602-5609.	6.6	367
6	Quantum dot-sensitized solar cells. <i>Chemical Society Reviews</i> , 2018, 47, 7659-7702.	18.7	344
7	Highly Efficient Inverted Type-I CdS/CdSe Core/Shell Structure QD-Sensitized Solar Cells. <i>ACS Nano</i> , 2012, 6, 3982-3991.	7.3	307
8	Band Engineering in Core/Shell ZnTe/CdSe for Photovoltage and Efficiency Enhancement in Exciplex Quantum Dot Sensitized Solar Cells. <i>ACS Nano</i> , 2015, 9, 908-915.	7.3	241
9	Amorphous TiO ₂ Buffer Layer Boosts Efficiency of Quantum Dot Sensitized Solar Cells to over 9%. <i>Chemistry of Materials</i> , 2015, 27, 8398-8405.	3.2	197
10	Nitrogen-Doped Mesoporous Carbons as Counter Electrodes in Quantum Dot Sensitized Solar Cells with a Conversion Efficiency Exceeding 12%. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 559-564.	2.1	193
11	Carbon Counter-Electrode-Based Quantum-Dot-Sensitized Solar Cells with Certified Efficiency Exceeding 11%. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 3103-3111.	2.1	169
12	Charge Recombination Control for High Efficiency Quantum Dot Sensitized Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 406-417.	2.1	140
13	Mn doped quantum dot sensitized solar cells with power conversion efficiency exceeding 9%. <i>Journal of Materials Chemistry A</i> , 2016, 4, 877-886.	5.2	122
14	One-step solution deposition of CsPbBr ₃ based on precursor engineering for efficient all-inorganic perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2019, 7, 22420-22428.	5.2	116
15	Improving the Efficiency of Quantum Dot Sensitized Solar Cells beyond 15% via Secondary Deposition. <i>Journal of the American Chemical Society</i> , 2021, 143, 4790-4800.	6.6	112
16	CuInSe ₂ and CuInSe ₂ -ZnS based high efficiency "green" quantum dot sensitized solar cells. <i>Journal of Materials Chemistry A</i> , 2015, 3, 1649-1655.	5.2	108
17	All-inorganic CsPbI ₃ Quantum Dot Solar Cells with Efficiency over 16% by Defect Control. <i>Advanced Functional Materials</i> , 2021, 31, 2005930.	7.8	101
18	Modification of Energy Level Alignment for Boosting Carbon-Based CsPbI ₂ Br Solar Cells with 14% Certified Efficiency. <i>Advanced Functional Materials</i> , 2021, 31, 2011187.	7.8	89

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19	Alloying Strategy in Cu ²⁺ /In ³⁺ /Ga ³⁺ /Se Quantum Dots for High Efficiency Quantum Dot Sensitized Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 5328-5336.	4.0	87
20	Quantum dot sensitized solar cells with efficiency over 12% based on tetraethyl orthosilicate additive in polysulfide electrolyte. Journal of Materials Chemistry A, 2017, 5, 14124-14133.	5.2	86
21	Copper deficient Zn ²⁺ /Cu ²⁺ /In ³⁺ /Se quantum dot sensitized solar cells for high efficiency. Journal of Materials Chemistry A, 2017, 5, 21442-21451.	5.2	73
22	Zn ²⁺ /Cu ²⁺ /In ³⁺ /S/Se Quinary "Green" Alloyed Quantum Dot Sensitized Solar Cells with a Certified Efficiency of 14.4%. Angewandte Chemie - International Edition, 2021, 60, 6137-6144.	7.2	72
23	Effects of Metal Oxyhydroxide Coatings on Photoanode in Quantum Dot Sensitized Solar Cells. Chemistry of Materials, 2016, 28, 2323-2330.	3.2	63
24	Quantum dot materials engineering boosting the quantum dot sensitized solar cell efficiency over 13%. Journal of Materials Chemistry A, 2020, 8, 10233-10241.	5.2	61
25	Enhancing Adsorption and Reaction Kinetics of Polysulfides Using CoP-Coated N-Doped Mesoporous Carbon for High-Energy-Density Lithium-Sulfur Batteries. ACS Applied Materials & Interfaces, 2020, 12, 43844-43853.	4.0	60
26	Antioxidative Stannous Oxalate Derived Lead-Free Stable CsSnX ₃ (X=Cl, Br, and I) Perovskite Nanocrystals. Angewandte Chemie - International Edition, 2021, 60, 660-665.	7.2	55
27	Influence of linker molecules on interfacial electron transfer and photovoltaic performance of quantum dot sensitized solar cells. Journal of Materials Chemistry A, 2014, 2, 20882-20888.	5.2	52
28	Comparative advantages of Zn ²⁺ /Cu ²⁺ /In ³⁺ /S alloy QDs in the construction of quantum dot-sensitized solar cells. RSC Advances, 2018, 8, 3637-3645.	1.7	52
29	Colloidal Inorganic Ligand-Capped Nanocrystals: Fundamentals, Status, and Insights into Advanced Functional Nanodevices. Chemical Reviews, 2022, 122, 4091-4162.	23.0	52
30	Boosting the Performance of Environmentally Friendly Quantum Dot Sensitized Solar Cells over 13% Efficiency by Dual Sensitizers with Cascade Energy Structure. Advanced Materials, 2019, 31, e1903696.	11.1	51
31	Poly(vinyl pyrrolidone): a superior and general additive in polysulfide electrolytes for high efficiency quantum dot sensitized solar cells. Journal of Materials Chemistry A, 2016, 4, 11416-11421.	5.2	49
32	High Efficiency Quantum Dot Sensitized Solar Cells Based on Direct Adsorption of Quantum Dots on Photoanodes. ACS Applied Materials & Interfaces, 2017, 9, 22549-22559.	4.0	39
33	Surface Defect Engineering of CsPbBr ₃ Nanocrystals for High Efficient Photocatalytic CO ₂ Reduction. Solar Rrl, 2021, 5, 2100154.	3.1	39
34	Bifunctional TiS ₂ /CNT as efficient polysulfide barrier to improve the performance of lithium-sulfur battery. Journal of Alloys and Compounds, 2020, 832, 154947.	2.8	34
35	Cs ₂ SnI ₆ nanocrystals enhancing hole extraction for efficient carbon-based CsPbI ₂ Br perovskite solar cells. Chemical Engineering Journal, 2022, 440, 135710.	6.6	31
36	Perovskite-Compatible Carbon Electrode Improving the Efficiency and Stability of CsPbI ₂ Br Solar Cells. Solar Rrl, 2020, 4, 2000431.	3.1	30

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37	ZnS _x Se _{1-x} Alloy Passivation Layer for High-Efficiency Quantum-Dot-Sensitized Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 41415-41423.	4.0	29
38	Inorganic Ligand Thiosulfate-Capped Quantum Dots for Efficient Quantum Dot Sensitized Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 18936-18944.	4.0	28
39	Synergistic passivation by alkali metal and halogenoid ions for high efficiency HTM-free carbon-based CsPbI ₂ Br solar cells. <i>Chemical Engineering Journal</i> , 2022, 430, 133083.	6.6	26
40	A ZnS and metal hydroxide composite passivation layer for recombination control in high efficiency quantum dot sensitized solar cells. <i>Journal of Materials Chemistry A</i> , 2016, 4, 18976-18982.	5.2	25
41	MOF-Derived Co,N Codoped Carbon/Ti Mesh Counter Electrode for High-Efficiency Quantum Dot Sensitized Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 4974-4979.	2.1	25
42	Free-standing 3D nitrogen-doped graphene/Co ₄ N aerogels with ultrahigh sulfur loading for high volumetric energy density Li-S batteries. <i>Journal of Alloys and Compounds</i> , 2022, 901, 163625.	2.8	25
43	Improving Loading Amount and Performance of Quantum Dot-Sensitized Solar Cells through Metal Salt Solutions Treatment on Photoanode. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 31006-31015.	4.0	24
44	Solar Paint from TiO ₂ Particles Supported Quantum Dots for Photoanodes in Quantum Dot-Sensitized Solar Cells. <i>ACS Omega</i> , 2018, 3, 1102-1109.	1.6	24
45	Antioxidative Stannous Oxalate Derived Lead-Free Stable CsSnX ₃ (X=Cl, Br, and I) Perovskite Nanocrystals. <i>Angewandte Chemie</i> , 2021, 133, 670-675.	1.6	23
46	Enhancing Loading Amount and Performance of Quantum-Dot-Sensitized Solar Cells Based on Direct Adsorption of Quantum Dots from Bicomponent Solvents. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 229-237.	2.1	21
47	Dual-Functional Quantum Dot Seeding Growth of High-Quality Air-Processed CsPbI ₂ Br Film for Carbon-Based Perovskite Solar Cells. <i>Solar Rrl</i> , 2022, 6, 2100989.	3.1	20
48	Plasmonic Effect with Tailored Au@TiO ₂ Nanorods in Photoanode for Quantum Dot Sensitized Solar Cells. <i>ACS Applied Energy Materials</i> , 2019, 2, 5917-5924.	2.5	19
49	Mild-method synthesised rGO-TiO ₂ as an effective Polysulphide Barrier for Lithium-Sulphur batteries. <i>Journal of Alloys and Compounds</i> , 2020, 836, 155341.	2.8	17
50	Modification of compact TiO ₂ layer by TiCl ₄ -TiCl ₃ mixture treatment and construction of high-efficiency carbon-based CsPbI ₂ Br perovskite solar cells. <i>Journal of Energy Chemistry</i> , 2021, 63, 442-451.	7.1	17
51	Selenium cooperated polysulfide electrolyte for efficiency enhancement of quantum dot-sensitized solar cells. <i>Journal of Energy Chemistry</i> , 2019, 38, 147-152.	7.1	15
52	Lightweight Free-Standing 3D Nitrogen-Doped Graphene/TiN Aerogels with Ultrahigh Sulfur Loading for High Energy Density Li-S Batteries. <i>ACS Applied Energy Materials</i> , 2021, 4, 7599-7610.	2.5	15
53	Proton Initiated Ligand Exchange Reactions for Colloidal Nanocrystals Functionalized by Inorganic Ligands with Extremely Weak Coordination Ability. <i>Chemistry of Materials</i> , 2020, 32, 630-637.	3.2	14
54	Enhancing Electron and Hole Extractions for Efficient PbS Quantum Dot Solar Cells. <i>Solar Rrl</i> , 2017, 1, 1700176.	3.1	12

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55	Hole transport materials mediating hole transfer for high efficiency quantum dot sensitized solar cells. <i>Journal of Materials Chemistry A</i> , 2021, 9, 997-1005.	5.2	12
56	TiO ₂ hierarchical nanowire-P25 particulate composite photoanodes in combination with N-doped mesoporous carbon/Ti counter electrodes for high performance quantum dot-sensitized solar cells. <i>Solar Energy</i> , 2019, 191, 459-467.	2.9	11
57	Air-Processed Carbon-Based Cs _{0.5} FA _{0.5} PbI ₃ ∕Cs ₄ PbI ₆ Heterostructure Perovskite Solar Cells with Efficiency Over 16%. <i>Solar Rrl</i> , 2022, 6, .	3.1	11
58	ZnCuInS ₅ Quinary Green-Alloyed Quantum Dot Sensitized Solar Cells with a Certified Efficiency of 14.4%. <i>Angewandte Chemie</i> , 2021, 133, 6202-6209.	1.6	8
59	Self-supported metal sulphide nanocrystals-assembled nanosheets on carbon paper as efficient counter electrodes for quantum-dot-sensitized solar cells. <i>Science China Chemistry</i> , 2018, 61, 1338-1344.	4.2	7