Yuan Zhang

List of Publications by Year
in descending order

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99 papers	7,008 citations	76294 40 h-index	60583 81 g-index
101 all docs	101 docs citations	101 times ranked	6663 citing authors

#	Article	IF	Citations
1	Highâ€Efficiency and Stable Perovskite Solar Cells Enabled by Lowâ€Dimensional Perovskite Surface Modifiers. Solar Rrl, 2022, 6, .	3.1	15
2	Quaternary Organic Solar Cells Enable Suppressed Energy Loss. Solar Rrl, 2022, 6, .	3.1	7
3	Light Managements and Transparent Electrodes for Semitransparent Organic and Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	14
4	Surface Passivation Using 2D Perovskites toward Efficient and Stable Perovskite Solar Cells. Advanced Materials, 2022, 34, e2105635.	11.1	221
5	High fill factor organic solar cells with increased dielectric constant and molecular packing density. Joule, 2022, 6, 444-457.	11.7	117
6	The synergistic effect of fluorine atom and alkyl chain positions in enhancing organic photovoltaic open-circuit voltage and morphology miscibility. Sustainable Energy and Fuels, 2022, 6, 2490-2497.	2.5	2
7	High Efficiency Perovskite Solar Cells Employing Quasiâ€2D Ruddlesdenâ€Popper/Dionâ€Jacobson Heterojunctions. Advanced Functional Materials, 2022, 32, .	7.8	23
8	Adenosine Triphosphate Disodium Modified Hole Transport Layer for Efficient Inverted Perovskite Solar Cells. ChemNanoMat, 2022, 8, .	1.5	2
9	Pseudohalide-Assisted Growth of Oriented Large Grains for High-Performance and Stable 2D Perovskite Solar Cells. ACS Energy Letters, 2022, 7, 1842-1849.	8.8	29
10	On the Understandings of Dielectric Constant and Its Impacts on the Photovoltaic Efficiency in Organic Solar Cells. Chinese Journal of Chemistry, 2021, 39, 381-390.	2.6	48
11	Molecular dispersion enhances photovoltaic efficiency and thermal stability in quasi-bilayer organic solar cells. Science China Chemistry, 2021, 64, 116-126.	4.2	34
12	High-efficiency of 15.47% for two-dimensional perovskite solar cells processed by blade coating with non-thermal assistance. Journal of Materials Chemistry C, 2021, 9, 9851-9858.	2.7	10
13	Molecular Engineering for Two-Dimensional Perovskites with Photovoltaic Efficiency Exceeding 18%. Matter, 2021, 4, 582-599.	5.0	123
14	Non-fullerene acceptors with branched side chains and improved molecular packing to exceed 18% efficiency in organic solar cells. Nature Energy, 2021, 6, 605-613.	19.8	1,307
15	Efficient Charge Transport Enables High Efficiency in Dilute Donor Organic Solar Cells. Journal of Physical Chemistry Letters, 2021, 12, 5039-5044.	2.1	41
16	Narrowâ€Bandgap Singleâ€Component Polymer Solar Cells with Approaching 9% Efficiency. Advanced Materials, 2021, 33, e2101295.	11.1	53
17	Triplet exciton formation for non-radiative voltage loss in high-efficiency nonfullerene organic solar cells. Joule, 2021, 5, 1832-1844.	11.7	98
18	Nanoscale heterogeneous distribution of surface energy at interlayers in organic bulk-heterojunction solar cells. Joule, 2021, 5, 3154-3168.	11.7	45

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19	Efficient and Stable Quasiâ€2D Perovskite Solar Cells Enabled by Thermalâ€Aged Precursor Solution. Advanced Functional Materials, 2021, 31, 2107675.	7.8	14
20	Enhanced stability in perovskite solar cells via room-temperature processing. Journal of Materials Chemistry C, 2021, 9, 14749-14756.	2.7	8
21	Strongly Reduced Non-Radiative Voltage Losses in Organic Solar Cells Prepared with Sequential Film Deposition. Journal of Physical Chemistry Letters, 2021, 12, 10663-10670.	2.1	8
22	Peculiar Steric Hindrance Assists Monoclinic Phase Formation toward High-Quality All-Inorganic Perovskites. Journal of Physical Chemistry Letters, 2021, 12, 11228-11237.	2.1	7
23	Hydrogen-Rich 2D Halide Perovskite Scintillators for Fast Neutron Radiography. Journal of the American Chemical Society, 2021, 143, 21302-21311.	6.6	27
24	Sequential molecular doping of non-fullerene organic solar cells without hole transport layers. Journal of Materials Chemistry C, 2020, 8, 158-164.	2.7	16
25	Nonâ€Fullerene Organic Solar Cells Based on Benzo[1,2â€b:4,5â€bâ€²]difuranâ€Conjugated Polymer with 14% Efficiency. Advanced Functional Materials, 2020, 30, 1906809.	7.8	41
26	Control of Nanomorphology in Fullerene-Free Organic Solar Cells by Lewis Acid Doping with Enhanced Photovoltaic Efficiency. ACS Applied Materials & Interfaces, 2020, 12, 667-677.	4.0	24
27	Rational Design of 2D pâ€“Ï€ Conjugated Polysquaraines for Both Fullerene and Nonfullerene Polymer Solar Cells. Macromolecular Chemistry and Physics, 2020, 221, 1900439.	1.1	6
28	Tailoring the side chain of imide-functional benzotriazole based polymers to achieve internal quantum efficiency approaching 100%. Journal of Materials Chemistry A, 2020, 8, 23519-23525.	5.2	9
29	Role of interface properties in organic solar cells: from substrate engineering to bulk-heterojunction interfacial morphology. Materials Chemistry Frontiers, 2020, 4, 2863-2880.	3.2	61
30	Waterâ€Assisted Crystal Growth in Quasiâ€2D Perovskites with Enhanced Charge Transport and Photovoltaic Performance. Advanced Energy Materials, 2020, 10, 2001832.	10.2	52
31	Fast Field-Insensitive Charge Extraction Enables High Fill Factors in Polymer Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 38460-38469.	4.0	8
32	A biopolymeric buffer layer improves device efficiency and stability in inverted organic solar cells. Journal of Materials Chemistry C, 2020, 8, 15795-15803.	2.7	18
33	Hybrid Quantum Dot/Organic Heterojunction: A Route to Improve Open-Circuit Voltage in PbS Colloidal Quantum Dot Solar Cells. ACS Energy Letters, 2020, 5, 2335-2342.	8.8	54
34	A surface modifier enhances the performance of the all-inorganic CsPbI₂Br perovskite solar cells with efficiencies approaching 15%. Physical Chemistry Chemical Physics, 2020, 22, 17847-17856.	1.3	23
35	On the understanding of energy loss and device fill factor trade-offs in non-fullerene organic solar cells with varied energy levels. Nano Energy, 2020, 75, 105032.	8.2	34
36	Interfacial Chemical Bridge Constructed by Zwitterionic Sulfamic Acid for Efficient and Stable Perovskite Solar Cells. ACS Applied Energy Materials, 2020, 3, 3186-3192.	2.5	37

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37	Mediated Non-geminate Recombination in Ternary Organic Solar Cells Through a Liquid Crystal Guest Donor. Frontiers in Chemistry, 2020, 8, 21.	1.8	9
38	Nonâ€Preheating Processed Quasiâ€2D Perovskites for Efficient and Stable Solar Cells. Small, 2020, 16, e1906997.	5.2	24
39	Understanding the Effect of the Third Component PC₇₁BM on Nanoscale Morphology and Photovoltaic Properties of Ternary Organic Solar Cells. Solar Rrl, 2020, 4, 1900540.	3.1	37
40	Built-in voltage enhanced by in situ electrochemical polymerized undoped conjugated hole-transporting modifiers in organic solar cells. Journal of Materials Chemistry C, 2020, 8, 2676-2681.	2.7	16
41	Understanding Temperatureâ€Dependent Charge Extraction and Trapping in Perovskite Solar Cells. Advanced Functional Materials, 2020, 30, 2000550.	7.8	31
42	A Comparative Study on Hole Transfer Inversely Correlated with Driving Force in Two Non-Fullerene Organic Solar Cells. Journal of Physical Chemistry Letters, 2019, 10, 4110-4116.	2.1	21
43	Fine Multiâ€Phase Alignments in 2D Perovskite Solar Cells with Efficiency over 17% via Slow Postâ€Annealing. Advanced Materials, 2019, 31, e1903889.	11.1	178
44	Polydopamine/ZnO electron transport layers enhance charge extraction in inverted non-fullerene organic solar cells. Journal of Materials Chemistry C, 2019, 7, 10795-10801.	2.7	38
45	Air-stable formamidinium/methylammonium mixed lead iodide perovskite integral microcrystals with low trap density and high photo-responsivity. Physical Chemistry Chemical Physics, 2019, 21, 3106-3113.	1.3	16
46	Exquisite modulation of ZnO nanoparticle electron transporting layer for high-performance fullerene-free organic solar cell with inverted structure. Journal of Materials Chemistry A, 2019, 7, 3570-3576.	5.2	58
47	A polyaspartic acid sodium interfacial layer enhances surface trap passivation in perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 23895-23903.	5.2	37
48	Facile development of CoAl-LDHs/RGO nanocomposites as photocatalysts for efficient hydrogen generation from water splitting under visible-light irradiation. Inorganic Chemistry Frontiers, 2019, 6, 1753-1760.	3.0	44
49	Regulating Bulkâ€Heterojunction Molecular Orientations through Surface Free Energy Control of Holeâ€Transporting Layers for Highâ€Performance Organic Solar Cells. Advanced Materials, 2019, 31, e1806921.	11.1	86
50	Management of the crystallization in two-dimensional perovskite solar cells with enhanced efficiency within a wide temperature range and high stability. Nano Energy, 2019, 58, 706-714.	8.2	52
51	Understanding the Impact of Bismuth Heterovalent Doping on the Structural and Photophysical Properties of CH₃NH₃PbBr₃ Halide Perovskite Crystals with Nearâ€IR Photoluminescence. Chemistry - A European Journal, 2019, 25, 5480-5488.	1.7	42
52	Halogen bonding reduces intrinsic traps and enhances charge mobilities in halide perovskite solar cells. Journal of Materials Chemistry A, 2019, 7, 6840-6848.	5.2	41
53	Ternary Organic Solar Cells with Efficiency >16.5% Based on Two Compatible Nonfullerene Acceptors. Advanced Materials, 2019, 31, e1905645.	11.1	240
54	A universal approach for optimizing charge extraction in electron transporting layer-free organic solar cells via Lewis base doping. Journal of Materials Chemistry A, 2019, 7, 25808-25817.	5.2	11

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55	Interfacial Modification in Organic and Perovskite Solar Cells. Advanced Materials, 2019, 31, e1805708.	11.1	106
56	Fluorination with an enlarged dielectric constant prompts charge separation and reduces bimolecular recombination in non-fullerene organic solar cells with a high fill factor and efficiency >â€¯13%. Nano Energy, 2019, 56, 494-501.	8.2	59
57	Effects of processing additives in non-fullerene organic bulk heterojunction solar cells with efficiency >11%. Chinese Chemical Letters, 2019, 30, 217-221.	4.8	17
58	A Biopolymer Heparin Sodium Interlayer Anchoring TiO₂ and MAPbI₃ Enhances Trap Passivation and Device Stability in Perovskite Solar Cells. Advanced Materials, 2018, 30, e1706924.	11.1	199
59	Ciliaâ€Inspired Flexible Arrays for Intelligent Transport of Viscoelastic Microspheres. Advanced Functional Materials, 2018, 28, 1706666.	7.8	51
60	Improved Electron Transport with Reduced Contact Resistance in Nâ€Doped Polymer Fieldâ€Effect Transistors with a Dimeric Dopant. Macromolecular Rapid Communications, 2018, 39, e1700726.	2.0	9
61	Effects of Nonradiative Losses at Charge Transfer States and Energetic Disorder on the Openâ€Circuit Voltage in Nonfullerene Organic Solar Cells. Advanced Functional Materials, 2018, 28, 1705659.	7.8	77
62	Ambipolar charge transport in a bis-diketopyrrolopyrrole small molecule semiconductor with tunable energetic disorder. Physical Chemistry Chemical Physics, 2018, 20, 1787-1793.	1.3	6
63	Ultra-narrow bandgap non-fullerene organic solar cells with low voltage losses and a large photocurrent. Journal of Materials Chemistry A, 2018, 6, 19934-19940.	5.2	33
64	Understanding the Passivation Mechanisms and Opto-Electronic Spectral Response in Methylammonium Lead Halide Perovskite Single Crystals. ACS Applied Materials & Interfaces, 2018, 10, 35580-35588.	4.0	19
65	Retardation of Trapâ€Assisted Recombination in Lead Halide Perovskite Solar Cells by a Dimethylbiguanide Anchor Layer. Chemistry - A European Journal, 2018, 25, 1076-1082.	1.7	9
66	Polyamino acid interlayer facilitates electron extraction in narrow band gap fullerene-free organic solar cells with an outstanding short-circuit current. Nano Energy, 2018, 50, 169-175.	8.2	50
67	Understanding the temperature-dependent charge transport, structural variation and photoluminescent properties in methylammonium lead halide perovskite single crystals. Journal of Materials Chemistry C, 2018, 6, 6556-6564.	2.7	13
68	An Integrated Janus Mesh: Underwater Bubble Antibuoyancy Unidirectional Penetration. ACS Nano, 2018, 12, 5489-5494.	7.3	88
69	Design of a New Fusedâ€Ring Electron Acceptor with Excellent Compatibility to Wideâ€Bandgap Polymer Donors for Highâ€Performance Organic Photovoltaics. Advanced Materials, 2018, 30, e1800403.	11.1	169
70	On the understanding of energetic disorder, charge recombination and voltage losses in all-polymer solar cells. Journal of Materials Chemistry C, 2018, 6, 7855-7863.	2.7	26
71	A conjugated microporous polymer film fabricated by in situ electro-chemical deposition as a hole transporting layer in organic photovoltaics. Journal of Materials Chemistry C, 2018, 6, 9044-9048.	2.7	27
72	High efficiency non-fullerene organic solar cells without electron transporting layers enabled by Lewis base anion doping. Nano Energy, 2018, 51, 736-744.	8.2	28

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73	A Highly Efficient Nonâ€Fullerene Organic Solar Cell with a Fill Factor over 0.80 Enabled by a Fineâ€Tuned Holeâ€Transporting Layer. Advanced Materials, 2018, 30, e1801801.	11.1	360
74	Electron Transport and Nanomorphology in Solutionâ€Processed Polymeric Semiconductor nâ€Doped with an Airâ€Stable Organometallic Dimer. Advanced Electronic Materials, 2017, 3, 1600546.	2.6	15
75	Improved electron extraction by a ZnO nanoparticle interlayer for solution-processed polymer solar cells. RSC Advances, 2017, 7, 12400-12406.	1.7	17
76	Temperature-dependent charge transport in solution-processed perovskite solar cells with tunable trap concentration and charge recombination. Journal of Materials Chemistry C, 2017, 5, 9376-9382.	2.7	44
77	Understanding charge transport and recombination losses in high performance polymer solar cells with non-fullerene acceptors. Journal of Materials Chemistry A, 2017, 5, 17230-17239.	5.2	66
78	Incorporating an Inert Polymer into the Interlayer Passivates Surface Defects in Methylammonium Lead Halide Perovskite Solar Cells. Chemistry - A European Journal, 2017, 23, 14650-14657.	1.7	28
79	Solution-Processed pH-Neutral Conjugated Polyelectrolyte Improves Interfacial Contact in Organic Solar Cells. ACS Nano, 2015, 9, 371-377.	7.3	73
80	Enhancement of the Photoresponse in Organic Fieldâ€Effect Transistors by Incorporating Thin DNA Layers. Angewandte Chemie - International Edition, 2014, 53, 244-249.	7.2	17
81	Increased Mobility Induced by Addition of a Lewis Acid to a Lewis Basic Conjugated Polymer. Advanced Materials, 2014, 26, 724-727.	11.1	69
82	Molecular Doping Enhances Photoconductivity in Polymer Bulk Heterojunction Solar Cells. Advanced Materials, 2013, 25, 7038-7044.	11.1	173
83	Highâ€Efficiency Polymer Solar Cells Enhanced by Solvent Treatment. Advanced Materials, 2013, 25, 1646-1652.	11.1	455
84	Synthesis and Properties of Two Cationic Narrow Band Gap Conjugated Polyelectrolytes. Journal of the American Chemical Society, 2013, 135, 4163-4166.	6.6	83
85	Photoresponse of Donor/Acceptor Blends in Organic Transistors: A Tool for Understanding Field-Assisted Charge Separation in Small Molecule Bulk Heterojunction Solar Cells. ACS Applied Materials & Interfaces, 2013, 5, 2347-2353.	4.0	68
86	High light intensity effects on nanoscale open-circuit voltage for three common donor materials in bulk heterojunction solar cells. Energy and Environmental Science, 2013, 6, 1766.	15.6	10
87	Effects of Heteroatom Substitutions on the Crystal Structure, Film Formation, and Optoelectronic Properties of Diketopyrrolopyrroleâ€Based Materials. Advanced Functional Materials, 2013, 23, 47-56.	7.8	171
88	Structureâ€“Property Relationships: Effects of Heteroatom Substitutions on the Crystal Structure, Film Formation, and Optoelectronic Properties of Diketopyrrolopyrroleâ€Based Materials (Adv. Funct.) Tj ETQq0 0 0 rgBT /Overlock 10 T	7.8	1
89	Crystallization: Effects of Stereoisomerism on the Crystallization Behavior and Optoelectrical Properties of Conjugated Molecules (Adv. Mater. 27/2013). Advanced Materials, 2013, 25, 3618-3618.	11.1	0
90	PCBM Disperse-Red Ester with Strong Visible-Light Absorption: Implication of Molecular Design and Morphological Control for Organic Solar Cells. Journal of Physical Chemistry C, 2012, 116, 1313-1321.	1.5	19

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91	DNA Interlayers Enhance Charge Injection in Organic Fieldâ€Effect Transistors. Advanced Materials, 2012, 24, 4255-4260.	11.1	63
92	Solutionâ€Processed Ambipolar Fieldâ€Effect Transistor Based on Diketopyrrolopyrrole Functionalized with Benzothiadiazole. Advanced Functional Materials, 2012, 22, 97-105.	7.8	102
93	Electrochromic devices and thin film transistors from a new family of ethylenedioxythiophene based conjugated polymers. New Journal of Chemistry, 2011, 35, 1327.	1.4	29
94	Electron and hole transport in poly(fluorene-benzothiadiazole). Applied Physics Letters, 2011, 98, 143504.	1.5	86
95	Effect of Charge Recombination on the Fill Factor of Small Molecule Bulk Heterojunction Solar Cells. Advanced Energy Materials, 2011, 1, 610-617.	10.2	146
96	Trap-free electron transport in poly(<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML") Tj ETQq0 0 0 rgBT /Overlock 10 T with<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>n</mml:mi></mml:math>-type doping. Physical Review B, 2010, 81, .	1.1	115
97	Enhancement of the hole injection into regioregular poly(3-hexylthiophene) by molecular doping. Applied Physics Letters, 2010, 97, 083303.	1.5	44
98	Controllable Molecular Doping and Charge Transport in Solutionâ€Processed Polymer Semiconducting Layers. Advanced Functional Materials, 2009, 19, 1901-1905.	7.8	136
99	Interfacial Molecular Doping at Donor and Acceptor Interface in Bilayer Organic Solar Cells. Solar Rrl, 0, , .	3.1	1