Jianyu Yuan

List of Publications by Year
in descending order

112 papers	6,206 citations	53751 45 h-index	74108 75 g-index
112 all docs	112 docs citations	112 times ranked	5684 citing authors

#	Article	IF	Citations
1	Fine-tuned crystallinity of polymerized non-fullerene acceptor via molecular engineering towards efficient all-polymer solar cell. Chemical Engineering Journal, 2022, 428, 131232.	6.6	20
2	Homojunction Perovskite Quantum Dot Solar Cells with over 1ÂÂµmâ€•Thick Photoactive Layer. Advanced Materials, 2022, 34, e2105977.	11.1	47
3	Electroluminescent Solar Cells Based on CsPbI₃ Perovskite Quantum Dots. Advanced Functional Materials, 2022, 32, 2108615.	7.8	38
4	Unveiling the Influence of the Spectral Irradiance of Indoor Lightâ€Emitting Diodes on the Photovoltaics of a Methylammonium Lead Iodideâ€Based Device. Advanced Energy and Sustainability Research, 2022, 3, 2100143.	2.8	5
5	Quantum Dot Passivation of Halide Perovskite Films with Reduced Defects, Suppressed Phase Segregation, and Enhanced Stability. Advanced Science, 2022, 9, e2102258.	5.6	35
6	Polymerizing small molecular acceptors for efficient allâ€polymer solar cells. InformaÄ•nÃ-MateriÃ¡ly, 2022, 4, .	8.5	42
7	Colloidal Quantum Dot Solar Cells: Progressive Deposition Techniques and Future Prospects on Largeâ€Area Fabrication. Advanced Materials, 2022, 34, e2107888.	11.1	39
8	CsPbI₃ perovskite quantum dot solar cells: opportunities, progress and challenges. Materials Advances, 2022, 3, 1931-1952.	2.6	17
9	Solutionâ€Processed CsPbBr₃ Quantum Dots/Organic Semiconductor Planar Heterojunctions for Highâ€Performance Photodetectors. Advanced Science, 2022, 9, e2105856.	5.6	15
10	Block copolymer compatibilizer for efficient and stable nonfullerene organic solar cells. Chemical Engineering Journal, 2022, 438, 135543.	6.6	26
11	Perovskite Quantum Dot Solar Cells Fabricated from Recycled Lead-Acid Battery Waste. , 2022, 4, 120-127.		7
12	Understanding the effect of chlorine substitution in all-polymer solar cells. Sustainable Energy and Fuels, 2022, 6, 2962-2969.	2.5	1
13	Indigo: A Natural Molecular Passivator for Efficient Perovskite Solar Cells. Advanced Energy Materials, 2022, 12, .	10.2	60
14	Regioselectivity control of block copolymers for high-performance single-material organic solar cells. Journal of Materials Chemistry A, 2022, 10, 12997-13004.	5.2	9
15	Tailoring Phase Alignment and Interfaces via Polyelectrolyte Anchoring Enables Largeâ€Area 2D Perovskite Solar Cells. Angewandte Chemie - International Edition, 2022, 61, .	7.2	12
16	Highly efficient A-site cation exchange in perovskite quantum dot for solar cells. Journal of Chemical Physics, 2022, 157, .	1.2	6
17	The Rise of Colloidal Lead Halide Perovskite Quantum Dot Solar Cells. Accounts of Materials Research, 2022, 3, 866-878.	5.9	19
18	<i>In Situ</i> Growth of Strained Matrix on CsPbI₃ Perovskite Quantum Dots for Balanced Conductivity and Stability. ACS Nano, 2022, 16, 10534-10544.	7.3	16

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19	Efficient wide bandgap all-polymer solar cells benefiting from a random n-type copolymers strategy. Chemical Engineering Journal, 2021, 417, 128000.	6.6	10
20	Optimizing Surface Chemistry of PbS Colloidal Quantum Dot for Highly Efficient and Stable Solar Cells via Chemical Binding. Advanced Science, 2021, 8, 2003138.	5.6	40
21	Poly(2,2â€™-(2,5-difluoro-1,4-phenylene)dithiophene-alt-naphthalene diimide) synthesized by direct (hetero)arylation reaction for all-polymer solar cells. Organic Electronics, 2021, 89, 106051.	1.4	4
22	Aromatic amine-assisted pseudo-solution-phase ligand exchange in CsPbI₃ perovskite quantum dot solar cells. Chemical Communications, 2021, 57, 7906-7909.	2.2	29
23	Flexible and efficient perovskite quantum dot solar cells via hybrid interfacial architecture. Nature Communications, 2021, 12, 466.	5.8	176
24	Advances in Metal Halide Perovskite Film Preparation: The Role of Antiâ€Solvent Treatment. Small Methods, 2021, 5, e2100046.	4.6	39
25	Hybrid Perovskite Quantum Dot/Nonâ€Fullerene Molecule Solar Cells with Efficiency Over 15%. Advanced Functional Materials, 2021, 31, 2101272.	7.8	44
26	Quantum Dots for Photovoltaics: A Tale of Two Materials. Advanced Energy Materials, 2021, 11, 2100354.	10.2	77
27	Efficient Hole Transfer via Delocalized Excited State in Small Molecular Acceptor: A Comparative Study on Photodynamics of PM6:Y6 and PM6:ITIC Organic Photovoltaic Blends. Advanced Functional Materials, 2021, 31, 2102764.	7.8	37
28	Narrowâ€Bandgap Singleâ€Component Polymer Solar Cells with Approaching 9% Efficiency. Advanced Materials, 2021, 33, e2101295.	11.1	53
29	Perspective on the perovskite quantum dots for flexible photovoltaics. Journal of Energy Chemistry, 2021, 62, 505-507.	7.1	20
30	A penetrated 2D/3D hybrid heterojunction for high-performance perovskite solar cells. Journal of Materials Chemistry A, 2021, 9, 23019-23027.	5.2	23
31	Understanding the Interplay of Transportâ€Morphologyâ€Performance in PBDBâ€Tâ€Based Polymer Solar Cells. Solar Rrl, 2020, 4, 1900524.	3.1	28
32	Quantum-Dot Tandem Solar Cells Based on a Solution-Processed Nanoparticle Intermediate Layer. ACS Applied Materials & Interfaces, 2020, 12, 2313-2318.	4.0	19
33	Tuning the Surface-Passivating Ligand Anchoring Position Enables Phase Robustness in CsPbI₃ Perovskite Quantum Dot Solar Cells. ACS Energy Letters, 2020, 5, 3322-3329.	8.8	89
34	Improved Hole Transfer and Charge Generation in All-Polymer Photovoltaic Blends with a Pâ€“iâ€“N Structure. Journal of Physical Chemistry C, 2020, 124, 25262-25269.	1.5	11
35	Contrasting Electron and Hole Transfer Dynamics from CH(NH2)2PbI3 Perovskite Quantum Dots to Charge Transport Layers. Applied Sciences (Switzerland), 2020, 10, 5553.	1.3	5
36	In Situ Ligand Bonding Management of CsPbI₃ Perovskite Quantum Dots Enables Highâ€Performance Photovoltaics and Red Lightâ€Emitting Diodes. Angewandte Chemie - International Edition, 2020, 59, 22230-22237.	7.2	117

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37	In Situ Ligand Bonding Management of CsPbI₃ Perovskite Quantum Dots Enables Highâ€Performance Photovoltaics and Red Lightâ€Emitting Diodes. Angewandte Chemie, 2020, 132, 22414-22421.	1.6	28
38	Magnetron Sputtered SnO₂ Constituting Double Electron Transport Layers for Efficient PbS Quantum Dot Solar Cells. Solar Rrl, 2020, 4, 2000218.	3.1	12
39	Metal Halide Perovskites in Quantum Dot Solar Cells: Progress and Prospects. Joule, 2020, 4, 1160-1185.	11.7	211
40	Î±-CsPbBr₃ Perovskite Quantum Dots for Application in Semitransparent Photovoltaics. ACS Applied Materials & Interfaces, 2020, 12, 27307-27315.	4.0	62
41	Solvent Vapor-Assisted Magnetic Manipulation of Molecular Orientation and Carrier Transport of Semiconducting Polymers. ACS Applied Materials & Interfaces, 2020, 12, 29487-29496.	4.0	5
42	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
43	Dual Interfacial Engineering Enables Efficient and Reproducible CsPbI₂Br All-Inorganic Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 31659-31666.	4.0	38
44	High-efficiency perovskite quantum dot solar cells benefiting from a conjugated polymer-quantum dot bulk heterojunction connecting layer. Journal of Materials Chemistry A, 2020, 8, 8104-8112.	5.2	82
45	Effect of Backbone Fluorine and Chlorine Substitution on Chargeâ€Transport Properties of Naphthalenediimideâ€Based Polymer Semiconductors. Advanced Electronic Materials, 2020, 6, 1901241.	2.6	21
46	Surface Ligand Management Aided by a Secondary Amine Enables Increased Synthesis Yield of CsPbI₃ Perovskite Quantum Dots and High Photovoltaic Performance. Advanced Materials, 2020, 32, e2000449.	11.1	137
47	Toward Efficient All-Polymer Solar Cells via Halogenation on Polymer Acceptors. ACS Applied Materials & Interfaces, 2020, 12, 33028-33038.	4.0	42
48	Guanidiniumâ€Assisted Surface Matrix Engineering for Highly Efficient Perovskite Quantum Dot Photovoltaics. Advanced Materials, 2020, 32, e2001906.	11.1	125
49	Efficient and stable CsPbI₃ perovskite quantum dots enabled by <i>in situ</i> ytterbium doping for photovoltaic applications. Journal of Materials Chemistry A, 2019, 7, 20936-20944.	5.2	121
50	Simultaneously Improved Efficiency and Stability in All-Polymer Solar Cells by a Pâ€"iâ€"N Architecture. ACS Energy Letters, 2019, 4, 2277-2286.	8.8	127
51	Solution-Processed MoO_{<i>x</i>} Hole-Transport Layer with F4-TCNQ Modification for Efficient and Stable Inverted Perovskite Solar Cells. ACS Applied Energy Materials, 2019, 2, 5862-5870.	2.5	35
52	Toward Scalable PbS Quantum Dot Solar Cells Using a Tailored Polymeric Hole Conductor. ACS Energy Letters, 2019, 4, 2850-2858.	8.8	61
53	Ambient Processable and Stable Allâ€Polymer Organic Solar Cells. Advanced Functional Materials, 2019, 29, 1806747.	7.8	111
54	Perovskite Quantum Dot Solar Cells with 15.6% Efficiency and Improved Stability Enabled by an Î±-CsPbI₃/FAPbI₃ Bilayer Structure. ACS Energy Letters, 2019, 4, 2571-2578.	8.8	160

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55	Understanding the impact of side-chains on photovoltaic performance in efficient all-polymer solar cells. Journal of Materials Chemistry C, 2019, 7, 12641-12649.	2.7	14
56	Towards improved efficiency of polymer solar cells <i>via</i> chlorination of a benzo[1,2-<i>b</i>:4,5-<i>b</i>â€²]dithiophene based polymer donor. Journal of Materials Chemistry A, 2019, 7, 2261-2267.	5.2	20
57	Towards scalable synthesis of high-quality PbS colloidal quantum dots for photovoltaic applications. Journal of Materials Chemistry C, 2019, 7, 1575-1583.	2.7	19
58	A new dialkylthio-substituted naphtho[2,3-<i>c</i>]thiophene-4,9-dione based polymer donor for high-performance polymer solar cells. Energy and Environmental Science, 2019, 12, 675-683.	15.6	71
59	14.1% CsPbI₃ Perovskite Quantum Dot Solar Cells via Cesium Cation Passivation. Advanced Energy Materials, 2019, 9, 1900721.	10.2	254
60	Stable PbS quantum dot ink for efficient solar cells by solution-phase ligand engineering. Journal of Materials Chemistry A, 2019, 7, 15951-15959.	5.2	72
61	An Analytical Approach to CH 3 NH 3 PbI 3 Perovskite Solar Cells Based on Different Hole Transport Materials. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900087.	0.8	5
62	Improved Tandem Allâ€Polymer Solar Cells Performance by Using Spectrally Matched Subcells. Advanced Energy Materials, 2018, 8, 1703291.	10.2	54
63	A Universal Strategy to Utilize Polymeric Semiconductors for Perovskite Solar Cells with Enhanced Efficiency and Longevity. Advanced Functional Materials, 2018, 28, 1706377.	7.8	134
64	Widely Applicable n-Type Molecular Doping for Enhanced Photovoltaic Performance of All-Polymer Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 2776-2784.	4.0	46
65	Enhanced Charge Transfer, Transport and Photovoltaic Efficiency in Allâ€Polymer Organic Solar Cells by Polymer Backbone Fluorination. Chinese Journal of Chemistry, 2018, 36, 280-286.	2.6	5
66	Enormously improved CH3NH3PbI3 film surface for environmentally stable planar perovskite solar cells with PCE exceeding 19.9%. Nano Energy, 2018, 48, 10-19.	8.2	61
67	Thermally Stable Allâ€Polymer Solar Cells with High Tolerance on Blend Ratios. Advanced Energy Materials, 2018, 8, 1800029.	10.2	163
68	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
69	Realizing solution-processed monolithic PbS QDs/perovskite tandem solar cells with high UV stability. Journal of Materials Chemistry A, 2018, 6, 24693-24701.	5.2	45
70	Metallophthalocyanine-Based Molecular Dipole Layer as a Universal and Versatile Approach to Realize Efficient and Stable Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 42397-42405.	4.0	20
71	Band-Aligned Polymeric Hole Transport Materials for Extremely Low Energy Loss Î±-CsPbI3 Perovskite Nanocrystal Solar Cells. Joule, 2018, 2, 2450-2463.	11.7	275
72	Acceptor Percolation Determines How Electron-Accepting Additives Modify Transport of Ambipolar Polymer Organic Field-Effect Transistors. ACS Nano, 2018, 12, 7134-7140.	7.3	8

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73	Engineering the morphology <i>via</i> processing additives in multiple all-polymer solar cells for improved performance. Journal of Materials Chemistry A, 2018, 6, 10421-10432.	5.2	65
74	From PCBM-Polymer to Low-Cost and Thermally Stable C60/C70-Polymer Solar Cells: The Role of Molecular Structure, Crystallinity, and Morphology Control. ACS Applied Materials & Interfaces, 2018, 10, 24037-24045.	4.0	10
75	A new polymer donor for efficient polymer solar cells: simultaneously realizing high short-circuit current density and transparency. Journal of Materials Chemistry A, 2018, 6, 14700-14708.	5.2	22
76	Synthesis of cesium-doped ZnO nanoparticles as an electron extraction layer for efficient PbS colloidal quantum dot solar cells. Journal of Materials Chemistry A, 2018, 6, 17688-17697.	5.2	65
77	Improved Charge Generation via Ultrafast Effective Holeâ€Transfer in Allâ€Polymer Photovoltaic Blends with Large Highest Occupied Molecular Orbital (HOMO) Energy Offset and Proper Crystal Orientation. Advanced Functional Materials, 2018, 28, 1801611.	7.8	27
78	Toward Thermal Stable and High Photovoltaic Efficiency Ternary Conjugated Copolymers: Influence of Backbone Fluorination and Regioselectivity. Chemistry of Materials, 2017, 29, 1758-1768.	3.2	66
79	Improved performance of inverted planar perovskite solar cells with F4-TCNQ doped PEDOT:PSS hole transport layers. Journal of Materials Chemistry A, 2017, 5, 5701-5708.	5.2	207
80	Film morphology of solution-processed regioregular ternary conjugated polymer solar cells under processing additive stress. Journal of Materials Chemistry A, 2017, 5, 8903-8908.	5.2	9
81	High-performance all-polymer nonfullerene solar cells by employing an efficient polymer-small molecule acceptor alloy strategy. Nano Energy, 2017, 36, 356-365.	8.2	58
82	Room-Temperature Processed Nb₂O₅ as the Electron-Transporting Layer for Efficient Planar Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 23181-23188.	4.0	120
83	Alkenyl Carboxylic Acid: Engineering the Nanomorphology in Polymerâ€"Polymer Solar Cells as Solvent Additive. ACS Applied Materials & Interfaces, 2017, 9, 13396-13405.	4.0	14
84	Photovoltaic Devices Based on Colloidal PbX Quantum Dots: Progress and Prospects. Solar Rrl, 2017, 1, 1600021.	3.1	39
85	Thermal Annealing Effect on Ultrafast Charge Transfer in All-Polymer Solar Cells with a Non-Fullerene Acceptor N2200. Journal of Physical Chemistry C, 2017, 121, 8804-8811.	1.5	20
86	Comparing the device physics, dynamics and morphology of polymer solar cells employing conventional PCBM and non-fullerene polymer acceptor N2200. Nano Energy, 2017, 35, 251-262.	8.2	83
87	Efficient PbS quantum dot solar cells employing a conventional structure. Journal of Materials Chemistry A, 2017, 5, 23960-23966.	5.2	104
88	Ultrafast Spectroscopic Identification of Hole Transfer in All-Polymer Blend Films of Poly(1-{4,8-bis[5-(2-ethylhexyl)thiophen-2-yl]-benzo[1,2-<i>b</i>:4,5-<i>b</i>â€²]dithiophen-2-yl}-3-methyl-5-(4-octylphenyl)-4<i>H</i>- and Poly[1,8-bis(dicarboximide)-2,6-diyl]-<i>alt</i>-5,5â€²-(2,2â€²-bithiophene)]. Journal of Physical Chemistry C, 2017, 121, 20126-20133.	1.5	2
89	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
90	Structural variations to a donor polymer with low energy losses. Journal of Materials Chemistry A, 2017, 5, 18618-18626.	5.2	12

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91	Naphthalene Diimide-Based n-Type Polymers: Efficient Rear Interlayers for High-Performance Siliconâ€“Organic Heterojunction Solar Cells. ACS Nano, 2017, 11, 7215-7222.	7.3	60
92	Improved Allâ€Polymer Solar Cell Performance by Using Matched Polymer Acceptor. Advanced Functional Materials, 2016, 26, 5669-5678.	7.8	107
93	Narrow bandgap conjugated polymers based on a high-mobility polymer template for visibly transparent photovoltaic devices. Journal of Materials Chemistry A, 2016, 4, 17333-17343.	5.2	17
94	Ternary D1â€“D2â€“Aâ€“D2 Structured Conjugated Polymer: Efficient â€œGreenâ€•Solvent-Processed Polymer/Neat-C₇₀ Solar Cells. Chemistry of Materials, 2016, 28, 7479-7486.	3.2	43
95	High efficiency all-polymer tandem solar cells. Scientific Reports, 2016, 6, 26459.	1.6	57
96	Ultrafast Electron Transfer in Lowâ€Band Gap Polymer/PbS Nanocrystalline Blend Films. Advanced Functional Materials, 2016, 26, 713-721.	7.8	17
97	High performance planar-heterojunction perovskite solar cells using amino-based fulleropyrrolidine as the electron transporting material. Journal of Materials Chemistry A, 2016, 4, 10130-10134.	5.2	44
98	Efficient all polymer solar cells employing donor polymer based on benzo[1,2-b:4,5-bâ€™]dithiophene unit. AIP Advances, 2015, 5, 117126.	0.6	5
99	Polymer selection toward efficient polymer/PbSe planar heterojunction hybrid solar cells. Organic Electronics, 2015, 24, 263-271.	1.4	30
100	Inverted Planar Heterojunction Perovskite Solar Cells Employing Polymer as the Electron Conductor. ACS Applied Materials & Interfaces, 2015, 7, 3994-3999.	4.0	100
101	High efficiency all-polymer solar cells realized by the synergistic effect between the polymer side-chain structure and solvent additive. Journal of Materials Chemistry A, 2015, 3, 7077-7085.	5.2	79
102	Combinative Effect of Additive and Thermal Annealing Processes Delivers High Efficiency All-Polymer Solar Cells. Journal of Physical Chemistry C, 2015, 119, 25298-25306.	1.5	41
103	High-efficiency polymerâ€“PbS hybrid solar cells via molecular engineering. Journal of Materials Chemistry A, 2015, 3, 2572-2579.	5.2	59
104	High Polymer/Fullerene Ratio Realized in Efficient Polymer Solar Cells by Tailoring of the Polymer Sideâ€Chains. Advanced Materials, 2014, 26, 3624-3630.	11.1	62
105	Correlation between structure and photovoltaic performance of a series of furan bridged donorâ€“acceptor conjugated polymers. Journal of Materials Chemistry A, 2013, 1, 12128.	5.2	25
106	Highâ€Efficiency Hybrid Solar Cells Based on Polymer/PbS_xSe_{1â€x} Nanocrystals Benefiting from Vertical Phase Segregation. Advanced Materials, 2013, 25, 5772-5778.	11.1	154
107	Structure, band gap and energy level modulations for obtaining efficient materials in inverted polymer solar cells. Organic Electronics, 2013, 14, 635-643.	1.4	28
108	Efficient Polymer Solar Cells with a High Open Circuit Voltage of 1 Volt. Advanced Functional Materials, 2013, 23, 885-892.	7.8	180

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109	Design of benzodithiophene-diketopyrrolopyrrole based donorâ€"acceptor copolymers for efficient organic field effect transistors and polymer solar cells. Journal of Materials Chemistry, 2012, 22, 22734.	6.7	64
110	Linking Phase Segregation and Photovoltaic Performance of Mixed-Halide Perovskite Films through Grain Size Engineering. ACS Energy Letters, 0, , 1649-1658.	8.8	33
111	Mechanochemical synthesis of nonfullerene small molecular acceptors. Journal of Materials Chemistry C, 0, , .	2.7	1
112	Understanding the Impact of Fluorine Substitution on the Photovoltaic Performance of Block Copolymers. Transactions of Tianjin University, 0, , .	3.3	1