Kuan Liu

List of Publications by Year
in descending order

56 papers	4,859 citations	117453 34 h-index	155451 55 g-index
56 all docs	56 docs citations	56 times ranked	4396 citing authors

#	Article	IF	Citations
1	Fused Nonacyclic Electron Acceptors for Efficient Polymer Solar Cells. Journal of the American Chemical Society, 2017, 139, 1336-1343.	6.6	813
2	Triarylamine: Versatile Platform for Organic, Dye-Sensitized, and Perovskite Solar Cells. Chemical Reviews, 2016, 116, 14675-14725.	23.0	418
3	Fused Hexacyclic Nonfullerene Acceptor with Strong Nearâ€Infrared Absorption for Semitransparent Organic Solar Cells with 9.77% Efficiency. Advanced Materials, 2017, 29, 1701308.	11.1	364
4	Enhancing the Performance of Polymer Solar Cells via Core Engineering of NIRâ€Absorbing Electron Acceptors. Advanced Materials, 2018, 30, e1706571.	11.1	309
5	Stable and low-photovoltage-loss perovskite solar cells by multifunctional passivation. Nature Photonics, 2021, 15, 681-689.	15.6	255
6	Fullerene derivative anchored SnO₂ for high-performance perovskite solar cells. Energy and Environmental Science, 2018, 11, 3463-3471.	15.6	205
7	Additive-induced miscibility regulation and hierarchical morphology enable 17.5% binary organic solar cells. Energy and Environmental Science, 2021, 14, 3044-3052.	15.6	170
8	Zwitterionic-Surfactant-Assisted Room-Temperature Coating of Efficient Perovskite Solar Cells. Joule, 2020, 4, 2404-2425.	11.7	137
9	Graded bulk-heterojunction enables 17% binary organic solar cells via nonhalogenated open air coating. Nature Communications, 2021, 12, 4815.	5.8	135
10	Precise Control of Perovskite Crystallization Kinetics via Sequential Aâ€Site Doping. Advanced Materials, 2020, 32, e2004630.	11.1	122
11	Highâ€Performance Fluorinated Fusedâ€Ring Electron Acceptor with 3D Stacking and Exciton/Charge Transport. Advanced Materials, 2020, 32, e2000645.	11.1	122
12	Multifunctional Crosslinkingâ€Enabled Strainâ€Regulating Crystallization for Stable, Efficient Î±â€FAPbI₃â€Based Perovskite Solar Cells. Advanced Materials, 2021, 33, e2008487.	11.1	106
13	Effect of Core Size on Performance of Fused-Ring Electron Acceptors. Chemistry of Materials, 2018, 30, 5390-5396.	3.2	102
14	A Simple Way to Simultaneously Release the Interface Stress and Realize the Inner Encapsulation for Highly Efficient and Stable Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1905336.	7.8	96
15	Roll-coating fabrication of flexible organic solar cells: comparison of fullerene and fullerene-free systems. Journal of Materials Chemistry A, 2016, 4, 1044-1051.	5.2	84
16	Spiro[fluorene-9,9â€²-xanthene]-based hole transporting materials for efficient perovskite solar cells with enhanced stability. Materials Chemistry Frontiers, 2017, 1, 100-110.	3.2	84
17	Alkoxy-Induced Near-Infrared Sensitive Electron Acceptor for High-Performance Organic Solar Cells. Chemistry of Materials, 2018, 30, 4150-4156.	3.2	79
18	High-Performance Fused Ring Electron Acceptorâ€“Perovskite Hybrid. Journal of the American Chemical Society, 2018, 140, 14938-14944.	6.6	71

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19	Manipulating Crystallization Kinetics in Highâ€Performance Bladeâ€Coated Perovskite Solar Cells via Cosolventâ€Assisted Phase Transition. Advanced Materials, 2022, 34, e2200276.	11.1	64
20	Fluorinated fused nonacyclic interfacial materials for efficient and stable perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 21414-21421.	5.2	59
21	Novel Oligomer Enables Green Solvent Processed 17.5% Ternary Organic Solar Cells: Synergistic Energy Loss Reduction and Morphology Fineâ€Tuning. Advanced Materials, 2022, 34, e2107659.	11.1	57
22	Stretchable ITOâ€Free Organic Solar Cells with Intrinsic Antiâ€Reflection Substrate for Highâ€Efficiency Outdoor and Indoor Energy Harvesting. Advanced Functional Materials, 2021, 31, 2010172.	7.8	53
23	A perylene diimide based polymer: a dual function interfacial material for efficient perovskite solar cells. Materials Chemistry Frontiers, 2017, 1, 1079-1086.	3.2	51
24	Enhancing the performance of non-fullerene organic solar cells <i>via</i> end group engineering of fused-ring electron acceptors. Journal of Materials Chemistry A, 2018, 6, 16638-16644.	5.2	47
25	A low temperature processed fused-ring electron transport material for efficient planar perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 24820-24825.	5.2	46
26	Enhancing the performance of the electron acceptor ITIC-Th <i>via</i> tailoring its end groups. Materials Chemistry Frontiers, 2018, 2, 537-543.	3.2	46
27	Bottomâ€Up Quasiâ€Epitaxial Growth of Hybrid Perovskite from Solution Processâ€"Achieving Highâ€Efficiency Solar Cells via Templateâ€â€Guided Crystallization. Advanced Materials, 2021, 33, e2100009.	11.1	44
28	Comparison of Linear- and Star-Shaped Fused-Ring Electron Acceptors. , 2019, 1, 367-374.		43
29	High-performance organic solar cells based on polymer donor/small molecule donor/nonfullerene acceptor ternary blends. Journal of Materials Chemistry A, 2019, 7, 2268-2274.	5.2	42
30	Black Phosphorous Quantum Dots Sandwiched Organic Solar Cells. Small, 2019, 15, e1903977.	5.2	41
31	High-Performance Mid-Bandgap Fused-Pyrene Electron Acceptor. Chemistry of Materials, 2019, 31, 6484-6490.	3.2	40
32	Printing Highâ€Efficiency Perovskite Solar Cells in Highâ€Humidity Ambient Environmentâ€"An In Situ Guided Investigation. Advanced Science, 2021, 8, 2003359.	5.6	40
33	Room-temperature multiple ligands-tailored SnO2 quantum dots endow in situ dual-interface binding for upscaling efficient perovskite photovoltaics with high VOC. Light: Science and Applications, 2021, 10, 239.	7.7	40
34	Enhancing the performance of a fused-ring electron acceptor <i>via</i> extending benzene to naphthalene. Journal of Materials Chemistry C, 2018, 6, 66-71.	2.7	38
35	Highâ€Mobility pâ€Type Organic Semiconducting Interlayer Enhancing Efficiency and Stability of Perovskite Solar Cells. Advanced Science, 2017, 4, 1700025.	5.6	36
36	Efficient Slantwise Aligned Dionâ€"Jacobson Phase Perovskite Solar Cells Based on Transâ€1,4â€Cyclohexanediamine. Small, 2020, 16, e2003098.	5.2	33

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37	Application of a new Ï€-conjugated ladder-like polymer in enhancing the stability and efficiency of perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 1417-1424.	5.2	32
38	High-performance ternary organic solar cells with photoresponses beyond 1000 nm. Journal of Materials Chemistry A, 2018, 6, 24210-24215.	5.2	31
39	Fused octacyclic electron acceptor isomers for organic solar cells. Journal of Materials Chemistry A, 2019, 7, 21432-21437.	5.2	26
40	Passivated Metal Oxide n-Type Contacts for Efficient and Stable Organic Solar Cells. ACS Applied Energy Materials, 2020, 3, 1111-1118.	2.5	26
41	Uncovering the out-of-plane nanomorphology of organic photovoltaic bulk heterojunction by GTSAXS. Nature Communications, 2021, 12, 6226.	5.8	23
42	ZnO electron transporting layer engineering realized over 20% efficiency and over 1.28 V openâ€circuit voltage in allâ€inorganic perovskite solar cells. EcoMat, 2022, 4, .	6.8	23
43	Self-assembly enables simple structure organic photovoltaics via green-solvent and open-air-printing: Closing the lab-to-fab gap. Materials Today, 2022, 55, 46-55.	8.3	23
44	Enhancing Efficiency and Stability of Organic Solar Cells by UV Absorbent. Solar Rrl, 2017, 1, 1700148.	3.1	21
45	Electropolymerization Porous Aromatic Framework Film As a Hole-Transport Layer for Inverted Perovskite Solar Cells with Superior Stability. ACS Applied Materials & Interfaces, 2017, 9, 43688-43695.	4.0	19
46	Facile synthesis of high-performance nonfullerene acceptor isomers <i>via</i> a one stone two birds strategy. Journal of Materials Chemistry A, 2019, 7, 20667-20674.	5.2	19
47	Enhancing the <i>J</i>_{SC} of P3HT-Based OSCs via a Thiophene-Fused Aromatic Heterocycle as a â€œÏ€-Bridgeâ€•for Aâˆ’Ï€â€“Dâˆ’Ï€â€“A-Type Acceptors. ACS Applied Materials & Interfaces, 2019, 11, 26005-26016.	4.0	19
48	Z-Shaped Fused-Chrysene Electron Acceptors for Organic Photovoltaics. ACS Applied Materials & Interfaces, 2019, 11, 33006-33011.	4.0	18
49	Enhancing Open-Circuit Voltage of High-Efficiency Nonfullerene Ternary Solar Cells with a Star-Shaped Acceptor. ACS Applied Materials & Interfaces, 2020, 12, 50660-50667.	4.0	16
50	Size Modulation and Heterovalent Doping Facilitated Hybrid Organic and Perovskite Quantum Dot Bulk Heterojunction Solar Cells. ACS Applied Energy Materials, 2020, 3, 11359-11367.	2.5	14
51	Ambipolar-transport wide-bandgap perovskite interlayer for organic photovoltaics with over 18% efficiency. Matter, 2022, 5, 2238-2250.	5.0	14
52	Upscaling perovskite solar cells via the ambient deposition of perovskite thin films. Trends in Chemistry, 2021, 3, 747-764.	4.4	12
53	A thiophene-fused benzotriazole unit as a â€œÏ€-bridgeâ€•in A-Ï€-D-Ï€-A type acceptor to achieve more balanced JSC and VOC for OSCs. Organic Electronics, 2020, 82, 105705.	1.4	10
54	Effects of Fluorination Position on Fusedâ€Ring Electron Acceptors. Small Structures, 2020, 1, 2000006.	6.9	8

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55	Effects of linking units on fused-ring electron acceptor dimers. Journal of Materials Chemistry A, 2020, 8, 13735-13741.	5.2	8
56	New roles of fused-ring electron acceptors in organic solar cells. Journal of Materials Chemistry A, 2019, 7, 4766-4770.	5.2	5