Hongtao Zhang

List of Publications by Year
in descending order

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55 papers	3,547 citations	186209 28 h-index	155592 55 g-index
56 all docs	56 docs citations	56 times ranked	4133 citing authors

#	Article	IF	Citations
1	Solution-processed organic tandem solar cells with power conversion efficiencies >12%. Nature Photonics, 2017, 11, 85-90.	15.6	510
2	Small-Molecule Acceptor Based on the Heptacyclic Benzodi(cyclopentadithiophene) Unit for Highly Efficient Nonfullerene Organic Solar Cells. Journal of the American Chemical Society, 2017, 139, 4929-4934.	6.6	459
3	A New Nonfullerene Electron Acceptor with a Ladder Type Backbone for Highâ€Performance Organic Solar Cells. Advanced Materials, 2017, 29, 1604964.	11.1	289
4	An A-D-A Type Small-Molecule Electron Acceptor with End-Extended Conjugation for High Performance Organic Solar Cells. Chemistry of Materials, 2017, 29, 7908-7917.	3.2	139
5	Interface Engineering of Semiconductor/Dielectric Heterojunctions toward Functional Organic Thin-Film Transistors. Nano Letters, 2011, 11, 4939-4946.	4.5	135
6	A simple small molecule as an acceptor for fullerene-free organic solar cells with efficiency near 8%. Journal of Materials Chemistry A, 2016, 4, 10409-10413.	5.2	104
7	A 3D cross-linked graphene-based honeycomb carbon composite withÂexcellent confinement effect of organic cathode material for lithium-ion batteries. Carbon, 2020, 157, 656-662.	5.4	98
8	Dithienosilole-Based Small-Molecule Organic Solar Cells with an Efficiency over 8%: Investigation of the Relationship between the Molecular Structure and Photovoltaic Performance. Chemistry of Materials, 2015, 27, 6077-6084.	3.2	92
9	Achieving an Efficient and Stable Morphology in Organic Solar Cells Via Fine-Tuning the Side Chains of Small-Molecule Acceptors. Chemistry of Materials, 2020, 32, 2593-2604.	3.2	91
10	Super-elasticity of three-dimensionally cross-linked graphene materials all the way to deep cryogenic temperatures. Science Advances, 2019, 5, eaav2589.	4.7	84
11	A facile gaseous sulfur treatment strategy for Li-rich and Ni-rich cathode materials with high cycling and rate performance. Nano Energy, 2019, 63, 103887.	8.2	82
12	Fullerene-free small molecule organic solar cells with a high open circuit voltage of 1.15 V. Chemical Communications, 2016, 52, 465-468.	2.2	79
13	Light-driven photochromism-induced reversible switching in P3HTâ€“spiropyran hybrid transistors. Journal of Materials Chemistry, 2012, 22, 4261-4265.	6.7	75
14	Synthesis of Reactive Azobenzene Main-Chain Liquid Crystalline Polymers via Michael Addition Polymerization and Photomechanical Effects of Their Supramolecular Hydrogen-Bonded Fibers. Macromolecules, 2013, 46, 7650-7660.	2.2	75
15	New small-molecule acceptors based on hexacyclic naphthalene(cyclopentadithiophene) for efficient non-fullerene organic solar cells. Journal of Materials Chemistry A, 2017, 5, 17204-17210.	5.2	75
16	Polymeric Graphene Bulk Materials with a 3D Crossâ€Linked Monolithic Graphene Network. Advanced Materials, 2019, 31, e1802403.	11.1	74
17	Small Molecules Based on Alkyl/Alkylthio-thieno[3,2-b]thiophene-Substituted Benzo[1,2-b:4,5-bâ€²]dithiophene for Solution-Processed Solar Cells with High Performance. Chemistry of Materials, 2015, 27, 8414-8423.	3.2	71
18	Efficient Synthesis of Molecularly Imprinted Polymers with Enzyme Inhibition Potency by the Controlled Surface Imprinting Approach. ACS Macro Letters, 2013, 2, 566-570.	2.3	69

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19	Well-Defined Hydrophilic Molecularly Imprinted Polymer Microspheres for Efficient Molecular Recognition in Real Biological Samples by Facile RAFT Coupling Chemistry. Biomacromolecules, 2014, 15, 1663-1675.	2.6	68
20	TiO2-decorated graphenes as efficient photoswitches with high oxygen sensitivity. Chemical Science, 2011, 2, 1860.	3.7	59
21	Nonfullerene Small Molecular Acceptors with a Three-Dimensional (3D) Structure for Organic Solar Cells. Chemistry of Materials, 2016, 28, 6770-6778.	3.2	57
22	The rational and effective design of nonfullerene acceptors guided by a semi-empirical model for an organic solar cell with an efficiency over 15%. Journal of Materials Chemistry A, 2020, 8, 9726-9732.	5.2	54
23	Chemical Design for Both Molecular and Morphology Optimization toward Highâ€Performance Lithiumâ€Ion Batteries Cathode Material Based on Covalent Organic Framework. Advanced Functional Materials, 2022, 32, 2107703.	7.8	47
24	Evaluation of Small Molecules as Front Cell Donor Materials for Highâ€Efficiency Tandem Solar Cells. Advanced Materials, 2016, 28, 7008-7012.	11.1	43
25	High performance Li-ion capacitor fabricated with dual graphene-based materials. Nanotechnology, 2021, 32, 015403.	1.3	32
26	Efficient synthesis of monodisperse, highly crosslinked, and â€œlivingâ€•functional polymer microspheres by the ambient temperature iniferterâ€•induced â€œlivingâ€•radical precipitation polymerization. Journal of Polymer Science Part A, 2013, 51, 1983-1998.	2.5	29
27	Photocontrol of charge injection/extraction at electrode/semiconductor interfaces for high-photoresponsivity organic transistors. Journal of Materials Chemistry C, 2016, 4, 5289-5296.	2.7	29
28	A simple small molecule as the acceptor for fullerene-free organic solar cells. Science China Chemistry, 2017, 60, 366-369.	4.2	29
29	Design and synthesis of low band gap non-fullerene acceptors for organic solar cells with impressively high Jsc over 21 mA cm_2. Science China Materials, 2017, 60, 819-828.	3.5	29
30	Facile Synthesis of Carbonâ€Coated Li₃VO₄ Anode Material and its Application in Full Cells. Energy Technology, 2018, 6, 2074-2081.	1.8	29
31	Flexible Highâ€Performance and Solutionâ€Processed Organic Photovoltaics with Robust Mechanical Stability. Advanced Functional Materials, 2021, 31, 2010000.	7.8	29
32	Synergistic Photomodulation of Capacitive Coupling and Charge Separation Toward Functional Organic Fieldâ€Effect Transistors with High Responsivity. Advanced Electronic Materials, 2015, 1, 1500159.	2.6	28
33	Small Molecules with Asymmetric 4-Alkyl-8-alkoxybenzo[1,2-b:4,5-bâ€²]dithiophene as the Central Unit for High-Performance Solar Cells with High Fill Factors. Chemistry of Materials, 2017, 29, 3694-3703.	3.2	28
34	A nonfullerene acceptor incorporating a dithienopyran fused backbone for organic solar cells with efficiency over 14%. Nano Energy, 2020, 75, 104988.	8.2	27
35	A 2D covalent organic framework with ultra-large interlayer distance as high-rate anode material for lithium-ion batteries. Nano Research, 2022, 15, 9779-9784.	5.8	27
36	Synthesis of well-defined easily crosslinkable azobenzene side-chain liquid crystalline polymers via reversible additionâ€“fragmentation chain transfer polymerization and photomechanical properties of their post-crosslinked fibers. European Polymer Journal, 2015, 69, 592-604.	2.6	26

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37	Side chain engineering investigation of non-fullerene acceptors for photovoltaic device with efficiency over 15%. Science China Chemistry, 2020, 63, 1799-1806.	4.2	25
38	Developing high-performance small molecule organic solar cells via a large planar structure and an electron-withdrawing central unit. Chemical Communications, 2017, 53, 451-454.	2.2	22
39	Achieving organic solar cells with efficiency over 14% based on a non-fullerene acceptor incorporating a cyclopentathiophene unit fused backbone. Journal of Materials Chemistry A, 2020, 8, 5194-5199.	5.2	21
40	An all small molecule organic solar cell based on a porphyrin donor and a non-fullerene acceptor with complementary and broad absorption. Dyes and Pigments, 2020, 176, 108250.	2.0	20
41	Efficient one-pot synthesis of uniform, surface-functionalized, and â€œlivingâ€•polymer microspheres by reverse atom transfer radical precipitation polymerization. European Polymer Journal, 2014, 54, 95-108.	2.6	19
42	Easily crosslinkable side-chain azobenzene polymers for fast and persistent fixation of surface relief gratings. New Journal of Chemistry, 2015, 39, 1410-1420.	1.4	17
43	A Li-rich layered-spinel cathode material for high capacity and high rate lithium-ion batteries fabricated via a gas-solid reaction. Science China Materials, 2020, 63, 2435-2442.	3.5	17
44	A series of dithienobenzodithiophene based small molecules for highly efficient organic solar cells. Science China Chemistry, 2017, 60, 552-560.	4.2	16
45	One polymer with three charge states for two types of lithium-ion batteries with different characteristics as needed. Energy Storage Materials, 2022, 47, 141-148.	9.5	16
46	An oxygen heterocycle-fused fluorene based non-fullerene acceptor for high efficiency organic solar cells. Materials Chemistry Frontiers, 2020, 4, 3594-3601.	3.2	15
47	All-Small-Molecule Organic Solar Cells Based on a Fluorinated Small Molecule Donor With High Open-Circuit Voltage of 1.07 V. Frontiers in Chemistry, 2020, 8, 329.	1.8	15
48	Improving current and mitigating energy loss in ternary organic photovoltaics enabled by two well-compatible small molecule acceptors. Science China Chemistry, 2021, 64, 608-615.	4.2	13
49	Two Thieno[3,2â€•b]thiopheneâ€Based Small Molecules as Bifunctional Photoactive Materials for Organic Solar Cells. Solar Rrl, 2018, 2, 1700179.	3.1	12
50	An acceptorâ€“donorâ€“acceptor type non-fullerene acceptor with an asymmetric backbone for high performance organic solar cells. Journal of Materials Chemistry C, 2020, 8, 6293-6298.	2.7	12
51	Effects of alkyl chains on intermolecular packing and device performance in small molecule based organic solar cells. Dyes and Pigments, 2017, 141, 262-268.	2.0	11
52	Efficient carbazole-based small-molecule organic solar cells with an improved fill factor. RSC Advances, 2018, 8, 4867-4871.	1.7	11
53	A-D-A-type small molecular acceptor with one hexyl-substituted thiophene as Ï€ bridge for fullerene-free organic solar cells. Science China Materials, 2017, 60, 49-56.	3.5	10
54	Bandgap Engineering of an Aryl-Fused Tetrathianaphthalene for Visible-Blind Organic Field-Effect Transistors. Frontiers in Chemistry, 2021, 9, 698246.	1.8	2

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55	Organic Semiconductors: Solutionâ€Crystallized Organic Semiconductors with High Carrier Mobility and Air Stability (Adv. Mater. 41/2012). Advanced Materials, 2012, 24, 5518-5518.	11.1	1