Hae Jung Son

List of Publications by Year
in descending order

51 papers	3,225 citations	159585 30 h-index	189892 50 g-index
52 all docs	52 docs citations	52 times ranked	4844 citing authors

#	Article	IF	Citations
1	Synthesis of Fluorinated Polythienothiophene-co-benzodithiophenes and Effect of Fluorination on the Photovoltaic Properties. Journal of the American Chemical Society, 2011, 133, 1885-1894.	13.7	548
2	Overcoming efficiency challenges in organic solar cells: rational development of conjugated polymers. Energy and Environmental Science, 2012, 5, 8158.	30.8	189
3	Synthesis and Photovoltaic Effect in Dithieno[2,3â€d:2â€²,3â€²â€dâ€²]Benzo[1,2â€b:4,5â€bâ€²]dithiopheneâ€Based Conjugated Polymers. Advanced Materials, 2013, 25, 838-843.	21.0	179
4	Are we there yet? Design of better conjugated polymers for polymer solar cells. Journal of Materials Chemistry, 2011, 21, 18934.	6.7	156
5	Mediating Solar Cell Performance by Controlling the Internal Dipole Change in Organic Photovoltaic Polymers. Macromolecules, 2012, 45, 6390-6395.	4.8	138
6	Improving Performance and Stability of Flexible Planarâ€Heterojunction Perovskite Solar Cells Using Polymeric Holeâ€Transport Material. Advanced Functional Materials, 2016, 26, 4464-4471.	14.9	136
7	Mechanically Recoverable and Highly Efficient Perovskite Solar Cells: Investigation of Intrinsic Flexibility of Organicâ€“Inorganic Perovskite. Advanced Energy Materials, 2015, 5, 1501406.	19.5	131
8	Progress in Materials, Solution Processes, and Longâ€Term Stability for Largeâ€Area Organic Photovoltaics. Advanced Materials, 2020, 32, e2002217.	21.0	124
9	Accelerated Degradation Due to Weakened Adhesion from Li-TFSI Additives in Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 7029-7035.	8.0	122
10	A tailored TiO2 electron selective layer for high-performance flexible perovskite solar cells via low temperature UV process. Nano Energy, 2016, 28, 380-389.	16.0	116
11	Intrinsic photo-degradation and mechanism of polymer solar cells: the crucial role of non-fullerene acceptors. Journal of Materials Chemistry A, 2019, 7, 25830-25837.	10.3	114
12	A [2,2]paracyclophane triarylamine-based hole-transporting material for high performance perovskite solar cells. Journal of Materials Chemistry A, 2015, 3, 24215-24220.	10.3	87
13	Synergistic enhancement and mechanism study of mechanical and moisture stability of perovskite solar cells introducing polyethylene-imine into the CH₃NH₃PbI₃/HTM interface. Journal of Materials Chemistry A, 2015, 3, 22176-22182.	10.3	80
14	Effect of multi-armed triphenylamine-based hole transporting materials for high performance perovskite solar cells. Chemical Science, 2016, 7, 5517-5522.	7.4	78
15	High-Performance and Stable Nonfullerene Acceptor-Based Organic Solar Cells for Indoor to Outdoor Light. ACS Energy Letters, 2020, 5, 170-179.	17.4	75
16	New Hybrid Hole Extraction Layer of Perovskite Solar Cells with a Planar pâ€“iâ€“n Geometry. Journal of Physical Chemistry C, 2015, 119, 27285-27290.	3.1	71
17	Interfacial engineering of a ZnO electron transporting layer using self-assembled monolayers for high performance and stable perovskite solar cells. Journal of Materials Chemistry A, 2020, 8, 2105-2113.	10.3	67
18	Enhancement of charge transport properties of small molecule semiconductors by controlling fluorine substitution and effects on photovoltaic properties of organic solar cells and perovskite solar cells. Chemical Science, 2016, 7, 6649-6661.	7.4	52

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19	Effect of Molecular Orientation of Donor Polymers on Charge Generation and Photovoltaic Properties in Bulk Heterojunction Allâ€Polymer Solar Cells. Advanced Energy Materials, 2017, 7, 1601365.	19.5	51
20	Highly efficient perovskite solar cells based on mechanically durable molybdenum cathode. Nano Energy, 2015, 17, 131-139.	16.0	48
21	Vertically aligned nanostructured TiO₂photoelectrodes for high efficiency perovskite solar cells via a block copolymer template approach. Nanoscale, 2016, 8, 11472-11479.	5.6	48
22	Pyriteâ€Based Biâ€Functional Layer for Longâ€Term Stability and Highâ€Performance of Organoâ€Lead Halide Perovskite Solar Cells. Advanced Functional Materials, 2016, 26, 5400-5407.	14.9	46
23	Enhancement of the Photovoltaic Performance of CH₃NH₃PbI₃ Perovskite Solar Cells through a Dichlorobenzeneâ€Functionalized Holeâ€Transporting Material. ChemPhysChem, 2014, 15, 2595-2603.	2.1	43
24	Development of Dopant-Free Donorâ€“Acceptor-type Hole Transporting Material for Highly Efficient and Stable Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 39511-39518.	8.0	42
25	Development of Selfâ€Doped Conjugated Polyelectrolytes with Controlled Work Functions and Application to Hole Transport Layer Materials for Highâ€Performance Organic Solar Cells. Advanced Materials Interfaces, 2016, 3, 1500703.	3.7	41
26	Highâ€Performance and Uniform 1 cm² Polymer Solar Cells with D₁â€Aâ€D₂â€Aâ€Type Random Terpolymers. Advanced Energy Materials, 2018, 8, 1701405.	19.5	39
27	Understanding the Performance of Organic Photovoltaics under Indoor and Outdoor Conditions: Effects of Chlorination of Donor Polymers. ACS Applied Materials & Interfaces, 2020, 12, 23181-23189.	8.0	35
28	Effects of Exciton Polarity in Charge-Transfer Polymer/PCBM Bulk Heterojunction Films. Journal of Physical Chemistry Letters, 2014, 5, 1856-1863.	4.6	33
29	Lowâ€Temperature Processable Highâ€Performance Dâ€“Aâ€Type Random Copolymers for Nonfullerene Polymer Solar Cells and Application to Flexible Devices. Advanced Energy Materials, 2018, 8, 1801601.	19.5	31
30	A fluorinated polythiophene hole-transport material for efficient and stable perovskite solar cells. Dyes and Pigments, 2019, 164, 1-6.	3.7	31
31	Enhancing performance and stability of perovskite solar cells using hole transport layer of small molecule and conjugated polymer blend. Journal of Power Sources, 2019, 418, 167-175.	7.8	28
32	Progress in morphology control from fullerene to nonfullerene acceptors for scalable high-performance organic photovoltaics. Journal of Materials Chemistry A, 2021, 9, 24729-24758.	10.3	28
33	3D Printer-Based Encapsulated Origami Electronics for Extreme System Stretchability and High Areal Coverage. ACS Nano, 2019, 13, 12500-12510.	14.6	27
34	Development of organic-inorganic double hole-transporting material for high performance perovskite solar cells. Journal of Power Sources, 2018, 378, 98-104.	7.8	24
35	Developement of highly efficient large area organic photovoltaic module: Effects of nonfullerene acceptor. Nano Energy, 2020, 77, 105147.	16.0	22
36	Wide-Linear-Dynamic-Range Polymer Photodiode with a New Benzo[1,2-b:4,5-bâ€²]dithiophene-Copolymer: The Role of Crystalline Orientation. Chemistry of Materials, 2020, 32, 3219-3228.	6.7	20

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37	Simultaneous Enhanced Efficiency and Stability of Perovskite Solar Cells Using Adhesive Fluorinated Polymer Interfacial Material. ACS Applied Materials & Interfaces, 2021, 13, 35595-35605.	8.0	20
38	Highly Efficient Large-Area Organic Photovoltaic Module with a 350 nm Thick Active Layer Using a Random Terpolymer Donor. Chemistry of Materials, 2020, 32, 3469-3479.	6.7	19
39	Development of Highly Crystalline Donorâ€“Acceptor-Type Random Polymers for High Performance Large-Area Organic Solar Cells. Macromolecules, 2017, 50, 7567-7576.	4.8	17
40	Synthetic Approach To Achieve a Thin-Film Red-Selective Polymer Photodiode: Difluorobenzothiadiazole-Based Donorâ€“Acceptor Polymer with Enhanced Space Charge Carriers. Macromolecules, 2018, 51, 8241-8247.	4.8	13
41	Important role of alloyed polymer acceptor for high efficiency and stable large-area organic photovoltaics. Nano Energy, 2022, 98, 107187.	16.0	11
42	Unraveling the Origin of Dark Current in Organic Bulk Heterojunction Photodiodes for Achieving High Near-Infrared Detectivity. ACS Photonics, 2022, 9, 2056-2065.	6.6	10
43	Development of a conjugated donor-acceptor polyelectrolyte with high work function and conductivity for organic solar cells. Organic Electronics, 2017, 50, 1-6.	2.6	8
44	Effects of stretching on the molecular packing structure of conjugated polymers with hydrogen bonding. Journal of Materials Chemistry C, 2021, 9, 15132-15140.	5.5	6
45	Ce(III)â€Based Coordinationâ€Complexâ€Based Efficient Radical Scavenger for Exceptional Durability Enhancement of Polymer Application in Protonâ€Exchange Membrane Fuel Cells and Organic Photovoltaics. Advanced Energy and Sustainability Research, 2022, 3, .	5.8	5
46	Development of interlayers based on polymethacrylate incorporating tertiary amine for organic solar cells with improved efficiency and stability. Dyes and Pigments, 2021, 194, 109523.	3.7	4
47	Effects of dynamic 3D-volume of side chains in conjugated polymers on nano-scale morphology and solar cell properties. Dyes and Pigments, 2015, 123, 323-330.	3.7	3
48	Polymer Solar Cells: Low-Temperature Processable High-Performance D-A-Type Random Copolymers for Nonfullerene Polymer Solar Cells and Application to Flexible Devices (Adv. Energy Mater. 30/2018). Advanced Energy Materials, 2018, 8, 1870132.	19.5	2
49	Development of a Healable Bulk Heterojunction Using Conjugated Donor Polymers Based on Thymine-Functionalized Side Chains. Macromolecules, 2021, 54, 3478-3488.	4.8	2
50	Hole Transport: Pyrite-Based Bi-Functional Layer for Long-Term Stability and High-Performance of Organo-Lead Halide Perovskite Solar Cells (Adv. Funct. Mater. 30/2016). Advanced Functional Materials, 2016, 26, 5382-5382.	14.9	1
51	Development of Printable Organic Solar Cells in a Large Area. ECS Meeting Abstracts, 2018, , .	0.0	0