In Hwan Jung

List of Publications by Year
in descending order

87 papers	3,331 citations	136950 32 h-index	155660 55 g-index
89 all docs	89 docs citations	89 times ranked	4766 citing authors

#	Article	IF	Citations
1	The Role of N-Doped Multiwall Carbon Nanotubes in Achieving Highly Efficient Polymer Bulk Heterojunction Solar Cells. Nano Letters, 2013, 13, 2365-2369.	9.1	191
2	Overcoming efficiency challenges in organic solar cells: rational development of conjugated polymers. Energy and Environmental Science, 2012, 5, 8158.	30.8	189
3	Multiâ€Charged Conjugated Polyelectrolytes as a Versatile Work Function Modifier for Organic Electronic Devices. Advanced Functional Materials, 2014, 24, 1100-1108.	14.9	170
4	Cationic Conjugated Polyelectrolytes-Triggered Conformational Change of Molecular Beacon Aptamer for Highly Sensitive and Selective Potassium Ion Detection. Journal of the American Chemical Society, 2012, 134, 3133-3138.	13.7	162
5	Highâ€Efficiency Lowâ€Temperature ZnO Based Perovskite Solar Cells Based on Highly Polar, Nonwetting Selfâ€Assembled Molecular Layers. Advanced Energy Materials, 2018, 8, 1701683.	19.5	144
6	High-performance dopant-free conjugated small molecule-based hole-transport materials for perovskite solar cells. Nano Energy, 2018, 44, 191-198.	16.0	124
7	Synthesis and Photovoltaic Properties of Cyclopentadithiopheneâ€Based Lowâ€Bandgap Copolymers That Contain Electronâ€Withdrawing Thiazole Derivatives. Chemistry - A European Journal, 2010, 16, 3743-3752.	3.3	112
8	Well-controlled thieno[3,4-c]pyrrole-4,6-(5H)-dione based conjugated polymers for high performance organic photovoltaic cells with the power conversion efficiency exceeding 9%. Energy and Environmental Science, 2015, 8, 2352-2356.	30.8	109
9	Synthesis and Search for Design Principles of New Electron Accepting Polymers for All-Polymer Solar Cells. Chemistry of Materials, 2014, 26, 3450-3459.	6.7	100
10	High Thermoelectric Power Factor of a Diketopyrrolopyrrole-Based Low Bandgap Polymer via Finely Tuned Doping Engineering. Scientific Reports, 2017, 7, 44704.	3.3	90
11	Highly efficient and thermally stable fullerene-free organic solar cells based on a small molecule donor and acceptor. Journal of Materials Chemistry A, 2016, 4, 16335-16340.	10.3	88
12	Simultaneous Improvement in Efficiency and Stability of Lowâ€Temperatureâ€Processed Perovskite Solar Cells by Interfacial Control. Advanced Energy Materials, 2018, 8, 1702934.	19.5	84
13	Optimization and Analysis of Conjugated Polymer Side Chains for Highâ€Performance Organic Photovoltaic Cells. Advanced Functional Materials, 2016, 26, 1517-1525.	14.9	67
14	Single Chain White-Light-Emitting Polyfluorene Copolymers Containing Iridium Complex Coordinated on the Main Chain. Macromolecules, 2010, 43, 1379-1386.	4.8	62
15	Development and Structure/Property Relationship of New Electron Accepting Polymers Based on Thieno[2â€²,3â€²:4,5]pyrido[2,3-g]thieno[3,2-c]quinoline-4,10-dione for All-Polymer Solar Cells. Chemistry of Materials, 2015, 27, 5941-5948.	6.7	60
16	New selenophene-based semiconducting copolymers for high performance organic thin-film transistors. Journal of Materials Chemistry, 2009, 19, 3490.	6.7	59
17	Geometrically controlled organic small molecule acceptors for efficient fullerene-free organic photovoltaic devices. Journal of Materials Chemistry A, 2016, 4, 12308-12318.	10.3	58
18	Simple Bithiopheneâ€"Rhodanineâ€Based Small Molecule Acceptor for Use in Additiveâ€Free Nonfullerene OPVs with Low Energy Loss of 0.51 eV. Advanced Energy Materials, 2019, 9, 1804021.	19.5	58

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19	Synthesis and electroluminescent properties of fluoreneâ€based copolymers containing electronâ€withdrawing thiazole derivatives. Journal of Polymer Science Part A, 2008, 46, 7148-7161.	2.3	57
20	Artificial light-harvesting n-type porphyrin for panchromatic organic photovoltaic devices. Chemical Science, 2017, 8, 5095-5100.	7.4	50
21	Fullerene-Free Organic Solar Cells with an Efficiency of 10.2% and an Energy Loss of 0.59 eV Based on a Thieno[3,4-<i>c</i>]Pyrrole-4,6-dione-Containing Wide Band Gap Polymer Donor. ACS Applied Materials & Interfaces, 2017, 9, 32939-32945.	8.0	48
22	Synthesis and characterization of indeno[1,2-b]fluorene-based low bandgap copolymers for photovoltaic cells. Journal of Materials Chemistry, 2010, 20, 1577.	6.7	45
23	Edge-on Gating Effect in Molecular Wires. Nano Letters, 2015, 15, 958-962.	9.1	43
24	Diphenylâ€2â€pyridylamineâ€Substituted Porphyrins as Holeâ€Transporting Materials for Perovskite Solar Cells. ChemSusChem, 2017, 10, 3780-3787.	6.8	40
25	Synthesis and characterization of cyclopentadithiopheneâ€based low bandgap copolymers containing electronâ€deficient benzoselenadiazole derivatives for photovoltaic devices. Journal of Polymer Science Part A, 2010, 48, 1423-1432.	2.3	38
26	High-Performance Near-Infrared Absorbing n-Type Porphyrin Acceptor for Organic Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 41344-41349.	8.0	37
27	Performance Optimization of Parallelâ€Like Ternary Organic Solar Cells through Simultaneous Improvement in Charge Generation and Transport. Advanced Functional Materials, 2019, 29, 1808731.	14.9	37
28	Synthesis, Characterization, and Electroluminescence of Polyfluorene Copolymers with Phenothiazine Derivative; Their Applications to High-Efficiency Red and White PLEDs. Macromolecules, 2008, 41, 9643-9649.	4.8	36
29	Effect of Acceptor Strength on Optical and Electronic Properties in Conjugated Polymers for Solar Applications. Journal of the American Chemical Society, 2015, 137, 5759-5769.	13.7	35
30	Dark current reduction strategies using edge-on aligned donor polymers for high detectivity and responsivity organic photodetectors. Polymer Chemistry, 2017, 8, 3612-3621.	3.9	35
31	Visible-Light-Responsive High-Detectivity Organic Photodetectors with a 1 Î¼m Thick Active Layer. ACS Applied Materials & Interfaces, 2018, 10, 38294-38301.	8.0	35
32	Synthesis and characterization of indeno[1,2â€<i>b</i>]fluoreneâ€based white lightâ€emitting copolymer. Journal of Polymer Science Part A, 2009, 47, 3467-3479.	2.3	34
33	Improved performance of colloidal quantum dot solar cells using high-electric-dipole self-assembled layers. Nano Energy, 2017, 39, 355-362.	16.0	34
34	Near-Infrared Harvesting Fullerene-Free All-Small-Molecule Organic Solar Cells Based on Porphyrin Donors. ACS Sustainable Chemistry and Engineering, 2018, 6, 5306-5313.	6.7	34
35	Controlling the Morphology of BDTT-DPP-Based Small Molecules via End-Group Functionalization for Highly Efficient Single and Tandem Organic Photovoltaic Cells. ACS Applied Materials & Interfaces, 2015, 7, 23866-23875.	8.0	33
36	Development of New Photovoltaic Conjugated Polymers Based on Di(1-benzothieno)[3,2-<i>b</i>:2â€²,3â€²-<i>d</i>]pyrrole: Benzene Ring Extension Strategy for Improving Open-Circuit Voltage. Macromolecules, 2015, 48, 5213-5221.	4.8	32

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37	Performance Improvement in Low-Temperature-Processed Perovskite Solar Cells by Molecular Engineering of Porphyrin-Based Hole Transport Materials. ACS Applied Materials & Interfaces, 2018, 10, 35404-35410.	8.0	32
38	PbS-Based Quantum Dot Solar Cells with Engineered Ï€-Conjugated Polymers Achieve 13% Efficiency. ACS Energy Letters, 2020, 5, 3452-3460.	17.4	32
39	Conjugated Polyelectrolyte and Aptamer Based Potassium Assay via Singleâ€•and Twoâ€Step Fluorescence Energy Transfer with a Tunable Dynamic Detection Range. Advanced Functional Materials, 2014, 24, 1748-1757.	14.9	31
40	New anthracene-thiophene-based copolymers that absorb across the entire UV-vis spectrum for application in organic solar cells. Chemical Communications, 2010, 46, 1863-1865.	4.1	29
41	Incremental optimization in donor polymers for bulk heterojunction organic solar cells exhibiting high performance. Journal of Polymer Science, Part B: Polymer Physics, 2012, 50, 1057-1070.	2.1	29
42	Synthesis and Electroluminescence of New Polyfluorene Copolymers Containing Iridium Complex Coordinated on the Main Chain. Macromolecules, 2009, 42, 5551-5557.	4.8	28
43	Match the Interfacial Energy Levels between Hole Transport Layer and Donor Polymer To Achieve High Solar Cell Performance. Journal of Physical Chemistry C, 2014, 118, 22834-22839.	3.1	26
44	Enhanced Thermoelectric Performance of Conjugated Polymer/CNT Nanocomposites by Modulating the Potential Barrier Difference between Conjugated Polymer and CNT. ACS Applied Electronic Materials, 2019, 1, 1282-1289.	4.3	26
45	Highâ€Detectivity Greenâ€Selective Allâ€Polymer pâ€"n Junction Photodetectors. Advanced Optical Materials, 2020, 8, 2001038.	7.3	23
46	The influence of electron deficient unit and interdigitated packing shape of new polythiophene derivatives on organic thinâ€film transistors and photovoltaic cells. Journal of Polymer Science Part A, 2011, 49, 2886-2898.	2.3	22
47	Polystyrene-<i>block</i>-Poly(ionic liquid) Copolymers as Work Function Modifiers in Inverted Organic Photovoltaic Cells. ACS Applied Materials & Interfaces, 2018, 10, 4887-4894.	8.0	21
48	Improved size distribution of <scp> AgBiS ₂ </scp> colloidal nanocrystals by optimized synthetic route enhances photovoltaic performance. International Journal of Energy Research, 2020, 44, 11006-11014.	4.5	21
49	Organic thin-film transistor properties and the structural relationships between various aromatic end-capped triisopropylsilylethynyl anthracene derivatives. Organic Electronics, 2010, 11, 820-830.	2.6	19
50	New alkylthio-thieno[3,2-b]thiophene-substituted benzodithiophene-based highly efficient photovoltaic polymer. Journal of Materials Chemistry C, 2015, 3, 4250-4253.	5.5	19
51	High-Performance Nonfullerene Organic Photovoltaic Cells Using a TPD-Based Wide Bandgap Donor Polymer. ACS Applied Energy Materials, 2019, 2, 5692-5697.	5.1	19
52	Enhanced and controllable open-circuit voltage using 2D-conjugated benzodithiophene (BDT) homopolymers by alkylthio substitution. Journal of Materials Chemistry C, 2016, 4, 2170-2177.	5.5	18
53	A di(1-benzothieno)[3,2-b:2â€²,3â€²-d]pyrrole and isoindigo-based electron donating conjugated polymer for efficient organic photovoltaics. Journal of Materials Chemistry C, 2016, 4, 663-667.	5.5	18
54	Synthesis and characterization of a wide bandgap polymer based on a weak donor-weak acceptor structure for dual applications in organic solar cells and organic photodetectors. Organic Electronics, 2017, 46, 173-182.	2.6	18

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55	Enhanced Static and Dynamic Properties of Highly Miscible Fullerene-Free Green-Selective Organic Photodetectors. ACS Applied Materials & Interfaces, 2021, 13, 25164-25174.	8.0	16
56	Green phosphorescent homoleptic iridium(III) complexes for highly efficient organic light-emitting diodes. Dyes and Pigments, 2018, 156, 395-402.	3.7	15
57	Alkylthiazole-based semicrystalline polymer donors for fullerene-free organic solar cells. Polymer Chemistry, 2019, 10, 4314-4321.	3.9	14
58	Development of a julolidine-based interfacial modifier for efficient inverted polymer solar cells. RSC Advances, 2015, 5, 107540-107546.	3.6	13
59	Ambidextrous Polymeric Binder for Silicon Anodes in Lithium-Ion Batteries. Chemistry of Materials, 2022, 34, 5791-5798.	6.7	13
60	2,5-di(thiophen-2-yl)thiazolo[5,4-d]thiazole-based donorâ€“acceptor type copolymers for photovoltaic cells. Current Applied Physics, 2012, 12, 11-16.	2.4	12
61	n-Type core effect on perylene diimide based acceptors for panchromatic fullerene-free organic solar cells. Dyes and Pigments, 2018, 156, 318-325.	3.7	12
62	Acceptorâ€“acceptor-type conjugated polymer for use in n-type organic thin-film transistors and thermoelectric devices. Organic Electronics, 2020, 86, 105921.	2.6	12
63	Contribution of dark current density to the photodetecting properties of thieno[3,4-b]pyrazine-based low bandgap polymers. Dyes and Pigments, 2022, 197, 109910.	3.7	12
64	Perovskite Solar Cells: Highâ€Efficiency Lowâ€Temperature ZnO Based Perovskite Solar Cells Based on Highly Polar, Nonwetting Selfâ€Assembled Molecular Layers (Adv. Energy Mater. 5/2018). Advanced Energy Materials, 2018, 8, 1870022.	19.5	11
65	Synthesis, characterization, and electroluminescence of polyfluorene copolymers containing Tâ€shaped isophorone derivatives. Journal of Polymer Science Part A, 2010, 48, 82-90.	2.3	10
66	Rational Design of Highly Soluble and Crystalline Conjugated Polymers for Highâ€Performance Fieldâ€Effect Transistors. Advanced Electronic Materials, 2022, 8, .	5.1	10
67	Synthesis and characterization of fluorene and cyclopentadithiopheneâ€based copolymers exhibiting broad absorption for photovoltaic devices. Journal of Polymer Science Part A, 2011, 49, 1248-1255.	2.3	9
68	Improved Performance of Quantumâ€Dot Photodetectors Using Cheap and Environmentally Friendly Polyethylene Glycol. Advanced Materials Interfaces, 2019, 6, 1801666.	3.7	9
69	Thiophene backbone-based polymers with electron-withdrawing pendant groups for application in organic thin-film transistors. New Journal of Chemistry, 2020, 44, 9321-9327.	2.8	9
70	Environmentally friendly AgBiS2 nanocrystal-based high-performance quantum-dot photodetectors. Applied Surface Science, 2022, 597, 153661.	6.1	9
71	Thermal annealing induced bicontinuous networks in bulk heterojunction solar cells and bipolar field-effect transistors. Applied Physics Letters, 2009, 95, 173301.	3.3	7
72	Synthesis and characterization of a new phenanthrenequinoxalineâ€based polymer for organic solar cells. Journal of Polymer Science Part A, 2016, 54, 2804-2810.	2.3	7

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73	Vacuum-Deposited Organic Solar Cells Based on a Dicyanovinyl-Terminated Small-Molecule Donor. Macromolecular Research, 2019, 27, 444-447.	2.4	7
74	A conjugated polyelectrolyte interfacial modifier for high performance near-infrared quantum-dot photodetectors. Journal of Materials Chemistry C, 2020, 8, 2542-2550.	5.5	7
75	Wavelength-selective porphyrin photodiodes via control of Soret- and Q-band absorption. Dyes and Pigments, 2021, 193, 109531.	3.7	7
76	Spontaneously Induced Hierarchical Structure by Surface Energy in Novel Conjugated Polymerâ€Based Ultrafastâ€Response Organic Photodetectors. Advanced Optical Materials, 2022, 10, .	7.3	7
77	Enhancement of Photovoltaic Performance in Immiscible Ternary Blends. ACS Applied Energy Materials, 2020, 3, 5313-5321.	5.1	6
78	Development of low bandgap polymers for red and near-infrared fullerene-free organic photodetectors. New Journal of Chemistry, 2021, 45, 10872-10879.	2.8	6
79	Solutionâ€state dopingâ€assisted molecular ordering and enhanced thermoelectric properties of an amorphous polymer. International Journal of Energy Research, 2021, 45, 21540-21551.	4.5	6
80	Development of n-Type Porphyrin Acceptors for Panchromatic Light-Harvesting Fullerene-Free Organic Solar Cells. Frontiers in Chemistry, 2018, 6, 473.	3.6	5
81	Simple-Structured Low-Cost Dopant-Free Hole-Transporting Polymers for High-Stability CsPbI₂Br Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 13400-13409.	8.0	5
82	Synthesis of triarylamine-based alternating copolymers for polymeric solar cell. Polymer, 2014, 55, 4837-4845.	3.8	4
83	Naphthalene-diimide-incorporated conjugated polyelectrolyte interfacial modifier for the efficient inverted-type polymer solar cells. Journal of Information Display, 2016, 17, 17-24.	4.0	3
84	Synthesis and Characterization of an Anthracene-Based Low Band Gap Polymer for Photovoltaic Devices. Journal of Nanoscience and Nanotechnology, 2014, 14, 6422-6426.	0.9	2
85	Modulation of Charge Density of Cationic Conjugated Polyelectrolytes for Improving the FRETâ€Induced Sensory Signal with Enhanced On/Off Ratio. Macromolecular Chemistry and Physics, 2016, 217, 459-466.	2.2	2
86	Fluorene-Based Conjugated Polyelectrolytes as Interlayers for Organic Photovoltaic Cells. Journal of Nanoscience and Nanotechnology, 2017, 17, 5601-5605.	0.9	2
87	Ternary Organic Solar Cells: Performance Optimization of Parallelâ€Like Ternary Organic Solar Cells through Simultaneous Improvement in Charge Generation and Transport (Adv. Funct. Mater. 14/2019). Advanced Functional Materials, 2019, 29, 1970093.	14.9	0