Jaewon Lee

List of Publications by Year in descending order

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51 papers	3,190 citations	196777 29 h-index	214428 50 g-index
54 all docs	54 docs citations	54 times ranked	3809 citing authors

#	Article	IF	Citations
1	Intrachain Delocalization Effect of Charge Carriers on the Charge-Transfer State Dynamics in Organic Solar Cells. Journal of Physical Chemistry C, 2022, 126, 3171-3179.	1.5	10
2	Highly transparent antireflection coatings on fullerene-free organic solar cells using polymeric nanoparticles. Thin Solid Films, 2022, 742, 139043.	0.8	5
3	Design of Nonfused Nonfullerene Acceptors Based on Pyrido- or Benzothiadiazole Cores for Organic Solar Cells. ACS Applied Energy Materials, 2022, 5, 2202-2210.	2.5	14
4	A Simple Approach for Unraveling Optoelectronic Processes in Organic Solar Cells under Shortâ€Circuit Conditions. Advanced Energy Materials, 2021, 11, 2002760.	10.2	32
5	Temperature and Light Modulated Openâ€Circuit Voltage in Nonfullerene Organic Solar Cells with Different Effective Bandgaps. Advanced Energy Materials, 2021, 11, 2003091.	10.2	23
6	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
7	Effect of Palladiumâ€Tetrakis(Triphenylphosphine) Catalyst Traces on Charge Recombination and Extraction in Nonâ€Fulleneâ€based Organic Solar Cells. Advanced Functional Materials, 2021, 31, 2009363.	7.8	27
8	Microwave-Assisted Synthesis of Non-Fullerene Acceptors and Their Photovoltaic Studies for High-Performance Organic Solar Cells. ACS Applied Energy Materials, 2021, 4, 9816-9826.	2.5	3
9	The role of charge recombination to triplet excitons in organic solar cells. Nature, 2021, 597, 666-671.	13.7	225
10	Understanding and Countering Illumination-Sensitive Dark Current: Toward Organic Photodetectors with Reliable High Detectivity. ACS Nano, 2021, 15, 1753-1763.	7.3	52
11	A Highâ€Performance Solutionâ€Processed Organic Photodetector for Nearâ€Infrared Sensing. Advanced Materials, 2020, 32, e1906027.	11.1	270
12	Difluorinated Oligothiophenes for Highâ€Efficiency Allâ€Smallâ€Molecule Organic Solar Cells: Positional Isomeric Effect of Fluorine Substitution on Performance Variations. Solar Rrl, 2020, 4, 1900472.	3.1	11
13	Large-gain low-voltage and wideband organic photodetectorsviaunbalanced charge transport. Materials Horizons, 2020, 7, 3234-3241.	6.4	29
14	A Narrowâ€Bandgap nâ€Type Polymer with an Acceptorâ€“Acceptor Backbone Enabling Efficient Allâ€Polymer Solar Cells. Advanced Materials, 2020, 32, e2004183.	11.1	184
15	Revealing the structural effects of non-fullerene acceptors on the performances of ternary organic photovoltaics under indoor light conditions. Nano Energy, 2020, 75, 104934.	8.2	30
16	Unifying Charge Generation, Recombination, and Extraction in Lowâ€Offset Nonâ€Fullerene Acceptor Organic Solar Cells. Advanced Energy Materials, 2020, 10, 2001203.	10.2	74
17	Bandgap Tailored Nonfullerene Acceptors for Low-Energy-Loss Near-Infrared Organic Photovoltaics. , 2020, 2, 395-402.		37
18	Design of narrow bandgap non-fullerene acceptors for photovoltaic applications and investigation of non-geminate recombination dynamics. Journal of Materials Chemistry C, 2020, 8, 15175-15182.	2.7	50

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19	Competitive role between conformational lock and steric hindrance in D-A copolymers containing 1,4-bis(thieno[3,2-b]thiophen-2-yl)benzene unit. Dyes and Pigments, 2020, 181, 108540.	2.0	1
20	Quantifying the Nongeminate Recombination Dynamics in Nonfullerene Bulk Heterojunction Organic Solar Cells. Advanced Energy Materials, 2019, 9, 1901438.	10.2	115
21	Hall of Fame Article: Solution-Processed Semitransparent Organic Photovoltaics: From Molecular Design to Device Performance (Adv. Mater. 30/2019). Advanced Materials, 2019, 31, 1970219.	11.1	21
22	Solutionâ€Processed Semitransparent Organic Photovoltaics: From Molecular Design to Device Performance. Advanced Materials, 2019, 31, e1900904.	11.1	168
23	Side-Chain Engineering of Nonfullerene Acceptors for Near-Infrared Organic Photodetectors and Photovoltaics. ACS Energy Letters, 2019, 4, 1401-1409.	8.8	182
24	Unraveling the efficiency-limiting morphological issues of the perylene diimide-based non-fullerene organic solar cells. Scientific Reports, 2018, 8, 2849.	1.6	25
25	Bandgap Narrowing in Nonâ€Fullerene Acceptors: Single Atom Substitution Leads to High Optoelectronic Response Beyond 1000 nm. Advanced Energy Materials, 2018, 8, 1801212.	10.2	125
26	Nonfullerene/Fullerene Acceptor Blend with a Tunable Energy State for High-Performance Ternary Organic Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 25570-25579.	4.0	27
27	Design of Nonfullerene Acceptors with Nearâ€Infrared Light Absorption Capabilities. Advanced Energy Materials, 2018, 8, 1801209.	10.2	95
28	Synergistic effects of an alkylthieno[3,2-b]thiophene Ï€-bridging backbone extension on the photovoltaic performances of donorâ€“acceptor copolymers. Journal of Materials Chemistry A, 2017, 5, 10269-10279.	5.2	23
29	Positional effects of fluorination in conjugated side chains on photovoltaic properties of donorâ€“acceptor copolymers. Chemical Communications, 2017, 53, 1176-1179.	2.2	36
30	Excitation Intensity Dependent Carrier Dynamics of Chalcogen Heteroatoms in Medium-Bandgap Polymer Solar Cells. Scientific Reports, 2017, 7, 836.	1.6	5
31	Impact of side-chain fluorination on photovoltaic properties: fine tuning of the microstructure and energy levels of 2D-conjugated copolymers. Journal of Materials Chemistry A, 2017, 5, 16702-16711.	5.2	20
32	Control of the molecular geometry and nanoscale morphology in perylene diimide based bulk heterojunctions enables an efficient non-fullerene organic solar cell. Journal of Materials Chemistry A, 2017, 5, 210-220.	5.2	78
33	Highly crystalline low-bandgap polymer nanowires towards high-performance thick-film organic solar cells exceeding 10% power conversion efficiency. Energy and Environmental Science, 2017, 10, 247-257.	15.6	131
34	Medium-Bandgap Conjugated Polymers Containing Fused Dithienobenzochalcogenadiazoles: Chalcogen Atom Effects on Organic Photovoltaics. Macromolecules, 2016, 49, 9358-9370.	2.2	40
35	A Nonfullerene Small Molecule Acceptor with 3D Interlocking Geometry Enabling Efficient Organic Solar Cells. Advanced Materials, 2016, 28, 69-76.	11.1	205
36	Propeller-shaped small molecule acceptors containing a 9,9â€²-spirobifluorene core with imide-linked perylene diimides for non-fullerene organic solar cells. Journal of Materials Chemistry C, 2016, 4, 10610-10615.	2.7	30

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37	Critical factors governing vertical phase separation in polymerâ€“PCBM blend films for organic solar cells. Journal of Materials Chemistry A, 2016, 4, 15522-15535.	5.2	64
38	Organic Solar Cells: Carrierâ€Selectivityâ€Dependent Charge Recombination Dynamics in Organic Photovoltaic Cells with a Ferroelectric Blend Interlayer (Adv. Energy Mater. 19/2015). Advanced Energy Materials, 2015, 5, .	10.2	0
39	Carrierâ€Selectivityâ€Dependent Charge Recombination Dynamics in Organic Photovoltaic Cells with a Ferroelectric Blend Interlayer. Advanced Energy Materials, 2015, 5, 1500802.	10.2	23
40	Effects of conformational symmetry in conjugated side chains on intermolecular packing of conjugated polymers and photovoltaic properties. RSC Advances, 2015, 5, 106044-106052.	1.7	11
41	Synthetic Tailoring of Solid-State Order in Diketopyrrolopyrrole-Based Copolymers via Intramolecular Noncovalent Interactions. Chemistry of Materials, 2015, 27, 829-838.	3.2	125
42	Two-Dimensionally Extended Ï€-Conjugation of Donorâ€“Acceptor Copolymers via Oligothienyl Side Chains for Efficient Polymer Solar Cells. Macromolecules, 2015, 48, 1723-1735.	2.2	69
43	Energy Level Engineering of Donor Polymers via Inductive and Resonance Effects for Polymer Solar Cells: Effects of Cyano and Alkoxy Substituents. Chemistry of Materials, 2015, 27, 6858-6868.	3.2	32
44	Naphthodithiophene-Based Conjugated Polymer with Linear, Planar Backbone Conformation and Strong Intermolecular Packing for Efficient Organic Solar Cells. ACS Applied Materials & Interfaces, 2015, 7, 21159-21169.	4.0	43
45	Solar Cells: Donor-Acceptor Alternating Copolymer Nanowires for Highly Efficient Organic Solar Cells (Adv. Mater. 39/2014). Advanced Materials, 2014, 26, 6662-6662.	11.1	2
46	Polymer Solar Cells: Side-Chain Engineering for Fine-Tuning of Energy Levels and Nanoscale Morphology in Polymer Solar Cells (Adv. Energy Mater. 10/2014). Advanced Energy Materials, 2014, 4, n/a-n/a.	10.2	2
47	Sideâ€Chain Engineering for Fineâ€Tuning of Energy Levels and Nanoscale Morphology in Polymer Solar Cells. Advanced Energy Materials, 2014, 4, 1400087.	10.2	67
48	Donorâ€“Acceptor Alternating Copolymer Nanowires for Highly Efficient Organic Solar Cells. Advanced Materials, 2014, 26, 6706-6714.	11.1	68
49	A Novel Thermally Reversible Solubleâ€Insoluble Conjugated Polymer with Semiâ€Fluorinated Alkyl Chains: Enhanced Transistor Performance by Fluorophobic Selfâ€Organization and Orthogonal Hydrophobic Patterning. Advanced Materials, 2013, 25, 6416-6422.	11.1	34
50	Synthesis and photovoltaic properties of benzo[1,2-b:4,5-bâ€²]dithiophene derivative-based polymers with deep HOMO levels. Journal of Materials Chemistry, 2012, 22, 17709.	6.7	31
51	Structureâ€“property relationships of diketopyrrolopyrrole- and thienoacene-based Aâ€“Dâ€“A type hole transport materials for efficient perovskite solar cells. New Journal of Chemistry, 0, , .	1.4	0