

Jaewon Lee

List of Publications by Year in descending order

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51
papers

3,190
citations

172443

29
h-index

189881

50
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54
all docs

54
docs citations

54
times ranked

3262
citing authors

#	ARTICLE	IF	CITATIONS
1	A High-Performance Solution-Processed Organic Photodetector for Near-Infrared Sensing. <i>Advanced Materials</i> , 2020, 32, e1906027.	21.0	270
2	The role of charge recombination to triplet excitons in organic solar cells. <i>Nature</i> , 2021, 597, 666-671.	27.8	225
3	A Nonfullerene Small Molecule Acceptor with 3D Interlocking Geometry Enabling Efficient Organic Solar Cells. <i>Advanced Materials</i> , 2016, 28, 69-76.	21.0	205
4	A Narrow-Bandgap n-Type Polymer with an Acceptor-Backbone Enabling Efficient All-Polymer Solar Cells. <i>Advanced Materials</i> , 2020, 32, e2004183.	21.0	184
5	Side-Chain Engineering of Nonfullerene Acceptors for Near-Infrared Organic Photodetectors and Photovoltaics. <i>ACS Energy Letters</i> , 2019, 4, 1401-1409.	17.4	182
6	Additive-induced miscibility regulation and hierarchical morphology enable 17.5% binary organic solar cells. <i>Energy and Environmental Science</i> , 2021, 14, 3044-3052.	30.8	170
7	Solution-Processed Semitransparent Organic Photovoltaics: From Molecular Design to Device Performance. <i>Advanced Materials</i> , 2019, 31, e1900904.	21.0	168
8	Highly crystalline low-bandgap polymer nanowires towards high-performance thick-film organic solar cells exceeding 10% power conversion efficiency. <i>Energy and Environmental Science</i> , 2017, 10, 247-257.	30.8	131
9	Synthetic Tailoring of Solid-State Order in Diketopyrrolopyrrole-Based Copolymers via Intramolecular Noncovalent Interactions. <i>Chemistry of Materials</i> , 2015, 27, 829-838.	6.7	125
10	Bandgap Narrowing in Non-Fullerene Acceptors: Single Atom Substitution Leads to High Optoelectronic Response Beyond 1000 nm. <i>Advanced Energy Materials</i> , 2018, 8, 1801212.	19.5	125
11	Quantifying the Nongeminate Recombination Dynamics in Nonfullerene Bulk Heterojunction Organic Solar Cells. <i>Advanced Energy Materials</i> , 2019, 9, 1901438.	19.5	115
12	Design of Nonfullerene Acceptors with Near-Infrared Light Absorption Capabilities. <i>Advanced Energy Materials</i> , 2018, 8, 1801209.	19.5	95
13	Control of the molecular geometry and nanoscale morphology in perylene diimide based bulk heterojunctions enables an efficient non-fullerene organic solar cell. <i>Journal of Materials Chemistry A</i> , 2017, 5, 210-220.	10.3	78
14	Unifying Charge Generation, Recombination, and Extraction in Low-Offset Non-Fullerene Acceptor Organic Solar Cells. <i>Advanced Energy Materials</i> , 2020, 10, 2001203.	19.5	74
15	Two-Dimensionally Extended π -Conjugation of Donor-Acceptor Copolymers via Oligothieryl Side Chains for Efficient Polymer Solar Cells. <i>Macromolecules</i> , 2015, 48, 1723-1735.	4.8	69
16	Donor-Acceptor Alternating Copolymer Nanowires for Highly Efficient Organic Solar Cells. <i>Advanced Materials</i> , 2014, 26, 6706-6714.	21.0	68
17	Side-Chain Engineering for Fine-Tuning of Energy Levels and Nanoscale Morphology in Polymer Solar Cells. <i>Advanced Energy Materials</i> , 2014, 4, 1400087.	19.5	67
18	Critical factors governing vertical phase separation in polymer-PCBM blend films for organic solar cells. <i>Journal of Materials Chemistry A</i> , 2016, 4, 15522-15535.	10.3	64

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19	Understanding and Countering Illumination-Sensitive Dark Current: Toward Organic Photodetectors with Reliable High Detectivity. <i>ACS Nano</i> , 2021, 15, 1753-1763.	14.6	52
20	Design of narrow bandgap non-fullerene acceptors for photovoltaic applications and investigation of non-geminate recombination dynamics. <i>Journal of Materials Chemistry C</i> , 2020, 8, 15175-15182.	5.5	50
21	Naphthodithiophene-Based Conjugated Polymer with Linear, Planar Backbone Conformation and Strong Intermolecular Packing for Efficient Organic Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 21159-21169.	8.0	43
22	Medium-Bandgap Conjugated Polymers Containing Fused Dithienobenzochalcogenadiazoles: Chalcogen Atom Effects on Organic Photovoltaics. <i>Macromolecules</i> , 2016, 49, 9358-9370.	4.8	40
23	Bandgap Tailored Nonfullerene Acceptors for Low-Energy-Loss Near-Infrared Organic Photovoltaics. , 2020, 2, 395-402.		37
24	Positional effects of fluorination in conjugated side chains on photovoltaic properties of donor-acceptor copolymers. <i>Chemical Communications</i> , 2017, 53, 1176-1179.	4.1	36
25	A Novel Thermally Reversible Soluble-Insoluble Conjugated Polymer with Semi-Fluorinated Alkyl Chains: Enhanced Transistor Performance by Fluorophobic Self-Organization and Orthogonal Hydrophobic Patterning. <i>Advanced Materials</i> , 2013, 25, 6416-6422.	21.0	34
26	Energy Level Engineering of Donor Polymers via Inductive and Resonance Effects for Polymer Solar Cells: Effects of Cyano and Alkoxy Substituents. <i>Chemistry of Materials</i> , 2015, 27, 6858-6868.	6.7	32
27	A Simple Approach for Unraveling Optoelectronic Processes in Organic Solar Cells under Short-Circuit Conditions. <i>Advanced Energy Materials</i> , 2021, 11, 2002760.	19.5	32
28	Synthesis and photovoltaic properties of benzo[1,2-b:4,5-b']dithiophene derivative-based polymers with deep HOMO levels. <i>Journal of Materials Chemistry</i> , 2012, 22, 17709.	6.7	31
29	Propeller-shaped small molecule acceptors containing a 9,9-spirobifluorene core with imide-linked perylene diimides for non-fullerene organic solar cells. <i>Journal of Materials Chemistry C</i> , 2016, 4, 10610-10615.	5.5	30
30	Revealing the structural effects of non-fullerene acceptors on the performances of ternary organic photovoltaics under indoor light conditions. <i>Nano Energy</i> , 2020, 75, 104934.	16.0	30
31	Large-gain low-voltage and wideband organic photodetectors via unbalanced charge transport. <i>Materials Horizons</i> , 2020, 7, 3234-3241.	12.2	29
32	Nonfullerene/Fullerene Acceptor Blend with a Tunable Energy State for High-Performance Ternary Organic Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 25570-25579.	8.0	27
33	Effect of Palladium-Tetrakis(Triphenylphosphine) Catalyst Traces on Charge Recombination and Extraction in Non-Fullerene-based Organic Solar Cells. <i>Advanced Functional Materials</i> , 2021, 31, 2009363.	14.9	27
34	Unraveling the efficiency-limiting morphological issues of the perylene diimide-based non-fullerene organic solar cells. <i>Scientific Reports</i> , 2018, 8, 2849.	3.3	25
35	Carrier-Selectivity-Dependent Charge Recombination Dynamics in Organic Photovoltaic Cells with a Ferroelectric Blend Interlayer. <i>Advanced Energy Materials</i> , 2015, 5, 1500802.	19.5	23
36	Synergistic effects of an alkylthieno[3,2-b]thiophene-bridging backbone extension on the photovoltaic performances of donor-acceptor copolymers. <i>Journal of Materials Chemistry A</i> , 2017, 5, 10269-10279.	10.3	23

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37	Temperature and Light Modulated Open-Circuit Voltage in Nonfullerene Organic Solar Cells with Different Effective Bandgaps. <i>Advanced Energy Materials</i> , 2021, 11, 2003091.	19.5	23
38	Hall of Fame Article: Solution-Processed Semitransparent Organic Photovoltaics: From Molecular Design to Device Performance (<i>Adv. Mater.</i> 30/2019). <i>Advanced Materials</i> , 2019, 31, 1970219.	21.0	21
39	Impact of side-chain fluorination on photovoltaic properties: fine tuning of the microstructure and energy levels of 2D-conjugated copolymers. <i>Journal of Materials Chemistry A</i> , 2017, 5, 16702-16711.	10.3	20
40	Design of Nonfused Nonfullerene Acceptors Based on Pyrido- or Benzothiadiazole Cores for Organic Solar Cells. <i>ACS Applied Energy Materials</i> , 2022, 5, 2202-2210.	5.1	14
41	Effects of conformational symmetry in conjugated side chains on intermolecular packing of conjugated polymers and photovoltaic properties. <i>RSC Advances</i> , 2015, 5, 106044-106052.	3.6	11
42	Difluorinated Oligothiophenes for High-Efficiency All-Small-Molecule Organic Solar Cells: Positional Isomeric Effect of Fluorine Substitution on Performance Variations. <i>Solar Rrl</i> , 2020, 4, 1900472.	5.8	11
43	Intrachain Delocalization Effect of Charge Carriers on the Charge-Transfer State Dynamics in Organic Solar Cells. <i>Journal of Physical Chemistry C</i> , 2022, 126, 3171-3179.	3.1	10
44	Excitation Intensity Dependent Carrier Dynamics of Chalcogen Heteroatoms in Medium-Bandgap Polymer Solar Cells. <i>Scientific Reports</i> , 2017, 7, 836.	3.3	5
45	Highly transparent antireflection coatings on fullerene-free organic solar cells using polymeric nanoparticles. <i>Thin Solid Films</i> , 2022, 742, 139043.	1.8	5
46	Microwave-Assisted Synthesis of Non-Fullerene Acceptors and Their Photovoltaic Studies for High-Performance Organic Solar Cells. <i>ACS Applied Energy Materials</i> , 2021, 4, 9816-9826.	5.1	3
47	Solar Cells: Donor-Acceptor Alternating Copolymer Nanowires for Highly Efficient Organic Solar Cells (<i>Adv. Mater.</i> 39/2014). <i>Advanced Materials</i> , 2014, 26, 6662-6662.	21.0	2
48	Polymer Solar Cells: Side-Chain Engineering for Fine-Tuning of Energy Levels and Nanoscale Morphology in Polymer Solar Cells (<i>Adv. Energy Mater.</i> 10/2014). <i>Advanced Energy Materials</i> , 2014, 4, n/a-n/a.	19.5	2
49	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. <i>Dyes and Pigments</i> , 2020, 181, 108540.	3.7	1
50	Organic Solar Cells: Carrier-Selectivity-Dependent Charge Recombination Dynamics in Organic Photovoltaic Cells with a Ferroelectric Blend Interlayer (<i>Adv. Energy Mater.</i> 19/2015). <i>Advanced Energy Materials</i> , 2015, 5, .	19.5	0
51	Structure-property relationships of diketopyrrolopyrrole- and thienoacene-based A-A type hole transport materials for efficient perovskite solar cells. <i>New Journal of Chemistry</i> , 0, , .	2.8	0