

Hyojung Cha

List of Publications by Year in descending order

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65
papers

2,558
citations

218677

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197818

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docs citations

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times ranked

3563
citing authors

#	ARTICLE	IF	CITATIONS
1	Oligoethylene Glycol Side Chains Increase Charge Generation in Organic Semiconductor Nanoparticles for Enhanced Photocatalytic Hydrogen Evolution. <i>Advanced Materials</i> , 2022, 34, e2105007.	21.0	33
2	A Comparison of Charge Carrier Dynamics in Organic and Perovskite Solar Cells. <i>Advanced Materials</i> , 2022, 34, e2101833.	21.0	55
3	Reconciling models of interfacial state kinetics and device performance in organic solar cells: impact of the energy offsets on the power conversion efficiency. <i>Energy and Environmental Science</i> , 2022, 15, 1256-1270.	30.8	21
4	Covalent Networking of a Conjugated Polymer Photocatalyst to Promote Exciton Diffusion in the Aqueous Phase for Efficient Hydrogen Production. <i>Small Methods</i> , 2022, 6, e2200010.	8.6	4
5	Identifying the Molecular Origins of High-Performance in Organic Photodetectors Based on Highly Intermixed Bulk Heterojunction Blends. <i>ACS Nano</i> , 2021, 15, 1217-1228.	14.6	19
6	Organic cathode interfacial materials for non-fullerene organic solar cells. <i>Journal of Materials Chemistry A</i> , 2021, 9, 13506-13514.	10.3	21
7	Correlating Charge-Transfer State Lifetimes with Material Energetics in Polymer:Non-Fullerene Acceptor Organic Solar Cells. <i>Journal of the American Chemical Society</i> , 2021, 143, 7599-7603.	13.7	59
8	Enhancing Light Absorption and Prolonging Charge Separation in Carbon Quantum Dots via Cl-Doping for Visible-Light-Driven Photocharge-Transfer Reactions. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 34648-34657.	8.0	39
9	Non-fullerene acceptor photostability and its impact on organic solar cell lifetime. <i>Cell Reports Physical Science</i> , 2021, 2, 100498.	5.6	35
10	Organic Solar Cells: Exciton and Charge Carrier Dynamics in Highly Crystalline PTQ10:IDIC Organic Solar Cells (<i>Adv. Energy Mater.</i> 38/2020). <i>Advanced Energy Materials</i> , 2020, 10, 2070158.	19.5	2
11	Exciton and Charge Carrier Dynamics in Highly Crystalline PTQ10:IDIC Organic Solar Cells. <i>Advanced Energy Materials</i> , 2020, 10, 2001149.	19.5	40
12	Effects of Bulk Heterojunction Morphology Control via Thermal Annealing on the Fill Factor of Anthracene-based Polymer Solar Cells. <i>Macromolecular Research</i> , 2020, 28, 820-825.	2.4	12
13	Covalent grafting of molecular catalysts on $C_{30}N_{10}H_{20}$ as robust, efficient and well-defined photocatalysts for solar fuel synthesis. <i>Chemical Science</i> , 2020, 11, 8425-8432.	7.4	14
14	Tracking Charge Transfer to Residual Metal Clusters in Conjugated Polymers for Photocatalytic Hydrogen Evolution. <i>Journal of the American Chemical Society</i> , 2020, 142, 14574-14587.	13.7	118
15	Efficient and photostable ternary organic solar cells with a narrow band gap non-fullerene acceptor and fullerene additive. <i>Journal of Materials Chemistry A</i> , 2020, 8, 6682-6691.	10.3	37
16	Exceptionally low charge trapping enables highly efficient organic bulk heterojunction solar cells. <i>Energy and Environmental Science</i> , 2020, 13, 2422-2430.	30.8	152
17	Toward Visibly Transparent Organic Photovoltaic Cells Based on a Near-Infrared Harvesting Bulk Heterojunction Blend. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 32764-32770.	8.0	40
18	Enhanced photocatalytic hydrogen evolution from organic semiconductor heterojunction nanoparticles. <i>Nature Materials</i> , 2020, 19, 559-565.	27.5	366

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19	Tail state limited photocurrent collection of thick photoactive layers in organic solar cells. <i>Nature Communications</i> , 2019, 10, 5159.	12.8	65
20	Acene-Modified Small-Molecule Donors for Organic Photovoltaics. <i>Chemistry - A European Journal</i> , 2019, 25, 12233-12233.	3.3	0
21	Acene-Modified Small-Molecule Donors for Organic Photovoltaics. <i>Chemistry - A European Journal</i> , 2019, 25, 12316-12324.	3.3	5
22	Suppression of Recombination Losses in Polymer:Nonfullerene Acceptor Organic Solar Cells due to Aggregation Dependence of Acceptor Electron Affinity. <i>Advanced Energy Materials</i> , 2019, 9, 1901254.	19.5	54
23	Dithieno[3,2- <i>b</i> :2',3'- <i>d</i>]arsole-containing conjugated polymers in organic photovoltaic devices. <i>Dalton Transactions</i> , 2019, 48, 6676-6679.	3.3	13
24	Toward Improved Environmental Stability of Polymer:Fullerene and Polymer:Nonfullerene Organic Solar Cells: A Common Energetic Origin of Light- and Oxygen-Induced Degradation. <i>ACS Energy Letters</i> , 2019, 4, 846-852.	17.4	71
25	The binding energy and dynamics of charge-transfer states in organic photovoltaics with low driving force for charge separation. <i>Journal of Chemical Physics</i> , 2019, 150, 104704.	3.0	32
26	Morphology Driven by Molecular Structure of Thiazole-Based Polymers for Use in Field-Effect Transistors and Solar Cells. <i>Chemistry - A European Journal</i> , 2019, 25, 649-656.	3.3	9
27	Ambipolar charge transport of diketopyrrolepyrrole-silole-based copolymers and effect of side chain engineering: Compact model parameter extraction strategy for high-voltage logic applications. <i>Organic Electronics</i> , 2018, 54, 1-8.	2.6	6
28	An Analysis of the Factors Determining the Efficiency of Photocurrent Generation in Polymer:Nonfullerene Acceptor Solar Cells. <i>Advanced Energy Materials</i> , 2018, 8, 1801537.	19.5	22
29	Influence of Blend Morphology and Energetics on Charge Separation and Recombination Dynamics in Organic Solar Cells Incorporating a Nonfullerene Acceptor. <i>Advanced Functional Materials</i> , 2018, 28, 1704389.	14.9	84
30	Understanding Structure-Property Relationships in All-Small-Molecule Solar Cells Incorporating a Fullerene or Nonfullerene Acceptor. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 36037-36046.	8.0	21
31	Rational design of a neutral pH functional and stable organic photocathode. <i>Chemical Communications</i> , 2018, 54, 5732-5735.	4.1	24
32	Ternary blends to achieve well-developed nanoscale morphology in organic bulk heterojunction solar cells. <i>Organic Electronics</i> , 2017, 45, 263-272.	2.6	9
33	All-Small-Molecule Solar Cells Incorporating NDI-Based Acceptors: Synthesis and Full Characterization. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 44667-44677.	8.0	29
34	An Efficient, -Burn in-Free Organic Solar Cell Employing a Nonfullerene Electron Acceptor. <i>Advanced Materials</i> , 2017, 29, 1701156.	21.0	175
35	New dithienophosphole-based donor-acceptor alternating copolymers: Synthesis and structure property relationships in OFET. <i>Dyes and Pigments</i> , 2016, 125, 316-322.	3.7	9
36	Molecular design and ordering effects of alkoxy aromatic donor in a DPP copolymer on OTFTs and OPVs. <i>Materials Chemistry and Physics</i> , 2015, 153, 63-71.	4.0	16

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37	Alkyl Chain Length Dependence of the Field-Effect Mobility in Novel Anthracene Derivatives. ACS Applied Materials & Interfaces, 2015, 7, 351-358.	8.0	80
38	Solvent boiling point affects the crystalline properties and performances of anthradithiophene-based devices. Dyes and Pigments, 2015, 114, 60-68.	3.7	11
39	Novel alkoxyanthracene donor and benzothiadiazole acceptor for organic thin film transistor and bulk heterojunction organic photovoltaic cells. Journal of Polymer Science Part A, 2014, 52, 1306-1314.	2.3	12
40	Amorphous Thieno[3,2- <i>b</i>]thiophene and Benzothiadiazole Based Copolymers for Organic Photovoltaics. ACS Applied Materials & Interfaces, 2014, 6, 20510-20518.	8.0	18
41	Development of bulk heterojunction morphology by the difference of intermolecular interaction behaviors. Organic Electronics, 2014, 15, 3558-3567.	2.6	8
42	A composite of a graphene oxide derivative as a novel sensing layer in an organic field-effect transistor. Journal of Materials Chemistry C, 2014, 2, 4539-4544.	5.5	32
43	Synthesis of triarylamine-based alternating copolymers for polymeric solar cell. Polymer, 2014, 55, 4837-4845.	3.8	4
44	Synthesis and characterization of an ester-terminated organic semiconductor for ethanol vapor detection. Organic Electronics, 2014, 15, 2277-2284.	2.6	6
45	Effects of Cyano-Substituents on the Molecular Packing Structures of Conjugated Polymers for Bulk-Heterojunction Solar Cells. ACS Applied Materials & Interfaces, 2014, 6, 15774-15782.	8.0	33
46	Synthesis and Transistor Properties of Asymmetric Oligothiophenes: Relationship between Molecular Structure and Device Performance. Chemistry - A European Journal, 2013, 19, 14052-14060.	3.3	39
47	Simultaneously Grasping and Self-Organizing Photoactive Polymers for Highly Reproducible Organic Solar Cells with Improved Efficiency. Advanced Energy Materials, 2013, 3, 1018-1024.	19.5	21
48	Molecular aggregation-performance relationship in the design of novel cyclohexylethynyl end-capped quaterthiophenes for solution-processed organic transistors. Dyes and Pigments, 2013, 96, 756-762.	3.7	21
49	Complementary Absorbing Star-Shaped Small Molecules for the Preparation of Ternary Cascade Energy Structures in Organic Photovoltaic Cells. Advanced Functional Materials, 2013, 23, 1556-1565.	14.9	138
50	Low-bandgap quinoxaline-based Di-A-type copolymers: Synthesis, characterization, and photovoltaic properties. Journal of Polymer Science Part A, 2013, 51, 372-382.	2.3	19
51	Synthesis and characterization of poly(dialkylterthiophene-bithiophene) and poly(dialkylterthiophene-thienothiophene) for organic thin film transistors and organic photovoltaic cells. Synthetic Metals, 2013, 185-186, 159-166.	3.9	7
52	Synthesis and characterization of naphtho[2,1-b:3,4-b']dithiophene-based polymers with extended π -conjugation systems for use in bulk heterojunction polymer solar cells. Journal of Polymer Science Part A, 2013, 51, 4742-4751.	2.3	13
53	Solvent Additive to Achieve Highly Ordered Nanostructural Semicrystalline DPP Copolymers: Toward a High Charge Carrier Mobility. Advanced Materials, 2013, 25, 7003-7009.	21.0	71
54	Thin Film Morphology Control via a Mixed Solvent System for High-Performance Organic Thin Film Transistors. Science of Advanced Materials, 2013, 5, 1323-1327.	0.7	19

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55	A side chain-modified quaterthiophene derivative for enhancing the performance of organic solar cell devices. <i>Journal of Materials Chemistry</i> , 2012, 22, 15141.	6.7	14
56	Effects of direct solvent exposure on the nanoscale morphologies and electrical characteristics of PCBM-based transistors and photovoltaics. <i>Journal of Materials Chemistry</i> , 2012, 22, 5543.	6.7	79
57	3,6-Carbazole Incorporated into Poly[9,9-dioctylfluorene- <i>alt</i> -(bisthieryl)benzothiadiazole]s Improving the Power Conversion Efficiency. <i>Macromolecules</i> , 2012, 45, 3004-3009.	4.8	41
58	Photopatternable, highly conductive and low work function polymer electrodes for high-performance n-type bottom contact organic transistors. <i>Organic Electronics</i> , 2011, 12, 516-519.	2.6	24
59	Thermally stable organic bulk heterojunction photovoltaic cells incorporating an amorphous fullerene derivative as an electron acceptor. <i>Solar Energy Materials and Solar Cells</i> , 2011, 95, 432-439.	6.2	22
60	Efficient polymer solar cells based on dialkoxynaphthalene and benzo[c][1,2,5]thiadiazole: A new approach for simple donor-acceptor pair. <i>Solar Energy Materials and Solar Cells</i> , 2011, 95, 1678-1685.	6.2	17
61	Solution-Processed Organic Photovoltaic Cells with Anthracene Derivatives. <i>ChemSusChem</i> , 2010, 3, 742-748.	6.8	26
62	Effects of selenophene substitution on the mobility and photovoltaic efficiency of polyquaterthiophene-based organic solar cells. <i>Organic Electronics</i> , 2010, 11, 899-904.	2.6	38
63	Thermally stable amorphous polymeric semiconductors containing fluorene and thiophene for use in organic photovoltaic cells. <i>Organic Electronics</i> , 2010, 11, 1534-1542.	2.6	14
64	Improved n-type bottom-contact organic transistors by introducing a poly(3,4-ethylenedioxythiophene):poly(4-styrene sulfonate) coating on the source/drain electrodes. <i>Applied Physics Letters</i> , 2010, 97, 103304.	3.3	20
65	Synthesis and characterization of polythiophene containing side chain electron acceptor for OPV. <i>Molecular Crystals and Liquid Crystals</i> , 0, , 1-10.	0.9	0