Doo Kyung Moon

List of Publications by Year
in descending order

101	1,927	279798	361022
papers	citations	23 h-index	35 g-index

104	104	104	2176
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Design Principles and Synergistic Effects of Chlorination on a Conjugated Backbone for Efficient Organic Photovoltaics: A Critical Review. Advanced Materials, 2020, 32, e1906175.	21.0	168
2	Latest Progress on Photoabsorbent Materials for Multifunctional Semitransparent Organic Solar Cells. Advanced Functional Materials, 2021, 31, 2007931.	14.9	108
3	Evaporationâ€Free Nonfullerene Flexible Organic Solar Cell Modules Manufactured by An Allâ€Solution Process. Advanced Energy Materials, 2019, 9, 1902065.	19.5	94
4	An organicâ€“inorganic hybrid interlayer for improved electron extraction in inverted polymer solar cells. Journal of Materials Chemistry C, 2016, 4, 2463-2469.	5.5	59
5	Synthesis and investigation of photovoltaic properties for polymer semiconductors based on porphyrin compounds as light-harvesting units. European Polymer Journal, 2011, 47, 1686-1693.	5.4	42
6	13.9%â€Efficiency and Ecoâ€Friendly Nonfullerene Polymer Solar Cells Obtained by Balancing Molecular Weight and Solubility in Chlorinated Thiopheneâ€Based Polymer Backbones. Small, 2019, 15, e1902598.	10.0	42
7	Development of DA-type polymers with phthalimide derivatives as electron withdrawing units and a promising strategy for the enhancement of photovoltaic properties. Solar Energy Materials and Solar Cells, 2011, 95, 3377-3384.	6.2	34
8	A flexible piezoelectric nanogenerator using conducting polymer and silver nanowire hybrid electrodes for its application in real-time muscular monitoring system. Sensors and Actuators A: Physical, 2019, 299, 111575.	4.1	32
9	13.2% Efficiency of Organic Solar Cells by Controlling Interfacial Resistance Resulting from Well-Distributed Vertical Phase Separation. ACS Applied Energy Materials, 2020, 3, 3745-3754.	5.1	32
10	Chlorine Effects of Heterocyclic Ringâ€Based Donor Polymer for Lowâ€Cost and Highâ€Performance Nonfullerene Polymer Solar Cells. Solar Rrl, 2019, 3, 1900094.	5.8	31
11	Enhanced performance in inverted polymer solar cells via solution process: Morphology controlling of PEDOT:PSS as anode buffer layer by adding surfactants. Organic Electronics, 2013, 14, 1629-1635.	2.6	29
12	Correlation of intramolecular charge transfer and orientation properties among quinacridone and acceptor units. Solar Energy Materials and Solar Cells, 2014, 123, 112-121.	6.2	28
13	Synthesis and characterization of nanofiber-type hydrophobic organic materials as electrodes for improved performance of PVDF-based piezoelectric nanogenerators. Nano Energy, 2019, 58, 11-22.	16.0	28
14	Synthesis and photovoltaic property of donorâ€“acceptor type conjugated polymer containing carbazole and 4,7-dithiazolylbenzothiadiazole moiety utilized as a promising electron withdrawing unit. Synthetic Metals, 2011, 161, 2434-2440.	3.9	27
15	A 3â€Fluoroâ€4â€hexylthiopheneâ€Based Wide Bandgap Donor Polymer for 10.9% Efficiency Ecoâ€Friendly Nonfullerene Organic Solar Cells. Small, 2019, 15, e1805321.	10.0	27
16	Enhanced performance in polymer light emitting diodes using an indiumâ€“zincâ€“tin oxide transparent anode by the controlling of oxygen partial pressure at room temperature. Journal of Materials Chemistry C, 2013, 1, 7009.	5.5	26
17	Synthesis of Donorâ€“Acceptor polymers through control of the chemical structure: Improvement of PCE by planar structure of polymer backbones. Polymer, 2013, 54, 1072-1079.	3.8	26
18	Enhanced stability in polymer solar cells by controlling the electrode work function via modification of indium tin oxide. Solar Energy Materials and Solar Cells, 2013, 115, 123-128.	6.2	26

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19	Conjugated polymer consisting of dibenzosilole and quinoxaline as donor materials for organic photovoltaics. European Polymer Journal, 2013, 49, 3261-3270.	5.4	26
20	Drastic Changes in Properties of Donorâ€“Acceptor Polymers Induced by Asymmetric Structural Isomers for Application to Polymer Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 9239-9250.	8.0	26
21	Synthesis and characterization of fluorineâ€“thiophene-based Ï€-conjugated polymers using coupling reaction. Journal of Industrial and Engineering Chemistry, 2008, 14, 810-817.	5.8	25
22	Enhanced carrier mobility and photon-harvesting property by introducing Au nano-particles in bulk heterojunction photovoltaic cells. Organic Electronics, 2013, 14, 1931-1938.	2.6	25
23	Alkylidenefluoreneâ€“isoindigo copolymers with an optimized molecular conformation for spacer manipulation, Ï€â€“Ï€ stacking and their application in efficient photovoltaic devices. Polymer Chemistry, 2015, 6, 2636-2646.	3.9	24
24	Photon energy transfer by quantum dots in organicâ€“inorganic hybrid solar cells through FRET. Journal of Materials Chemistry A, 2016, 4, 10444-10453.	10.3	24
25	Molecular design through computational simulation on the benzo[2,1-b;3,4-bâ€²]dithiophene-based highly ordered donor material for efficient polymer solar cells. Polymer Chemistry, 2017, 8, 2979-2989.	3.9	24
26	Effect of mono alkoxy-carboxylate-functionalized benzothiadiazole-based donor polymers for non-fullerene solar cells. Dyes and Pigments, 2019, 164, 62-71.	3.7	24
27	Polymer solar cells based on quinoxaline and dialkylthienyl substituted benzodithiophene with enhanced open circuit voltage. Journal of Polymer Science Part A, 2014, 52, 1028-1036.	2.3	23
28	An effect on the side chain position of Dâ€“Ï€â€“A-type conjugated polymers with sp2-hybridized orbitals for organic photovoltaics. Polymer Chemistry, 2013, 4, 3225.	3.9	22
29	Controlling the interchain packing and photovoltaic properties via fluorine substitution in terpolymers based on benzo[1,2-c:4,5-c']dithiophene-4,8-dione and benzothiadiazole units. Polymer, 2018, 148, 330-338.	3.8	22
30	Organic Electrolytes Doped ZnO Layer as the Electron Transport Layer for Bulk Heterojunction Polymer Solar Cells. Solar Rrl, 2018, 2, 1800086.	5.8	22
31	A Simple Approach to Fabricate an Efficient Inverted Polymer Solar Cell with a Novel Small Molecular Electrolyte as the Cathode Buffer Layer. ACS Applied Materials & Interfaces, 2016, 8, 32992-32997.	8.0	21
32	Highly efficient Ternary Solar Cells of 10.2% with Core/Shell Quantum Dots via FRET Effect. Solar Rrl, 2018, 2, 1800077.	5.8	21
33	Effects of incorporated pyrazine on the interchain packing and photovoltaic properties of wide-bandgap Dâ€“A polymers for non-fullerene polymer solar cells. Polymer Chemistry, 2019, 10, 4459-4468.	3.9	21
34	Printable and Semitransparent Nonfullerene Organic Solar Modules over 30 cm² Introducing an Energy-Level Controllable Hole Transport Layer. ACS Applied Materials & Interfaces, 2021, 13, 19085-19098.	8.0	21
35	Control of polymer-packing orientation in thin films through chemical structure of D-A type polymers and its application in efficient photovoltaic devices. Polymer, 2015, 74, 205-215.	3.8	20
36	Structural optimization in the same polymer backbones for efficient polymer solar cells: Relationship between steric hindrance and molecular weight. Journal of Industrial and Engineering Chemistry, 2019, 71, 137-149.	5.8	20

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37	Effect of interface modification in polymer solar cells: An in-depth investigation of the structural variation of organic dye for interlayer material. Dyes and Pigments, 2020, 173, 107927.	3.7	20
38	The synthesis and electroluminescent properties of dithienylquinacridone-based copolymers for white light-emitting diodes. Synthetic Metals, 2011, 161, 2451-2459.	3.9	19
39	Emission color tuning of copolymers containing polyfluorene, benzothiadiazole, porphyrin derivatives. European Polymer Journal, 2012, 48, 1485-1494.	5.4	18
40	Fabrication of OPVs by introducing a conductivity-enhanced hybrid buffer layer. Solar Energy Materials and Solar Cells, 2012, 101, 295-302.	6.2	17
41	Effect of replacing proton with alkoxy side chain for donor acceptor type organic photovoltaics. Solar Energy Materials and Solar Cells, 2014, 120, 303-309.	6.2	17
42	Solution-processed pH-neutral conjugated polyelectrolytes with one-atom variation (O, S, Se) as a novel hole-collecting layer in organic photovoltaics. Solar Energy Materials and Solar Cells, 2016, 155, 243-252.	6.2	17
43	Control of molecular curvature and crystallinity of quinacridone-benzoxadiazole copolymers using different Ï€ bridge for polymer solar cells. Polymer, 2016, 91, 162-173.	3.8	17
44	A 2,5-difluoro benzene-based low cost and efficient polymer donor for non-fullerene solar cells. Solar Energy, 2020, 207, 720-728.	6.1	17
45	Investigating the effect of diverse structural variation of conjugated polymer electrolytes as the interlayer on photovoltaic properties. Chemical Engineering Journal, 2021, 420, 129895.	12.7	17
46	Enhanced photocurrent generation by high molecular weight random copolymer consisting of benzothiadiazole and quinoxaline as donor materials. Solar Energy Materials and Solar Cells, 2014, 120, 94-101.	6.2	16
47	Opto-electrical and density functional theory analysis of poly(2,7-carbazole-alt-thieno[3,4-c]pyrrole-4,6-dione) and photovoltaic behaviors of bulk heterojunction structure. Journal of Industrial and Engineering Chemistry, 2014, 20, 290-296.	5.8	16
48	Solution-processed interlayer of discotic-based small molecules for organic photovoltaic devices: Enhancement of both the open-circuit voltage and the fill factor. Dyes and Pigments, 2015, 113, 210-218.	3.7	16
49	Correlation of intermolecular packing distance and crystallinity of D-A polymers according to Ï€-spacer for polymer solar cells. Polymer, 2016, 99, 756-766.	3.8	16
50	Utilizing 3,4-ethylenedioxythiophene (EDOT)-bridged non-fullerene acceptors for efficient organic solar cells. Journal of Energy Chemistry, 2022, 65, 194-204.	12.9	16
51	Effect of conjugated polymer electrolytes with diverse acid derivatives as a cathode buffer layer on photovoltaic properties. Journal of Materials Chemistry A, 2020, 8, 4562-4569.	10.3	16
52	Properties of inverted polymer solar cells based on novel small molecular electrolytes as the cathode buffer layer. Organic Electronics, 2016, 39, 163-167.	2.6	15
53	Vertical Phase Separation for Highly Efficient Organic Solar Cells Incorporating Conjugatedâ€Polyelectrolytes. Advanced Materials Interfaces, 2019, 6, 1801396.	3.7	15
54	Synthesis of Random Copolymers of Pyrrole and Aniline by Chemical Oxidative Polymerization. Molecular Crystals and Liquid Crystals, 2007, 464, 177/[759]-185/[767].	0.9	14

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55	PVDF based flexible piezoelectric nanogenerators using conjugated polymer:PCBM blend systems. Sensors and Actuators A: Physical, 2017, 259, 112-120.	4.1	14
56	Effect on Electrode Work Function by Changing Molecular Geometry of Conjugated Polymer Electrolytes and Application for Hole-Transporting Layer of Organic Optoelectronic Devices. ACS Applied Materials & Interfaces, 2017, 9, 44060-44069.	8.0	14
57	Introduction of co-additives to form well dispersed photoactive layer to improve performance and stability of organic solar cells. Solar Energy, 2019, 185, 1-12.	6.1	14
58	High-Performance Nonfullerene Organic Photovoltaics Applicable for Both Outdoor and Indoor Environments through Directional Photon Energy Transfer. ACS Applied Materials & Interfaces, 2020, 12, 38470-38482.	8.0	14
59	Synthesis and photovoltaic property of polymer semiconductor with phthalimide derivative as a promising electron withdrawing material. European Polymer Journal, 2012, 48, 532-540.	5.4	13
60	Solution-processed interlayer of n-type small molecules for organic photovoltaic devices: Enhancement of the fill factor due to ordered orientation. Solar Energy Materials and Solar Cells, 2015, 141, 232-239.	6.2	13
61	Improvement in Half-Life of Organic Solar Cells by Using a Blended Hole Extraction Layer Consisting of PEDOT:PSS and Conjugated Polymer Electrolyte. ACS Applied Materials & Interfaces, 2016, 8, 31791-31798.	8.0	13
62	Deep HOMO polymers comprising anthracene units for bulk heterojunction solar cells. Journal of Industrial and Engineering Chemistry, 2016, 33, 209-220.	5.8	13
63	Case Study on the Correlation between Crystal Packing and Miscibility of Chlorinated Thiopheneâ€“Based Donor Polymers for Nonfullerene Organic Solar Cells with Long Shelf Life. Solar Rrl, 2020, 4, 2000074.	5.8	13
64	Improved Performance of P3HT:PCBM-Based Solar Cells Using Nematic Liquid Crystals as a Processing Additive under Low Processing Temperature conditions. Macromolecular Materials and Engineering, 2014, 299, 353-360.	3.6	12
65	Effect of side chains on solubility and morphology of poly(benzodithiohene-alt-alkylbithiophene) in organic photovoltaics. Journal of Industrial and Engineering Chemistry, 2015, 29, 120-128.	5.8	12
66	Significant impact of monomer curvatures for polymer curved shape composition on backbone orientation and solar cell performances. Journal of Industrial and Engineering Chemistry, 2018, 65, 195-204.	5.8	12
67	Design and synthesis of the quinacridone-based donor polymers for application to organic solar cells. Journal of Industrial and Engineering Chemistry, 2021, 101, 135-143.	5.8	12
68	Interchain hydrogen-bonded conjugated polymer for enhancing the stability of organic solar cells. Journal of Industrial and Engineering Chemistry, 2022, 112, 76-84.	5.8	11
69	Enhancement in performance of polymer solar cells by introducing solution-processed dipole interlayer. Journal of Industrial and Engineering Chemistry, 2016, 36, 44-48.	5.8	10
70	Excellent carrier transport materials produced by controlled molecular stacking and their application in flexible organic electronic devices. Journal of Materials Chemistry A, 2019, 7, 14790-14805.	10.3	10
71	Self-organization polymer consisting of quinacridone and quaterthiophene units: Coplanar structure between benzene and thiophene linkage. Solar Energy Materials and Solar Cells, 2013, 117, 285-292.	6.2	9
72	Organic electrolyte hybridized ZnO as the electron transport layer for inverted polymer solar cells. Journal of Industrial and Engineering Chemistry, 2018, 65, 175-179.	5.8	9

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73	Study on the wet processable antimony tin oxide (ATO) transparent electrode for PLEDs. Journal of Industrial and Engineering Chemistry, 2012, 18, 312-316.	5.8	8
74	Open circuit voltage increase by substituted spacer and thieno[3,4-c]pyrrole-4,6-dione for polymer solar cells. Journal of Industrial and Engineering Chemistry, 2014, 20, 426-434.	5.8	8
75	A facile method for enhancing photovoltaic performance of low-band-gap Dâ€“A conjugated polymer for OPVs by controlling the chemical structure. Journal of Industrial and Engineering Chemistry, 2015, 26, 173-181.	5.8	8
76	Molecular Design of Efficient Chlorineâ€•and Carboxylateâ€Functionalized Donor Polymers for Nonfullerene Organic Solar Cells Enabling Processing with Ecoâ€Friendly Solvent in Air. Solar Rrl, 2021, 5, 2000608.	5.8	8
77	Study on the antimony tin oxide as a hole injection layer for polymer light emitting diodes. Thin Solid Films, 2012, 520, 4068-4073.	1.8	7
78	Enhancement of external quantum efficiency through steric hindrance of phenazine derivative for white polymer light-emitting diode materials. Synthetic Metals, 2013, 181, 98-103.	3.9	7
79	Design and synthesis of 2D A1-Ï€-A2 copolymers impact on fullerene network for efficient polymer solar cells. Polymer, 2018, 149, 85-95.	3.8	7
80	Water-Repellent Perovskites Induced by a Blend of Organic Halide Salts for Efficient and Stable Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 33172-33181.	8.0	7
81	Enhanced performance in bulk heterojunction solar cells with alkylidene fluorene donor by introducing modified PFN-OH/Al bilayer cathode. RSC Advances, 2014, 4, 6776.	3.6	6
82	Effect of conjugated 2D-side groups on quinacridone-based copolymers to adjust deep HOMO level for photovoltaics. Journal of Industrial and Engineering Chemistry, 2017, 46, 304-314.	5.8	6
83	Effect of non-covalent interactions on molecular stacking and photovoltaic properties in organic photovoltaics. Journal of Industrial and Engineering Chemistry, 2018, 63, 191-200.	5.8	6
84	Simple Approach to Overcome Thickness Tolerance of Interlayer without Sacrificing the Performances of Polymer Solar Cells. Advanced Materials Interfaces, 2019, 6, 1900797.	3.7	6
85	Development of a Complex High-Conductivity Hole Transport Layer with Energy-Level Control for High-Efficiency Organic Solar Cells by the Solution Process. ACS Applied Energy Materials, 2022, 5, 8400-8409.	5.1	6
86	Oxygen effect of transparent conducting amorphous Indium Zinc Tin Oxide films on Polyimide substrate for flexible electrode. Thin Solid Films, 2013, 547, 32-37.	1.8	5
87	Enhanced Photovoltaic Properties of Bulk Heterojunction Organic Photovoltaic Devices by an Addition of a Low Band Gap Conjugated Polymer. Materials, 2016, 9, 996.	2.9	5
88	A comparative investigation of dibenzo[a,c]phenazine and quinoxaline donorâ€“acceptor conjugated polymers: Correlation of planar structure and intramolecular charge transfer properties. Polymer, 2019, 185, 121906.	3.8	5
89	Design and synthesis of acceptorâ€“donorâ€“acceptor small molecule based on caffeine derivative for efficient and stable polymer solar cells. Journal of Industrial and Engineering Chemistry, 2019, 75, 138-147.	5.8	5
90	Understanding the Critical Role of Sequential Fluorination of Phenylene Units on the Properties of Dicarboxylate Bithiopheneâ€Based Wideâ€Bandgap Polymer Donors for Nonâ€Fullerene Organic Solar Cells. Macromolecular Rapid Communications, 2021, 42, e2000743.	3.9	5

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91	Enhanced chemical and physical properties of PEDOT doped with anionic polyelectrolytes prepared from acrylic derivatives and application to nanogenerators. Nanoscale Advances, 2019, 1, 4384-4392.	4.6	4
92	Synthesis of novel triphenylene-based discotic liquid crystals with naphthalene moiety in the side chains for photo-polymerisation. Journal of Industrial and Engineering Chemistry, 2011, 17, 445-449.	5.8	3
93	Small-molecule electrolytes with different ionic functionalities as a cathode buffer layer for polymer solar cells. Journal of Materials Chemistry C, 2020, 8, 15183-15188.	5.5	3
94	Tailoring Microstructure and Morphology via Sequential Fluorination to Enhance the Photovoltaic Performance of Lowâ€Cost Polymer Donors for Organic Solar Cells. Macromolecular Rapid Communications, 2022, 43, e2200070.	3.9	3
95	Organic Solar Cells: Vertical Phase Separation for Highly Efficient Organic Solar Cells Incorporating Conjugatedâ€Polyelectrolytes (Adv. Mater. Interfaces 3/2019). Advanced Materials Interfaces, 2019, 6, 1970018.	3.7	2
96	Structureâ€“property relationship on insertion of fluorine- versus nitrogen substituents in wide bandgap polymer donors for non-fullerene solar cells: an interesting case study. Materials Chemistry Frontiers, 2022, 6, 1759-1769.	5.9	2
97	Control of vertical distribution of thiopheneâ€based copolymers containing 4,7â€Dithienâ€2â€ylâ€benzo[C][1,2,5]thiadiazole and 3,6â€Dithienâ€2â€ylâ€pyrrolo[3,4â€C]pyrroleâ€1,4(2H,5H)â€dione as Side Groups for Photovoltaics. Journal of Polymer Science Part A, 2016, 54, 2746-2759.	3.4	1
98	Enhancement of the air-stability and optimization of VOC by changing molecular conformation of polyelectrolytes. Journal of Industrial and Engineering Chemistry, 2018, 63, 426-436.	5.8	1
99	Synthesis of 3,4-dimethoxythiophene spacer-based non-fullerene acceptors for efficient organic solar cells. Synthetic Metals, 2021, 280, 116880.	3.9	1
100	Highly efficient Ternary Solar Cells of 10.2% with Core/Shell Quantum Dots via FRET Effect (Solar RRL) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	5.8	0
101	Smallâ€Molecule Electrolyte: Simple Approach to Overcome Thickness Tolerance of Interlayer without Sacrificing the Performances of Polymer Solar Cells (Adv. Mater. Interfaces 18/2019). Advanced Materials Interfaces, 2019, 6, 1970115.	3.7	0