Jung-Yong Lee

List of Publications by Year
in descending order

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105 papers	8,518 citations	101384 36 h-index	42291 92 g-index
109 all docs	109 docs citations	109 times ranked	11095 citing authors

#	Article	IF	Citations
1	Mediating Colloidal Quantum Dot/Organic Semiconductor Interfaces for Efficient Hybrid Solar Cells. Advanced Energy Materials, 2022, 12, 2102689.	10.2	13
2	Allâ€inâ€One Process for Color Tuning and Patterning of Perovskite Quantum Dot Lightâ€Emitting Diodes. Advanced Science, 2022, 9, e2200073.	5.6	14
3	Highly Efficient (>9%) Leadâ€Free AgBiS₂ Colloidal Nanocrystal/Organic Hybrid Solar Cells. Advanced Energy Materials, 2022, 12, .	10.2	22
4	Manufacturing of Compound Parabolic Concentrator Devices Using an Ultra-fine Planing Method for Enhancing Efficiency of a Solar Cell. International Journal of Precision Engineering and Manufacturing - Green Technology, 2021, 8, 1405-1414.	2.7	7
5	Influence of the metal phthalocyanine molecular orientation on charge separation at the organic donor/acceptor interface. Journal of Materials Chemistry C, 2021, 9, 2156-2164.	2.7	6
6	Intrinsically Stretchable Organic Solar Cells with Efficiencies of over 11%. ACS Energy Letters, 2021, 6, 2512-2518.	8.8	69
7	Highly Efficient Vacuum-Evaporated CsPbBr₃ Perovskite Light-Emitting Diodes with an Electrical Conductivity Enhanced Polymer-Assisted Passivation Layer. ACS Applied Materials & Interfaces, 2021, 13, 37323-37330.	4.0	19
8	Enhanced stretchability of metal/interlayer/metal hybrid electrode. Nanoscale, 2021, 13, 4543-4550.	2.8	6
9	An Interlocking Fibrillar Polymer Layer for Mechanical Stability of Perovskite Solar Cells. Advanced Materials Interfaces, 2020, 7, 2001425.	1.9	9
10	Flexible Transparent Crystalline-ITO/Ag Nanowire Hybrid Electrode with High Stability for Organic Optoelectronics. ACS Applied Materials & Interfaces, 2020, 12, 56462-56469.	4.0	29
11	Chemo-Mechanically Operating Palladium-Polymer Nanograting Film for a Self-Powered H₂ Gas Sensor. ACS Nano, 2020, 14, 16813-16822.	7.3	40
12	Role of Oxygen in Two-Step Thermal Annealing Processes for Enhancing the Performance of Colloidal Quantum Dot Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 57840-57846.	4.0	7
13	Tunable Resonator: Selfâ€Powered Humidity Sensor Using Chitosanâ€Based Plasmonic Metalâ€“Hydrogelâ€“Metal Filters (Advanced Optical Materials 9/2020). Advanced Optical Materials, 2020, 8, 2070038.	3.6	3
14	Flexible Bottom-Gated Organic Field-Effect Transistors Utilizing Stamped Polymer Layers from the Surface of Water. ACS Applied Materials & Interfaces, 2020, 12, 25092-25099.	4.0	14
15	Enhanced bendability of nanostructured metal electrodes: effect of nanoholes and their arrangement. Nanoscale, 2020, 12, 12898-12908.	2.8	8
16	Artifactâ€Free 2D Mapping of Neural Activity In Vivo through Transparent Gold Nanonetwork Array. Advanced Functional Materials, 2020, 30, 2000896.	7.8	54
17	Self-Powered Gas Sensor Based on a Photovoltaic Cell and a Colorimetric Film with Hierarchical Micro/Nanostructures. ACS Applied Materials & Interfaces, 2020, 12, 39024-39032.	4.0	24
18	Selfâ€Powered Humidity Sensor Using Chitosanâ€Based Plasmonic Metalâ€“Hydrogelâ€“Metal Filters. Advanced Optical Materials, 2020, 8, 1901932.	3.6	85

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19	The role of photon recycling in perovskite light-emitting diodes. Nature Communications, 2020, 11, 611.	5.8	121
20	Wearable self-powered pressure sensor by integration of piezo-transmittance microporous elastomer with organic solar cell. Nano Energy, 2020, 74, 104749.	8.2	49
21	Highly Efficient (>10%) Flexible Organic Solar Cells on PEDOTâ€Free and ITOâ€Free Transparent Electrodes. Advanced Materials, 2019, 31, e1902447.	11.1	77
22	Electromechanical enhancement of metal nanoparticle thin film by composite formation with short metal nanowires. Functional Composites and Structures, 2019, 1, 035006.	1.6	2
23	Study of Optical Configurations for Multiple Enhancement of Microalgal Biomass Production. Scientific Reports, 2019, 9, 1723.	1.6	9
24	Efficient hybrid colloidal quantum dot/organic solar cells mediated by near-infrared sensitizing small molecules. Nature Energy, 2019, 4, 969-976.	19.8	120
25	Multi-bandgap Solar Energy Conversion via Combination of Microalgal Photosynthesis and Spectrally Selective Photovoltaic Cell. Scientific Reports, 2019, 9, 18999.	1.6	19
26	Columnar-Structured Low-Concentration Donor Molecules in Bulk Heterojunction Organic Solar Cells. ACS Omega, 2018, 3, 929-936.	1.6	12
27	Fabrication of a Combustion-Reacted High-Performance ZnO Electron Transport Layer with Silver Nanowire Electrodes for Organic Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 7214-7222.	4.0	15
28	Two-dimensional sheet resistance model for polycrystalline graphene with overlapped grain boundaries. FlatChem, 2018, 7, 19-25.	2.8	7
29	Effects of temperature and coating speed on the morphology of solution-sheared halide perovskite thin-films. Journal of Materials Chemistry A, 2018, 6, 24911-24919.	5.2	40
30	Infrared Cavity-Enhanced Colloidal Quantum Dot Photovoltaics Employing Asymmetric Multilayer Electrodes. ACS Energy Letters, 2018, 3, 2908-2913.	8.8	20
31	Flexible optical pressure sensor and its application to wearable human motion detecting device. , 2018, , .		1
32	Homo-tandem structures to achieve the ideal external quantum efficiency in small molecular organic solar cells. Optics Express, 2018, 26, A697.	1.7	6
33	Solutionâ€Processed Aluminum Nanogratings for Wire Grid Polarizers. Advanced Optical Materials, 2018, 6, 1800205.	3.6	9
34	A hydro/oxo-phobic top hole-selective layer for efficient and stable colloidal quantum dot solar cells. Energy and Environmental Science, 2018, 11, 2078-2084.	15.6	41
35	A Colloidalâ€Quantumâ€Dotâ€Based Selfâ€Charging System via the Nearâ€Infrared Band. Advanced Materials, 2018, 30, e1707224.	11.1	17
36	Improved exciton dissociation and charge transport in energetically cascaded trilayer organic solar cells. Current Applied Physics, 2017, 17, 924-930.	1.1	5

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37	Mechanical Properties of Polymerâ€“Fullerene Bulk Heterojunction Films: Role of Nanomorphology of Composite Films. Chemistry of Materials, 2017, 29, 3954-3961.	3.2	50
38	Self-Organization of Polymer Additive, Poly(2-vinylpyridine) via One-Step Solution Processing to Enhance the Efficiency and Stability of Polymer Solar Cells. Advanced Energy Materials, 2017, 7, 1602812.	10.2	29
39	Facilitated embedding of silver nanowires into conformally-coated iCVD polymer films deposited on cloth for robust wearable electronics. Nanoscale, 2017, 9, 3399-3407.	2.8	16
40	Cooptimization of Adhesion and Power Conversion Efficiency of Organic Solar Cells by Controlling Surface Energy of Buffer Layers. ACS Applied Materials & Interfaces, 2017, 9, 37395-37401.	4.0	20
41	Solar Cells: Rationally Designed Donorâ€“Acceptor Random Copolymers with Optimized Complementary Light Absorption for Highly Efficient Allâ€Polymer Solar Cells (Adv. Funct. Mater. 38/2017). Advanced Functional Materials, 2017, 27, .	7.8	0
42	Self-powered gas sensor using thin-film photovoltaic cell and microstructured colorimetric film. , 2017, , .		3
43	Self-powered, highly sensitive pressure sensor based on thin-film solar cell and pressure-responsive porous elastomer film. , 2017, , .		0
44	Rationally Designed Donorâ€“Acceptor Random Copolymers with Optimized Complementary Light Absorption for Highly Efficient Allâ€Polymer Solar Cells. Advanced Functional Materials, 2017, 27, 1703070.	7.8	37
45	Broadband light trapping strategies for quantum-dot photovoltaic cells (>10%) and their issues with the measurement of photovoltaic characteristics. Scientific Reports, 2017, 7, 17393.	1.6	8
46	Silver Nanowire/Carbon Sheet Composites for Electrochemical Syngas Generation with Tunable H₂/CO Ratios. ACS Omega, 2017, 2, 3441-3446.	1.6	20
47	Bioinspired Transparent Laminated Composite Film for Flexible Green Optoelectronics. ACS Applied Materials & Interfaces, 2017, 9, 24161-24168.	4.0	42
48	An Electroactive, Tunable, and Frequency Selective Surface Utilizing Highly Stretchable Dielectric Elastomer Actuators Based on Functionally Antagonistic Aperture Control. Small, 2016, 12, 1840-1846.	5.2	25
49	Extremely Robust and Patternable Electrodes for Copy-Paper-Based Electronics. ACS Applied Materials & Interfaces, 2016, 8, 19031-19037.	4.0	44
50	Fabrication of high aspect ratio nanogrid transparent electrodes via capillary assembly of Ag nanoparticles. Nanoscale, 2016, 8, 11217-11223.	2.8	26
51	Improved Internal Quantum Efficiency and Light-Extraction Efficiency of Organic Light-Emitting Diodes via Synergistic Doping with Au and Ag Nanoparticles. ACS Applied Materials & Interfaces, 2016, 8, 27911-27919.	4.0	34
52	Effects of Backbone Planarity and Tightly Packed Alkyl Chains in the Donorâ€“Acceptor Polymers for High Photostability. Macromolecules, 2016, 49, 7844-7856.	2.2	39
53	Optical study of thin-film photovoltaic cells with apparent optical path length. Journal of Optics (United Kingdom), 2016, 18, 094001.	1.0	7
54	A Flexible and Robust Transparent Conducting Electrode Platform Using an Electroplated Silver Grid/Surface-Embedded Silver Nanowire Hybrid Structure. ACS Applied Materials & Interfaces, 2016, 8, 27035-27043.	4.0	57

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55	Ultrafast formation of air-processable and high-quality polymer films on an aqueous substrate. Nature Communications, 2016, 7, 12374.	5.8	88
56	Hybrid crystalline-ITO/metal nanowire mesh transparent electrodes and their application for highly flexible perovskite solar cells. NPG Asia Materials, 2016, 8, e282-e282.	3.8	89
57	Efficient Green Organic Light-Emitting Diodes by Plasmonic Silver Nanoparticles. IEEE Photonics Technology Letters, 2016, 28, 371-374.	1.3	14
58	Self-Supplied Nano-Fusing and Transferring Metal Nanostructures via Surface Oxide Reduction. ACS Applied Materials & Interfaces, 2016, 8, 1112-1119.	4.0	27
59	Organic Solar Cells: Enhancing the Internal Quantum Efficiency and Stability of Organic Solar Cells via Metallic Nanofunnels (Adv. Energy Mater. 24/2015). Advanced Energy Materials, 2015, 5, .	10.2	0
60	Light Trapping: Toward Perfect Light Trapping in Thinâ€Film Photovoltaic Cells: Full Utilization of the Dual Characteristics of Light (Advanced Optical Materials 12/2015). Advanced Optical Materials, 2015, 3, 1656-1656.	3.6	0
61	A Resonanceâ€Shifting Hybrid nâ€Type Layer for Boosting Nearâ€Infrared Response in Highly Efficient Colloidal Quantum Dots Solar Cells. Advanced Materials, 2015, 27, 8102-8108.	11.1	28
62	Toward Perfect Light Trapping in Thinâ€Film Photovoltaic Cells: Full Utilization of the Dual Characteristics of Light. Advanced Optical Materials, 2015, 3, 1697-1702.	3.6	25
63	Enhancing the Internal Quantum Efficiency and Stability of Organic Solar Cells via Metallic Nanofunnels. Advanced Energy Materials, 2015, 5, 1501393.	10.2	29
64	Roughening Conjugated Polymer Surface for Enhancing the Charge Collection Efficiency of Sequentially Deposited Polymer/Fullerene Photovoltaics. Polymers, 2015, 7, 1497-1509.	2.0	11
65	Nanoimprinting-Induced Nanomorphological Transition in Polymer Solar Cells: Enhanced Electrical and Optical Performance. ACS Nano, 2015, 9, 2773-2782.	7.3	31
66	Stability enhancement of normal-geometry organic solar cells in a highly damp condition: A study on the effect of top electrodes. Organic Electronics, 2015, 25, 31-36.	1.4	6
67	Efficient Organic Photovoltaics Utilizing Nanoscale Heterojunctions in Sequentially Deposited Polymer/fullerene Bilayer. Scientific Reports, 2015, 5, 8373.	1.6	49
68	Development of highly transparent Pd-coated Ag nanowire electrode for display and catalysis applications. Applied Surface Science, 2015, 350, 79-86.	3.1	16
69	Design of asymmetrically textured structure for efficient light trapping in building-integrated photovoltaics. Organic Electronics, 2015, 26, 61-65.	1.4	11
70	Ferroelectric nanodot formation from spinâ€coated poly(vinylidene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 147 Td (fluorideâ€coâ Applied Polymer Science, 2015, 132, .	1.3	12
71	Stable inverted small molecular organic solar cells using a p-doped optical spacer. Nanoscale, 2015, 7, 157-165.	2.8	23
72	ITO-free highly bendable and efficient organic solar cells with Ag nanomesh/ZnO hybrid electrodes. Journal of Materials Chemistry A, 2015, 3, 65-70.	5.2	55

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73	Highly Efficient Topâ€Illuminated Flexible Polymer Solar Cells with a Nanopatterned 3D Microresonant Cavity. Small, 2014, 10, 1278-1283.	5.2	26
74	Thermal property of transparent silver nanowire films. Semiconductor Science and Technology, 2014, 29, 015002.	1.0	12
75	Surface plasmon assisted high performance top-illuminated polymer solar cells with nanostructured Ag rear electrodes. Journal of Materials Chemistry A, 2014, 2, 2915.	5.2	19
76	Flexible Transparent Conducting Hybrid Film Using a Surface-Embedded Copper Nanowire Network: A Highly Oxidation-Resistant Copper Nanowire Electrode for Flexible Optoelectronics. ACS Nano, 2014, 8, 10973-10979.	7.3	166
77	Enhancement of growth and lipid production from microalgae using fluorescent paint under the solar radiation. Bioresource Technology, 2014, 173, 193-197.	4.8	39
78	Highly Transparent Au-Coated Ag Nanowire Transparent Electrode with Reduction in Haze. ACS Applied Materials & Interfaces, 2014, 6, 13527-13534.	4.0	66
79	Flexible transparent conducting composite films using a monolithically embedded AgNW electrode with robust performance stability. Nanoscale, 2014, 6, 711-715.	2.8	95
80	Au@Polymer Coreâ€“Shell Nanoparticles for Simultaneously Enhancing Efficiency and Ambient Stability of Organic Optoelectronic Devices. ACS Applied Materials & Interfaces, 2014, 6, 16956-16965.	4.0	71
81	Ag@Ni Coreâ€“Shell Nanowire Network for Robust Transparent Electrodes Against Oxidation and Sulfurization. Small, 2014, 10, 4171-4181.	5.2	89
82	Au@Ag Coreâ€“Shell Nanocubes for Efficient Plasmonic Light Scattering Effect in Low Bandgap Organic Solar Cells. ACS Nano, 2014, 8, 3302-3312.	7.3	228
83	Coupled Nearâ€•and Farâ€Field Scattering in Silver Nanoparticles for Highâ€Efficiency, Stable, and Thin Plasmonic Dyeâ€Sensitized Solar Cells. ChemSusChem, 2014, 7, 2461-2468.	3.6	24
84	Bio-Inspired Dielectric Elastomer Actuator with AgNWs Coated on Carbon Black Electrode. Journal of Nanoscience and Nanotechnology, 2014, 14, 7483-7487.	0.9	8
85	Random and V-groove texturing for efficient light trapping in organic photovoltaic cells. Solar Energy Materials and Solar Cells, 2013, 115, 36-41.	3.0	70
86	Broadband energy transfer to sensitizing dyes by mobile quantum dot mediators in solar cells. Scientific Reports, 2013, 3, 2711.	1.6	26
87	Plasmonic Forward Scattering Effect in Organic Solar Cells: A Powerful Optical Engineering Method. Scientific Reports, 2013, 3, .	1.6	215
88	Wearable Textile Battery Rechargeable by Solar Energy. Nano Letters, 2013, 13, 5753-5761.	4.5	400
89	Enhancing quantum efficiency of parallel-like bulk heterojunction solar cells. Applied Physics Letters, 2013, 103, .	1.5	7
90	Efficient light trapping in inverted polymer solar cells by a randomly nanostructured electrode using monodispersed polymer nanoparticles. Nanoscale, 2013, 5, 1858.	2.8	22

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91	High-performance hybrid plastic films: a robust electrode platform for thin-film optoelectronics. Energy and Environmental Science, 2013, 6, 1811.	15.6	85
92	Efficient Welding of Silver Nanowire Networks without Postâ€Processing. Small, 2013, 9, 2887-2894.	5.2	209
93	Probing polarization modes of Ag nanowires with hot electron detection on Au/TiO2 nanodiodes. Applied Physics Letters, 2013, 102, 123112.	1.5	13
94	Multi-scale and angular analysis of ray-optical light trapping schemes in thin-film solar cells: Micro lens array, V-shaped configuration, and double parabolic trapper. Optics Express, 2013, 21, A276.	1.7	26
95	Light Management Toward Efficient Organic Solar Cells. , 2013, , .		0
96	Coherent light trapping in thin-film photovoltaics. MRS Bulletin, 2011, 36, 453-460.	1.7	84
97	Title: Using Alignment and 2D Network Simulations to Study Charge Transport Through Doped ZnO Nanowire Thin Film Electrodes. Advanced Functional Materials, 2011, 21, 4691-4697.	7.8	17
98	Fully Solution-Processed Inverted Polymer Solar Cells with Laminated Nanowire Electrodes. ACS Nano, 2010, 4, 30-34.	7.3	269
99	Scalable Coating and Properties of Transparent, Flexible, Silver Nanowire Electrodes. ACS Nano, 2010, 4, 2955-2963.	7.3	1,906
100	Semitransparent Organic Photovoltaic Cells with Laminated Top Electrode. Nano Letters, 2010, 10, 1276-1279.	4.5	252
101	Enhancement of optical absorption in thin-film organic solar cells through the excitation of plasmonic modes in metallic gratings. Applied Physics Letters, 2010, 96, .	1.5	214
102	The origin of enhanced optical absorption in solar cells with metal nanoparticles embedded in the active layer. Optics Express, 2010, 18, 10078.	1.7	172
103	Fully solution-processed organic solar cells on metal foil substrates. Proceedings of SPIE, 2009, , .	0.8	1
104	Transparent and tandem solar cells using solution-processed metal nanowire transparent electrodes. , 2009, , .		1
105	Solution-Processed Metal Nanowire Mesh Transparent Electrodes. Nano Letters, 2008, 8, 689-692.	4.5	1,713