Jung-Yong Lee

List of Publications by Year in Descending Order

101 papers	7,256 citations	32 h-index	85 g-index
109 ext. papers	7,934 ext. citations	10.9 avg, IF	6.02 L-index

#	Paper	IF	Citations
101	Mediating Colloidal Quantum Dot/Organic Semiconductor Interfaces for Efficient Hybrid Solar Cells. *Advanced Energy Materials*, **2022**, 12, 2102689	21.8	5
100	All-in-One Process for Color Tuning and Patterning of Perovskite Quantum Dot Light-Emitting Diodes.. *Advanced Science*, **2022**, e2200073	13.6	1
99	Intrinsically Stretchable Organic Solar Cells with Efficiencies of over 11%. *ACS Energy Letters*, **2021**, 6, 2512-2518	20.1	25
98	Highly Efficient Vacuum-Evaporated CsPbBr Perovskite Light-Emitting Diodes with an Electrical Conductivity Enhanced Polymer-Assisted Passivation Layer. *ACS Applied Materials & Interfaces*, **2021**, 13, 37323-37330	9.5	8
97	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	7.1	1
96	Enhanced stretchability of metal/interlayer/metal hybrid electrode. *Nanoscale*, **2021**, 13, 4543-4550	7.7	2
95	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	9.5	2
94	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*, **2020**, 8, 1405	3.8	3
93	Tunable Resonator: Self-Powered Humidity Sensor Using Chitosan-Based Plasmonic Metal□Hydrogel□Metal Filters (Advanced Optical Materials 9/2020). *Advanced Optical Materials*, **2020**, 8, 2070038	8.1	1
92	Flexible Bottom-Gated Organic Field-Effect Transistors Utilizing Stamped Polymer Layers from the Surface of Water. *ACS Applied Materials & Interfaces*, **2020**, 12, 25092-25099	9.5	10
91	Enhanced bendability of nanostructured metal electrodes: effect of nanoholes and their arrangement. *Nanoscale*, **2020**, 12, 12898-12908	7.7	4
90	Artifact-Free 2D Mapping of Neural Activity In Vivo through Transparent Gold Nanonetwork Array. *Advanced Functional Materials*, **2020**, 30, 2000896	15.6	24
89	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	9.5	9
88	Self-Powered Humidity Sensor Using Chitosan-Based Plasmonic Metal□Hydrogel□Metal Filters. *Advanced Optical Materials*, **2020**, 8, 1901932	8.1	52
87	The role of photon recycling in perovskite light-emitting diodes. *Nature Communications*, **2020**, 11, 611	17.4	71
86	Wearable self-powered pressure sensor by integration of piezo-transmittance microporous elastomer with organic solar cell. *Nano Energy*, **2020**, 74, 104749	17.1	20
85	An Interlocking Fibrillar Polymer Layer for Mechanical Stability of Perovskite Solar Cells. *Advanced Materials Interfaces*, **2020**, 7, 2001425	4.6	6

84	Flexible Transparent Crystalline-ITO/Ag Nanowire Hybrid Electrode with High Stability for Organic Optoelectronics. *ACS Applied Materials & Interfaces*, **2020**, 12, 56462-56469	9.5	11
83	Chemo-Mechanically Operating Palladium-Polymer Nanograting Film for a Self-Powered H Gas Sensor. *ACS Nano*, **2020**,	16.7	9
82	Highly Efficient (>10%) Flexible Organic Solar Cells on PEDOT-Free and ITO-Free Transparent Electrodes. *Advanced Materials*, **2019**, 31, e1902447	24	54
81	Electromechanical enhancement of metal nanoparticle thin film by composite formation with short metal nanowires. *Functional Composites and Structures*, **2019**, 1, 035006	3.5	2
80	Study of Optical Configurations for Multiple Enhancement of Microalgal Biomass Production. *Scientific Reports*, **2019**, 9, 1723	4.9	7
79	Efficient hybrid colloidal quantum dot/organic solar cells mediated by near-infrared sensitizing small molecules. *Nature Energy*, **2019**, 4, 969-976	62.3	78
78	Multi-bandgap Solar Energy Conversion via Combination of Microalgal Photosynthesis and Spectrally Selective Photovoltaic Cell. *Scientific Reports*, **2019**, 9, 18999	4.9	15
77	Columnar-Structured Low-Concentration Donor Molecules in Bulk Heterojunction Organic Solar Cells. *ACS Omega*, **2018**, 3, 929-936	3.9	8
76	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	9.5	13
75	Two-dimensional sheet resistance model for polycrystalline graphene with overlapped grain boundaries. *FlatChem*, **2018**, 7, 19-25	5.1	3
74	Homo-tandem structures to achieve the ideal external quantum efficiency in small molecular organic solar cells. *Optics Express*, **2018**, 26, A697-A708	3.3	5
73	Solution-Processed Aluminum Nanogratings for Wire Grid Polarizers. *Advanced Optical Materials*, **2018**, 6, 1800205	8.1	6
72	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	35.4	31
71	A Colloidal-Quantum-Dot-Based Self-Charging System via the Near-Infrared Band. *Advanced Materials*, **2018**, 30, e1707224	24	9
70	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	13	27
69	Infrared Cavity-Enhanced Colloidal Quantum Dot Photovoltaics Employing Asymmetric Multilayer Electrodes. *ACS Energy Letters*, **2018**, 3, 2908-2913	20.1	12
68	Flexible optical pressure sensor and its application to wearable human motion detecting device **2018**,		1
67	Improved exciton dissociation and charge transport in energetically cascaded trilayer organic solar cells. *Current Applied Physics*, **2017**, 17, 924-930	2.6	5

66	Mechanical Properties of Polymer–Fullerene Bulk Heterojunction Films: Role of Nanomorphology of Composite Films. *Chemistry of Materials*, **2017**, 29, 3954-3961	9.6	39
65	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	21.8	26
64	Facilitated embedding of silver nanowires into conformally-coated iCVD polymer films deposited on cloth for robust wearable electronics. *Nanoscale*, **2017**, 9, 3399-3407	7.7	14
63	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	9.5	17
62	Self-powered gas sensor using thin-film photovoltaic cell and microstructured colorimetric film **2017**,		2
61	Rationally Designed Donor–Acceptor Random Copolymers with Optimized Complementary Light Absorption for Highly Efficient All-Polymer Solar Cells. *Advanced Functional Materials*, **2017**, 27, 1703070	15.6	35
60	Broadband light trapping strategies for quantum-dot photovoltaic cells (>10%) and their issues with the measurement of photovoltaic characteristics. *Scientific Reports*, **2017**, 7, 17393	4.9	7
59	Silver Nanowire/Carbon Sheet Composites for Electrochemical Syngas Generation with Tunable H/CO Ratios. *ACS Omega*, **2017**, 2, 3441-3446	3.9	14
58	Bioinspired Transparent Laminated Composite Film for Flexible Green Optoelectronics. *ACS Applied Materials & Interfaces*, **2017**, 9, 24161-24168	9.5	27
57	Optical study of thin-film photovoltaic cells with apparent optical path length. *Journal of Optics (United Kingdom)*, **2016**, 18, 094001	1.7	6
56	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	9.5	52
55	Ultrafast formation of air-processable and high-quality polymer films on an aqueous substrate. *Nature Communications*, **2016**, 7, 12374	17.4	67
54	Hybrid crystalline-ITO/metal nanowire mesh transparent electrodes and their application for highly flexible perovskite solar cells. *NPG Asia Materials*, **2016**, 8, e282-e282	10.3	76
53	Efficient Green Organic Light-Emitting Diodes by Plasmonic Silver Nanoparticles. *IEEE Photonics Technology Letters*, **2016**, 28, 371-374	2.2	9
52	Self-Supplied Nano-Fusing and Transferring Metal Nanostructures via Surface Oxide Reduction. *ACS Applied Materials & Interfaces*, **2016**, 8, 1112-9	9.5	25
51	An Electroactive, Tunable, and Frequency Selective Surface Utilizing Highly Stretchable Dielectric Elastomer Actuators Based on Functionally Antagonistic Aperture Control. *Small*, **2016**, 12, 1840-6	11	18
50	Extremely Robust and Patternable Electrodes for Copy-Paper-Based Electronics. *ACS Applied Materials & Interfaces*, **2016**, 8, 19031-7	9.5	39
49	Fabrication of high aspect ratio nanogrid transparent electrodes via capillary assembly of Ag nanoparticles. *Nanoscale*, **2016**, 8, 11217-23	7.7	22

48	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	9.5	33
47	Effects of Backbone Planarity and Tightly Packed Alkyl Chains in the Donor–Acceptor Polymers for High Photostability. *Macromolecules*, **2016**, 49, 7844-7856	5.5	34
46	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	3.5	6
45	Efficient organic photovoltaics utilizing nanoscale heterojunctions in sequentially deposited polymer/fullerene bilayer. *Scientific Reports*, **2015**, 5, 8373	4.9	41
44	Development of highly transparent Pd-coated Ag nanowire electrode for display and catalysis applications. *Applied Surface Science*, **2015**, 350, 79-86	6.7	16
43	Design of asymmetrically textured structure for efficient light trapping in building-integrated photovoltaics. *Organic Electronics*, **2015**, 26, 61-65	3.5	10
42	Ferroelectric nanodot formation from spin-coated poly(vinylidene fluoride-co-trifluoroethylene) films and their application to organic solar cells. *Journal of Applied Polymer Science*, **2015**, 132,	2.9	12
41	Stable inverted small molecular organic solar cells using a p-doped optical spacer. *Nanoscale*, **2015**, 7, 157-65	7.7	19
40	ITO-free highly bendable and efficient organic solar cells with Ag nanomesh/ZnO hybrid electrodes. *Journal of Materials Chemistry A*, **2015**, 3, 65-70	13	47
39	Light Trapping: Toward Perfect Light Trapping in Thin-Film Photovoltaic Cells: Full Utilization of the Dual Characteristics of Light (Advanced Optical Materials 12/2015). *Advanced Optical Materials*, **2015**, 3, 1656-1656	8.1	
38	A Resonance-Shifting Hybrid n-Type Layer for Boosting Near-Infrared Response in Highly Efficient Colloidal Quantum Dots Solar Cells. *Advanced Materials*, **2015**, 27, 8102-8	24	24
37	Toward Perfect Light Trapping in Thin-Film Photovoltaic Cells: Full Utilization of the Dual Characteristics of Light. *Advanced Optical Materials*, **2015**, 3, 1697-1702	8.1	25
36	Enhancing the Internal Quantum Efficiency and Stability of Organic Solar Cells via Metallic Nanofunnels. *Advanced Energy Materials*, **2015**, 5, 1501393	21.8	24
35	Roughening Conjugated Polymer Surface for Enhancing the Charge Collection Efficiency of Sequentially Deposited Polymer/Fullerene Photovoltaics. *Polymers*, **2015**, 7, 1497-1509	4.5	9
34	Nanoimprinting-induced nanomorphological transition in polymer solar cells: enhanced electrical and optical performance. *ACS Nano*, **2015**, 9, 2773-82	16.7	29
33	Highly efficient top-illuminated flexible polymer solar cells with a nanopatterned 3D microresonant cavity. *Small*, **2014**, 10, 1278-83	11	25
32	Thermal property of transparent silver nanowire films. *Semiconductor Science and Technology*, **2014**, 29, 015002	1.8	10
31	Surface plasmon assisted high performance top-illuminated polymer solar cells with nanostructured Ag rear electrodes. *Journal of Materials Chemistry A*, **2014**, 2, 2915	13	19

30	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, 10973-9	16.7	145
29	Enhancement of growth and lipid production from microalgae using fluorescent paint under the solar radiation. *Bioresource Technology*, **2014**, 173, 193-197	11	29
28	Highly transparent Au-coated Ag nanowire transparent electrode with reduction in haze. *ACS Applied Materials & Interfaces*, **2014**, 6, 13527-34	9.5	56
27	Flexible transparent conducting composite films using a monolithically embedded AgNW electrode with robust performance stability. *Nanoscale*, **2014**, 6, 711-5	7.7	81
26	Au@polymer core-shell nanoparticles for simultaneously enhancing efficiency and ambient stability of organic optoelectronic devices. *ACS Applied Materials & Interfaces*, **2014**, 6, 16956-65	9.5	64
25	Ag@Ni core-shell nanowire network for robust transparent electrodes against oxidation and sulfurization. *Small*, **2014**, 10, 4171-81	11	70
24	Au@Ag core-shell nanocubes for efficient plasmonic light scattering effect in low bandgap organic solar cells. *ACS Nano*, **2014**, 8, 3302-12	16.7	193
23	Coupled near- and far-field scattering in silver nanoparticles for high-efficiency, stable, and thin plasmonic dye-sensitized solar cells. *ChemSusChem*, **2014**, 7, 2461-8	8.3	19
22	Bio-Inspired dielectric elastomer actuator with AgNWs coated on carbon black electrode. *Journal of Nanoscience and Nanotechnology*, **2014**, 14, 7483-7	1.3	6
21	Random and V-groove texturing for efficient light trapping in organic photovoltaic cells. *Solar Energy Materials and Solar Cells*, **2013**, 115, 36-41	6.4	56
20	Broadband energy transfer to sensitizing dyes by mobile quantum dot mediators in solar cells. *Scientific Reports*, **2013**, 3, 2711	4.9	23
19	Plasmonic Forward Scattering Effect in Organic Solar Cells: A Powerful Optical Engineering Method. *Scientific Reports*, **2013**, 3,	4.9	190
18	Wearable textile battery rechargeable by solar energy. *Nano Letters*, **2013**, 13, 5753-61	11.5	349
17	Enhancing quantum efficiency of parallel-like bulk heterojunction solar cells. *Applied Physics Letters*, **2013**, 103, 123301	3.4	7
16	Efficient light trapping in inverted polymer solar cells by a randomly nanostructured electrode using monodispersed polymer nanoparticles. *Nanoscale*, **2013**, 5, 1858-63	7.7	20
15	High-performance hybrid plastic films: a robust electrode platform for thin-film optoelectronics. *Energy and Environmental Science*, **2013**, 6, 1811	35.4	78
14	Efficient welding of silver nanowire networks without post-processing. *Small*, **2013**, 9, 2887-94	11	183
13	Probing polarization modes of Ag nanowires with hot electron detection on Au/TiO2 nanodiodes. *Applied Physics Letters*, **2013**, 102, 123112	3.4	13

12	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 Suppl 2, A276-84	3.2	22
11	Coherent light trapping in thin-film photovoltaics. *MRS Bulletin*, **2011**, 36, 453-460	3.2	71
10	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	15.6	16
9	Fully solution-processed inverted polymer solar cells with laminated nanowire electrodes. *ACS Nano*, **2010**, 4, 30-4	16.7	253
8	Scalable coating and properties of transparent, flexible, silver nanowire electrodes. *ACS Nano*, **2010** , 4, 2955-63	16.7	1734
7	Semitransparent organic photovoltaic cells with laminated top electrode. *Nano Letters*, **2010**, 10, 1276-9	11.5	235
6	Enhancement of optical absorption in thin-film organic solar cells through the excitation of plasmonic modes in metallic gratings. *Applied Physics Letters*, **2010**, 96, 133302	3.4	179
5	The origin of enhanced optical absorption in solar cells with metal nanoparticles embedded in the active layer. *Optics Express*, **2010**, 18, 10078-87	3.3	151
4	Fully solution-processed organic solar cells on metal foil substrates **2009**,		1
3	Transparent and tandem solar cells using solution-processed metal nanowire transparent electrodes **2009**,		1
2	Solution-processed metal nanowire mesh transparent electrodes. *Nano Letters*, **2008**, 8, 689-92	11.5	1587
1	Highly Efficient (>9%) Lead-Free AgBiS 2 Colloidal Nanocrystal/Organic Hybrid Solar Cells. *Advanced Energy Materials*,2200262	21.8	4