Jin-Wook Lee

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89 papers	13,629 citations	45 h-index	95 g-index
95 ext. papers	16,011 ext. citations	15.7 avg, IF	6.97 L-index

#	Paper	IF	Citations
89	6.5% efficient perovskite quantum-dot-sensitized solar cell. *Nanoscale*, **2011**, 3, 4088-93	7.7	2465
88	Formamidinium and Cesium Hybridization for Photo- and Moisture-Stable Perovskite Solar Cell. *Advanced Energy Materials*, **2015**, 5, 1501310	21.8	1085
87	High efficiency solid-state sensitized solar cell-based on submicrometer rutile TiO2 nanorod and CH3NH3PbI3 perovskite sensitizer. *Nano Letters*, **2013**, 13, 2412-7	11.5	825
86	Self-formed grain boundary healing layer for highly efficient CH3NH3PbI3 perovskite solar cells. *Nature Energy*, **2016**, 1,	62.3	757
85	High-efficiency perovskite solar cells based on the black polymorph of HC(NH2)2 PbI3. *Advanced Materials*, **2014**, 26, 4991-8	24	732
84	Lewis Acid-Base Adduct Approach for High Efficiency Perovskite Solar Cells. *Accounts of Chemical Research*, **2016**, 49, 311-9	24.3	690
83	High-Efficiency Perovskite Solar Cells. *Chemical Reviews*, **2020**, 120, 7867-7918	68.1	587
82	Slow Dynamic Processes in Lead Halide Perovskite Solar Cells. Characteristic Times and Hysteresis. *Journal of Physical Chemistry Letters*, **2014**, 5, 2357-63	6.4	556
81	2D perovskite stabilized phase-pure formamidinium perovskite solar cells. *Nature Communications*, **2018**, 9, 3021	17.4	407
80	15.76% efficiency perovskite solar cells prepared under high relative humidity: importance of PbI2 morphology in two-step deposition of CH3NH3PbI3. *Journal of Materials Chemistry A*, **2015**, 3, 8808-8815	13	267
79	Caffeine Improves the Performance and Thermal Stability of Perovskite Solar Cells. *Joule*, **2019**, 3, 1464-1477	17.7	266
78	Perovskite-polymer composite cross-linker approach for highly-stable and efficient perovskite solar cells. *Nature Communications*, **2019**, 10, 520	17.4	262
77	Tuning Molecular Interactions for Highly Reproducible and Efficient Formamidinium Perovskite Solar Cells via Adduct Approach. *Journal of the American Chemical Society*, **2018**, 140, 6317-6324	16.4	233
76	A Bifunctional Lewis Base Additive for Microscopic Homogeneity in Perovskite Solar Cells. *CheM*, **2017**, 3, 290-302	16.2	232
75	Quantum-dot-sensitized solar cell with unprecedentedly high photocurrent. *Scientific Reports*, **2013** , 3, 1050	4.9	220
74	Interface and Defect Engineering for Metal Halide Perovskite Optoelectronic Devices. *Advanced Materials*, **2019**, 31, e1803515	24	201
73	The Interplay between Trap Density and Hysteresis in Planar Heterojunction Perovskite Solar Cells. *Nano Letters*, **2017**, 17, 4270-4276	11.5	175

72	Rutile TiO2-based perovskite solar cells. *Journal of Materials Chemistry A*, **2014**, 2, 9251	13	166
71	Tailored Phase Conversion under Conjugated Polymer Enables Thermally Stable Perovskite Solar Cells with Efficiency Exceeding 21. *Journal of the American Chemical Society*, **2018**, 140, 17255-17262	16.4	162
70	Reduced Graphene Oxide/Mesoporous TiO2 Nanocomposite Based Perovskite Solar Cells. *ACS Applied Materials & Interfaces*, **2015**, 7, 23521-6	9.5	153
69	The role of grain boundaries in perovskite solar cells. *Materials Today Energy*, **2018**, 7, 149-160	7	149
68	In-Situ Formed Type I Nanocrystalline Perovskite Film for Highly Efficient Light-Emitting Diode. *ACS Nano*, **2017**, 11, 3311-3319	16.7	134
67	Verification and mitigation of ion migration in perovskite solar cells. *APL Materials*, **2019**, 7, 041111	5.7	125
66	Niobium Doping Effects on TiO2 Mesoscopic Electron Transport Layer-Based Perovskite Solar Cells. *ChemSusChem*, **2015**, 8, 2392-8	8.3	123
65	Detrimental Effect of Unreacted PbI on the Long-Term Stability of Perovskite Solar Cells. *Advanced Materials*, **2020**, 32, e1905035	24	123
64	Moth-Eye TiO2 Layer for Improving Light Harvesting Efficiency in Perovskite Solar Cells. *Small*, **2016** , 12, 2443-9	11	115
63	Surface Ligand Management for Stable FAPbI3 Perovskite Quantum Dot Solar Cells. *Joule*, **2018**, 2, 1866-1878	21.8	114
62	The Emergence of the Mixed Perovskites and Their Applications as Solar Cells. *Advanced Energy Materials*, **2017**, 7, 1700491	21.8	103
61	Cooperative kinetics of depolarization in CH3NH3PbI3 perovskite solar cells. *Energy and Environmental Science*, **2015**, 8, 910-915	35.4	102
60	Crystalline Liquid-like Behavior: Surface-Induced Secondary Grain Growth of Photovoltaic Perovskite Thin Film. *Journal of the American Chemical Society*, **2019**, 141, 13948-13953	16.4	96
59	Chemical Approaches for Stabilizing Perovskite Solar Cells. *Advanced Energy Materials*, **2020**, 10, 1903249	21.8	88
58	A Polymerization-Assisted Grain Growth Strategy for Efficient and Stable Perovskite Solar Cells. *Advanced Materials*, **2020**, 32, e1907769	24	87
57	Thermodynamic regulation of CH3NH3PbI3 crystal growth and its effect on photovoltaic performance of perovskite solar cells. *Journal of Materials Chemistry A*, **2015**, 3, 19901-19906	13	78
56	Zn2SnO4-Based Photoelectrodes for Organolead Halide Perovskite Solar Cells. *Journal of Physical Chemistry C*, **2014**, 118, 22991-22994	3.8	76
55	Steric Impediment of Ion Migration Contributes to Improved Operational Stability of Perovskite Solar Cells. *Advanced Materials*, **2020**, 32, e1906995	24	76

54	Control of Crystal Growth toward Scalable Fabrication of Perovskite Solar Cells. *Advanced Functional Materials*, **2019**, 29, 1807047	15.6	74
53	Shallow Iodine Defects Accelerate the Degradation of α-Phase Formamidinium Perovskite. *Joule*, **2020**, 4, 2426-2442	27.8	72
52	Molecular Interaction Regulates the Performance and Longevity of Defect Passivation for Metal Halide Perovskite Solar Cells. *Journal of the American Chemical Society*, **2020**, 142, 20071-20079	16.4	72
51	Opto-electronic properties of TiO2 nanohelices with embedded HC(NH2)2PbI3 perovskite solar cells. *Journal of Materials Chemistry A*, **2015**, 3, 9179-9186	13	60
50	Evaluation of external quantum efficiency of a 12.35% tandem solar cell comprising dye-sensitized and CIGS solar cells. *Solar Energy Materials and Solar Cells*, **2011**, 95, 3419-3423	6.4	60
49	A Small-Molecule "Charge Driver" enables Perovskite Quantum Dot Solar Cells with Efficiency Approaching 13. *Advanced Materials*, **2019**, 31, e1900111	24	58
48	Hysteresis-less and stable perovskite solar cells with a self-assembled monolayer. *Communications Materials*, **2020**, 1,	6	57
47	On the Role of Interfaces in Planar-Structured HC(NH2)2 PbI3 Perovskite Solar Cells. *ChemSusChem* , **2015**, 8, 2414-9	8.3	56
46	Hermetic seal for perovskite solar cells: An improved plasma enhanced atomic layer deposition encapsulation. *Nano Energy*, **2020**, 69, 104375	17.1	56
45	Water-repellent perovskite solar cell. *Journal of Materials Chemistry A*, **2014**, 2, 20017-20021	13	55
44	Achieving High Efficiency in Solution-Processed Perovskite Solar Cells Using C/C Mixed Fullerenes. *ACS Applied Materials & Interfaces*, **2018**, 10, 39590-39598	9.5	45
43	Semiconducting carbon nanotubes as crystal growth templates and grain bridges in perovskite solar cells. *Journal of Materials Chemistry A*, **2019**, 7, 12987-12992	13	44
42	Epitaxial 1D electron transport layers for high-performance perovskite solar cells. *Nanoscale*, **2015**, 7, 15284-90	7.7	44
41	Vapor-Assisted Ex-Situ Doping of Carbon Nanotube toward Efficient and Stable Perovskite Solar Cells. *Nano Letters*, **2019**, 19, 2223-2230	11.5	43
40	Stable and Reproducible 2D/3D Formamidinium-Lead-Iodide Perovskite Solar Cells. *ACS Applied Energy Materials*, **2019**, 2, 2486-2493	6.1	42
39	Enhancement of the photovoltaic performance of $CH_3NH_3PbI_3$ perovskite solar cells through a dichlorobenzene-functionalized hole-transporting material. *ChemPhysChem*, **2014**, 15, 2595-603	3.2	42
38	Impact of Excess CH3NH3I on Free Carrier Dynamics in High-Performance Nonstoichiometric Perovskites. *Journal of Physical Chemistry C*, **2017**, 121, 3143-3148	3.8	41
37	Halide Perovskites for Tandem Solar Cells. *Journal of Physical Chemistry Letters*, **2017**, 8, 1999-2011	6.4	41

36	Surface Reconstruction of Halide Perovskites During Post-treatment. *Journal of the American Chemical Society*, **2021**, 143, 6781-6786	16.4	39
35	A Cryogenic Process for Antisolvent-Free High-Performance Perovskite Solar Cells. *Advanced Materials*, **2018**, 30, e1804402	24	39
34	Two-step deposition method for high-efficiency perovskite solar cells. *MRS Bulletin*, **2015**, 40, 654-659	3.2	38
33	Solid-phase hetero epitaxial growth of δ-phase formamidinium perovskite. *Nature Communications*, **2020**, 11, 5514	17.4	38
32	Surface-2D/Bulk-3D Heterophased Perovskite Nanograins for Long-Term-Stable Light-Emitting Diodes. *Advanced Materials*, **2020**, 32, e1905674	24	36
31	Controlled Redox of Lithium-Ion Endohedral Fullerene for Efficient and Stable Metal Electrode-Free Perovskite Solar Cells. *Journal of the American Chemical Society*, **2019**, 141, 16553-16558	16.4	35
30	Electro-spray deposition of a mesoporous TiO2 charge collection layer: toward large scale and continuous production of high efficiency perovskite solar cells. *Nanoscale*, **2015**, 7, 20725-33	7.7	33
29	17% efficient perovskite solar mini-module via hexamethylphosphoramide (HMPA)-adduct-based large-area D-bar coating. *Journal of Materials Chemistry A*, **2020**, 8, 9345-9354	13	31
28	Stability-limiting heterointerfaces of perovskite photovoltaics.. *Nature*, **2022**,	50.4	31
27	Rethinking the A cation in halide perovskites.. *Science*, **2022**, 375, eabj1186	33.3	29
26	Scalable perovskite coating via anti-solvent-free Lewis acid–base adduct engineering for efficient perovskite solar modules. *Journal of Materials Chemistry A*, **2021**, 9, 3018-3028	13	27
25	Efficient surface passivation of perovskite films by a post-treatment method with a minimal dose. *Journal of Materials Chemistry A*, **2021**, 9, 3441-3450	13	25
24	Mesoscopic perovskite solar cells with an admixture of nanocrystalline TiO2 and Al2O3: role of interconnectivity of TiO2 in charge collection. *Nanoscale*, **2016**, 8, 6341-51	7.7	24
23	Modulation of photovoltage in mesoscopic perovskite solar cell by controlled interfacial electron injection. *RSC Advances*, **2015**, 5, 47334-47340	3.7	23
22	Sixfold enhancement of photocurrent by surface charge controlled high density quantum dot coating. *Chemical Communications*, **2013**, 49, 6448-50	5.8	19
21	Stable and Efficient Methylammonium-, Cesium-, and Bromide-Free Perovskite Solar Cells by In-Situ Interlayer Formation. *Advanced Functional Materials*, **2021**, 31, 2007520	15.6	19
20	Rationally Induced Interfacial Dipole in Planar Heterojunction Perovskite Solar Cells for Reduced J-V Hysteresis. *Advanced Energy Materials*, **2018**, 8, 1800568	21.8	19
19	Effect of double blocking layers at TiO2/Sb2S3 and Sb2S3/spiro-MeOTAD interfaces on photovoltaic performance. *Faraday Discussions*, **2014**, 176, 287-99	3.6	14

18	Quantum confinement effect of CdSe induced by nanoscale solvothermal reaction. *Nanoscale*, **2012** , 4, 6642-8	7.7	13
17	Dynamic structural property of organic-inorganic metal halide perovskite. *IScience*, **2021**, 24, 101959	6.1	12
16	Panchromatic light harvesting by dye- and quantum dot-sensitized solar cells. *Solar Energy*, **2014**, 109, 183-188	6.8	10
15	Nanocrystalline Polymorphic Energy Funnels for Efficient and Stable Perovskite Light-Emitting Diodes. *ACS Energy Letters*, **2021**, 6, 1821-1830	20.1	10
14	Enhancing Performance and Stability of Tin Halide Perovskite Light Emitting Diodes via Coordination Engineering of Lewis AcidBase Adducts. *Advanced Functional Materials*,2106974	15.6	9
13	Hybrid Integrated Photomedical Devices for Wearable Vital Sign Tracking. *ACS Sensors*, **2020**, 5, 1582-1588	9.2	8
12	Surface Defect Engineering of Metal Halide Perovskites for Photovoltaic Applications. *ACS Energy Letters*, **2022**, 7, 1230-1239	20.1	8
11	Effect of Fluorine Substitution in a Hole Dopant on the Photovoltaic Performance of Perovskite Solar Cells. *ACS Energy Letters*, **2022**, 7, 741-748	20.1	4
10	A Sharp Focus on Perovskite Solar Cells at Sungkyun International Solar Forum (SISF). *ACS Energy Letters*, **2016**, 1, 500-502	20.1	4
9	APbI3 (A = CH3NH3 and HC(NH2)2) Perovskite Solar Cells: From Sensitization to Planar Heterojunction **2016**, 223-253		3
8	Semiconducting Metal Oxides for High Performance Perovskite Solar Cells **2018**, 241-265		3
7	Perovskite solar cell. *Vacuum Magazine*, **2014**, 1, 10-13		2
6	Perovskite Light-Emitting Diodes: Surface-2D/Bulk-3D Heterophased Perovskite Nanograins for Long-Term-Stable Light-Emitting Diodes (Adv. Mater. 1/2020). *Advanced Materials*, **2020**, 32, 2070007	24	2
5	In-Situ Nano-Auger Probe of Chloride-Ions during CHNHPbICl Perovskite Formation. *Materials*, **2021** , 14,	3.5	2
4	Mixed-Dimensional Formamidinium Bismuth Iodides Featuring In-Situ Formed Type-I Band Structure for Convolution Neural Networks.. *Advanced Science*, **2022**, e2200168	13.6	2
3	Homogeneously Miscible Fullerene inducing Vertical Gradient in Perovskite Thin-Film toward Highly Efficient Solar Cells. *Advanced Energy Materials*,2200877	21.8	2
2	Perovskite Solar Cells: Moth-Eye TiO2 Layer for Improving Light Harvesting Efficiency in Perovskite Solar Cells (Small 18/2016). *Small*, **2016**, 12, 2530-2530	11	1
1	Recent Advances on Tin Oxide Electron Transport Layer for High-Performance Perovskite Solar Cells. *Ceramist*, **2022**, 25, 31-51	0.3	