

Yun Seog Lee

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Cu ₂ ZnSnSe ₄ Thin-Film Solar Cells by Thermal Co-evaporation with 11.6% Efficiency and Improved Minority Carrier Diffusion Length. <i>Advanced Energy Materials</i> , 2015, 5, 1401372.	19.5	408
2	High Efficiency Cu ₂ ZnSn(S,Se) ₄ Solar Cells by Applying a Double In ₂ S ₃ /CdS Emitter. <i>Advanced Materials</i> , 2014, 26, 7427-7431.	21.0	400
3	Atomic Layer Deposited Gallium Oxide Buffer Layer Enables 1.2 V Open-Circuit Voltage in Cuprous Oxide Solar Cells. <i>Advanced Materials</i> , 2014, 26, 4704-4710.	21.0	242
4	3.88% Efficient Tin Sulfide Solar Cells using Congruent Thermal Evaporation. <i>Advanced Materials</i> , 2014, 26, 7488-7492.	21.0	227
5	Photovoltaic Materials and Devices Based on the Alloyed Kesterite Absorber (Ag _x Cu _{1-x}) ₂ ZnSnSe ₄ . <i>Advanced Energy Materials</i> , 2016, 6, 1502468.	19.5	226
6	Monolithic Perovskite-CIGS Tandem Solar Cells via In Situ Band Gap Engineering. <i>Advanced Energy Materials</i> , 2015, 5, 1500799.	19.5	219
7	Ultrathin amorphous zinc-tin-oxide buffer layer for enhancing heterojunction interface quality in metal-oxide solar cells. <i>Energy and Environmental Science</i> , 2013, 6, 2112.	30.8	160
8	Improved Cu ₂ O-Based Solar Cells Using Atomic Layer Deposition to Control the Cu Oxidation State at the p-n Junction. <i>Advanced Energy Materials</i> , 2014, 4, 1301916.	19.5	142
9	Hall mobility of cuprous oxide thin films deposited by reactive direct-current magnetron sputtering. <i>Applied Physics Letters</i> , 2011, 98, .	3.3	120
10	Phase transition-induced band edge engineering of BiVO ₄ to split pure water under visible light. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 13774-13778.	7.1	116
11	Nitrogen-doped cuprous oxide as a p-type hole-transporting layer in thin-film solar cells. <i>Journal of Materials Chemistry A</i> , 2013, 1, 15416.	10.3	108
12	Photovoltaic Device with over 5% Efficiency Based on an n-type Ag ₂ ZnSnSe ₄ Absorber. <i>Advanced Energy Materials</i> , 2016, 6, 1601182.	19.5	102
13	Band offsets of n-type electron-selective contacts on cuprous oxide (Cu ₂ O) for photovoltaics. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	96
14	Ultrathin high band gap solar cells with improved efficiencies from the world's oldest photovoltaic material. <i>Nature Communications</i> , 2017, 8, 682.	12.8	94
15	Ag ₂ ZnSn(S,Se) ₄ : A highly promising absorber for thin film photovoltaics. <i>Journal of Chemical Physics</i> , 2016, 144, 104704.	3.0	86
16	High Photocurrent in Silicon Photoanodes Catalyzed by Iron Oxide Thin Films for Water Oxidation. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 423-427.	13.8	75
17	Atomic Layer Deposited Aluminum Oxide for Interface Passivation of Cu ₂ ZnSn(S,Se) ₄ Thin-Film Solar Cells. <i>Advanced Energy Materials</i> , 2016, 6, 1600198.	19.5	75
18	Carrier-resolved photo-Hall effect. <i>Nature</i> , 2019, 575, 151-155.	27.8	66

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19	Materials perspectives for next-generation low-cost tandem solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2018, 180, 350-357.	6.2	60
20	Atomic-scale Observation of Oxygen Substitution and Its Correlation with Hole-Transport Barriers in $\text{Cu}_2\text{ZnSnSe}_4$ Thin-Film Solar Cells. <i>Advanced Energy Materials</i> , 2016, 6, 1501902.	19.5	56
21	Back Contact Engineering for Increased Performance in Kesterite Solar Cells. <i>Advanced Energy Materials</i> , 2017, 7, 1602585.	19.5	54
22	The impact of sodium on the sub-bandgap states in CZTSe and CZTS. <i>Applied Physics Letters</i> , 2015, 106, .	3.3	51
23	Preparation of single-phase SnSe thin-films and modification of electrical properties via stoichiometry control for photovoltaic application. <i>Journal of Alloys and Compounds</i> , 2017, 722, 474-481.	5.5	50
24	10.5% efficient polymer and amorphous silicon hybrid tandem photovoltaic cell. <i>Nature Communications</i> , 2015, 6, 6391.	12.8	45
25	Investigation of Defect-Tolerant Perovskite Solar Cells with Long-Term Stability via Controlling the Self-Doping Effect. <i>Advanced Energy Materials</i> , 2021, 11, 2100555.	19.5	38
26	Vapor transport deposited tin monosulfide for thin-film solar cells: effect of deposition temperature and duration. <i>Journal of Materials Chemistry A</i> , 2019, 7, 7186-7193.	10.3	35
27	Unveiling the carrier transport mechanism in epitaxial graphene for forming wafer-scale, single-domain graphene. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 4082-4086.	7.1	34
28	Industrial perspectives on earth abundant, multinary thin film photovoltaics. <i>Semiconductor Science and Technology</i> , 2017, 32, 033004.	2.0	31
29	Unconventional kesterites: The quest to reduce band tailing in CZTSSe. <i>Current Opinion in Green and Sustainable Chemistry</i> , 2017, 4, 29-36.	5.9	29
30	Effects of Postsynthesis Thermal Conditions on Methylammonium Lead Halide Perovskite: Band Bending at Grain Boundaries and Its Impacts on Solar Cell Performance. <i>Journal of Physical Chemistry C</i> , 2016, 120, 21330-21335.	3.1	25
31	Compositional effects in $\text{Ag}_2\text{ZnSnSe}_4$ thin films and photovoltaic devices. <i>Acta Materialia</i> , 2017, 126, 383-388.	7.9	25
32	Determining interface properties limiting open-circuit voltage in heterojunction solar cells. <i>Journal of Applied Physics</i> , 2017, 121, .	2.5	24
33	Elucidating Ionic Programming Dynamics of Metal-Oxide Electrochemical Memory for Neuromorphic Computing. <i>Advanced Electronic Materials</i> , 2021, 7, 2100185.	5.1	20
34	Low contact resistivity of metals on nitrogen-doped cuprous oxide (Cu_2O) thin-films. <i>Journal of Applied Physics</i> , 2012, 112, .	2.5	19
35	X-ray absorption spectroscopy elucidates the impact of structural disorder on electron mobility in amorphous zinc-tin-oxide thin films. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	19
36	Scalable High-Efficiency Bi-Facial Solar Evaporator with a Dendritic Copper Oxide Wick. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 11869-11878.	8.0	16

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37	Interfacial Solar Evaporator— Physical Principles and Fabrication Methods. International Journal of Precision Engineering and Manufacturing - Green Technology, 2021, 8, 1347-1367.	4.9	16
38	Textured conducting glass by nanosphere lithography for increased light absorption in thin-film solar cells. Journal Physics D: Applied Physics, 2014, 47, 085105.	2.8	13
39	Chemical Consequences of Alkali Inhomogeneity in $\text{Cu}_2\text{ZnSnS}_4$ Thin-Film Solar Cells. Advanced Energy Materials, 2015, 5, 1500922.	19.5	13
40	Confined Growth of High-quality Single-Crystal MAPbBr_3 by Inverse Temperature Crystallization for Photovoltaic Applications. Electronic Materials Letters, 2021, 17, 347-354.	2.2	12
41	Earth abundant materials for high efficiency heterojunction thin film solar cells. , 2009, , .		11
42	Solar Cells: High Efficiency $\text{Cu}_2\text{ZnSn}(\text{S},\text{Se})_4$ Solar Cells by Applying a Double $\text{In}_2\text{S}_3/\text{CdS}$ Emitter (Adv.) Tj ETQq0 0 0,rgBT /Overlock 10 Tf	21.0	10
43	Vapor-transport-deposited orthorhombic SnSe thin films: A potential cost-effective absorber material for solar cell applications. Solar Rrl, 2022, 6, 2100676.	5.8	10
44	Semitransparent Perovskite Solar Cells with Enhanced Light Utilization Efficiencies by Transferable Ag Nanogrid Electrodes. ACS Applied Materials & Interfaces, 2021, 13, 58475-58485.	8.0	9
45	Two-Step Annealing Study of Cuprous Oxide for Photovoltaic Applications. IEEE Journal of Photovoltaics, 2015, 5, 1476-1481.	2.5	5
46	Record Efficiencies for Selenium Photovoltaics and Application to Indoor Solar Cells. , 2017, , .		5
47	Flexible kesterite solar cells on ceramic substrates for advanced thermal processing. , 2015, , .		3
48	Fundamentals, impedance, and performance of solid-state Li-metal microbatteries. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, 033212.	2.1	3
49	Growth and p-type doping of cuprous oxide thin-films for photovoltaic applications. , 2012, , .		2
50	Low-resistance earth-abundant metal contacts to nitrogen-doped cuprous oxide thin films. , 2012, , .		1
51	Evolution of metal impurities during crystalline silicon solar cell processing. Conference Record of the IEEE Photovoltaic Specialists Conference, 2008, , .	0.0	0
52	Phase-pure evaporation of tin (II) sulfide for solar cell applications. , 2014, , .		0
53	Optimization of Silver-alloying for improved photovoltaic properties of CZTSSe . , 2016, , .		0