Jae Sung Yun

List of Publications by Year
in descending order

58 papers	4,109 citations	218381 26 h-index	161609 54 g-index
62 all docs	62 docs citations	62 times ranked	5841 citing authors

#	Article	IF	Citations
1	Spatially confined atomic dispersion of metals in thermally reduced graphene oxide films. Carbon, 2022, 188, 367-375.	5.4	2
2	Engineering of Interface and Bulk Properties in Cu₂ZnSn(S,Se)₄ Thin-Film Solar Cells with Ultrathin CuAlO₂ Intermediate Layer and Ge Doping. ACS Applied Energy Materials, 2022, 5, 2024-2035.	2.5	16
3	Enhancing CZTSSe solar cells through electric field induced ion migration. Journal of Materials Chemistry A, 2022, 10, 5642-5649.	5.2	12
4	Polymethyl Methacrylate as an Interlayer Between the Halide Perovskite and Copper Phthalocyanine Layers for Stable and Efficient Perovskite Solar Cells. Advanced Functional Materials, 2022, 32, .	7.8	30
5	Controllable Acceleration and Deceleration of Charge Carrier Transport in Metalâ€Halide Perovskite Singleâ€Crystal by Csâ€Cation Induced Bandgap Engineering. Small, 2022, 18, e2107680.	5.2	3
6	Revealing the Dynamics of the Thermal Reaction between Copper and Mixed Halide Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 20866-20874.	4.0	6
7	Suppressing Halide Segregation in Wide-Band-Gap Mixed-Halide Perovskite Layers through Post-Hot Pressing. ACS Applied Materials & Interfaces, 2022, , .	4.0	4
8	Kinetics of light-induced degradation in semi-transparent perovskite solar cells. Solar Energy Materials and Solar Cells, 2021, 219, 110776.	3.0	29
9	Achieving Low <i>V</i>_{OC}-deficit Characteristics in Cu₂ZnSn(S,Se)₄ Solar Cells through Improved Carrier Separation. ACS Applied Materials & Interfaces, 2021, 13, 429-437.	4.0	27
10	Enhanced Holeâ€Carrier Selectivity in Wide Bandgap Halide Perovskite Photovoltaic Devices for Indoor Internet of Things Applications. Advanced Functional Materials, 2021, 31, 2008908.	7.8	31
11	Suppression of Defects Through Cation Substitution: A Strategic Approach to Improve the Performance of Kesterite Cu₂ZnSn(S,Se)₄ Solar Cells Under Indoor Light Conditions. Solar Rrl, 2021, 5, 2100020.	3.1	10
12	Transparent Electrodes with Enhanced Infrared Transmittance for Semitransparent and Four-Terminal Tandem Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 30497-30503.	4.0	11
13	Probing Charge Carrier Properties and Ion Migration Dynamics of Indoor Halide Perovskite PV Devices Using Topâ€and Bottomâ€Illumination SPM Studies. Advanced Energy Materials, 2021, 11, 2101739.	10.2	9
14	Selfâ€Assembled Perovskite Nanoislands on CH₃NH₃PbI₃ Cuboid Single Crystals by Energetic Surface Engineering. Advanced Functional Materials, 2021, 31, 2105542.	7.8	9
15	Unraveling the hysteretic behavior at double cations-double halides perovskite - electrode interfaces. Nano Energy, 2021, 89, 106428.	8.2	11
16	Contactless Series Resistance Imaging of Perovskite Solar Cells via Inhomogeneous Illumination. Solar Rrl, 2021, 5, 2100655.	3.1	2
17	Microstructural Evaluation of Phase Instability in Large Bandgap Metal Halide Perovskites. ACS Nano, 2021, 15, 20391-20402.	7.3	8
18	Selfâ€Assembled Perovskite Nanoislands on CH₃NH₃PbI₃ Cuboid Single Crystals by Energetic Surface Engineering (Adv. Funct. Mater. 50/2021). Advanced Functional Materials, 2021, 31, .	7.8	1

#	Article	IF	Citations
19	Device design rules and operation principles of high-power perovskite solar cells for indoor applications. Nano Energy, 2020, 68, 104321.	8.2	70
20	Investigation of low intensity light performances of kesterite CZTSe, CZTSSe, and CZTS thin film solar cells for indoor applications. Journal of Materials Chemistry A, 2020, 8, 14538-14544.	5.2	40
21	Focussed Review of Utilization of Graphene-Based Materials in Electron Transport Layer in Halide Perovskite Solar Cells: Materials-Based Issues. Energies, 2020, 13, 6335.	1.6	7
22	Transparent Electrodes Consisting of a Surfaceâ€Treated Buffer Layer Based on Tungsten Oxide for Semitransparent Perovskite Solar Cells and Fourâ€Terminal Tandem Applications. Small Methods, 2020, 4, 2000074.	4.6	41
23	Unveiling the Relationship between the Perovskite Precursor Solution and the Resulting Device Performance. Journal of the American Chemical Society, 2020, 142, 6251-6260.	6.6	103
24	Unveiling the Importance of Precursor Preparation for Highly Efficient and Stable Phenethylammoniumâ€Based Perovskite Solar Cells. Solar Rrl, 2020, 4, 1900463.	3.1	2
25	Unveiling the Importance of Precursor Preparation for Highly Efficient and Stable Phenethylammoniumâ€Based Perovskite Solar Cells. Solar Rrl, 2020, 4, 2070043.	3.1	0
26	Chlorine Incorporation in Perovskite Solar Cells for Indoor Light Applications. Cell Reports Physical Science, 2020, 1, 100273.	2.8	21
27	Fluorine-mediated porosity and crystal-phase tailoring of meso-macroporous F TiO2 nanofibers and their enhanced photocatalytic performance. Thin Solid Films, 2019, 689, 137523.	0.8	1
28	Improvement of Csâ€(FAPbI₃)_{0.85}(MAPbBr₃)_{0.15} Quality Via DMSOâ€Moleculeâ€Control to Increase the Efficiency and Boost the Longâ€Term Stability of 1â€‰cm² Sized Planar Perovskite Solar Cells. Solar Rrl, 2019, 3, 1800338.	3.1	21
29	Light- and bias-induced structural variations in metal halide perovskites. Nature Communications, 2019, 10, 444.	5.8	81
30	Probing Facet-Dependent Surface Defects in MAPbI₃ Perovskite Single Crystals. Journal of Physical Chemistry C, 2019, 123, 14144-14151.	1.5	70
31	Reconsideration of the gallium nitride: Dual functionality as an electron transporter and transparent conductor for recyclable polymer solar cell substrate applications. Solar Energy Materials and Solar Cells, 2019, 200, 109971.	3.0	0
32	Exploring Inorganic Binary Alkaline Halide to Passivate Defects in Lowâ€Temperatureâ€Processed Planarâ€Structure Hybrid Perovskite Solar Cells. Advanced Energy Materials, 2018, 8, 1800138.	10.2	186
33	Mixed 3Dâ€"2D Passivation Treatment for Mixedâ€Cation Lead Mixedâ€Halide Perovskite Solar Cells for Higher Efficiency and Better Stability. Advanced Energy Materials, 2018, 8, 1703392.	10.2	289
34	Passivation of Grain Boundaries by Phenethylammonium in Formamidinium-Methylammonium Lead Halide Perovskite Solar Cells. ACS Energy Letters, 2018, 3, 647-654.	8.8	283
35	Humidityâ€Induced Degradation via Grain Boundaries of HC(NH₂)₂PbI₃ Planar Perovskite Solar Cells. Advanced Functional Materials, 2018, 28, 1705363.	7.8	260
36	Solution-Processed, Silver-Doped NiO_{<i>x</i>} as Hole Transporting Layer for High-Efficiency Inverted Perovskite Solar Cells. ACS Applied Energy Materials, 2018, 1, 561-570.	2.5	95

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37	The Role of Hydrogen from ALDâ€Al₂O₃ in Kesterite Cu₂ZnSnS₄ Solar Cells: Grain Surface Passivation. Advanced Energy Materials, 2018, 8, 1701940.	10.2	68
38	High-Efficiency Rubidium-Incorporated Perovskite Solar Cells by Gas Quenching. ACS Energy Letters, 2017, 2, 438-444.	8.8	247
39	Spatial Distribution of Lead Iodide and Local Passivation on Organo-Lead Halide Perovskite. ACS Applied Materials & Interfaces, 2017, 9, 6072-6078.	4.0	62
40	An effective method of predicting perovskite solar cell lifetimeâ€"Case study on planar CH 3 NH 3 PbI 3 and HC(NH 2) 2 PbI 3 perovskite solar cells and hole transfer materials of spiro-OMeTAD and PTAA. Solar Energy Materials and Solar Cells, 2017, 162, 41-46.	3.0	77
41	Lessons Learnt from Spatially Resolved Electroâ€•and Photoluminescence Imaging: Interfacial Delamination in CH₃NH₃PbI₃ Planar Perovskite Solar Cells upon Illumination. Advanced Energy Materials, 2017, 7, 1602111.	10.2	50
42	Overcoming the Challenges of Large-Area High-Efficiency Perovskite Solar Cells. ACS Energy Letters, 2017, 2, 1978-1984.	8.8	130
43	Critical Role of Grain Boundaries for Ion Migration in Formamidinium and Methylammonium Lead Halide Perovskite Solar Cells. Advanced Energy Materials, 2016, 6, 1600330.	10.2	360
44	Beneficial Effects of PbI₂ Incorporated in Organoâ€Lead Halide Perovskite Solar Cells. Advanced Energy Materials, 2016, 6, 1502104.	10.2	387
45	Electro- and photoluminescence imaging as fast screening technique of the layer uniformity and device degradation in planar perovskite solar cells. Journal of Applied Physics, 2016, 120, .	1.1	27
46	Nucleation and Growth Control of HC(NH2)2PbI3 for Planar Perovskite Solar Cell. Journal of Physical Chemistry C, 2016, 120, 11262-11267.	1.5	80
47	Electric field induced reversible and irreversible photoluminescence responses in methylammonium lead iodide perovskite. Journal of Materials Chemistry C, 2016, 4, 9060-9068.	2.7	77
48	CsPbIBr₂ Perovskite Solar Cell by Spray-Assisted Deposition. ACS Energy Letters, 2016, 1, 573-577.	8.8	230
49	Correlation of the crystal orientation and electrical properties of silicon thin films on glass crystallized by line focus diode laser. Thin Solid Films, 2016, 609, 12-18.	0.8	5
50	Characterization of a Cu2 ZnSnS4 solar cell fabricated by sulfurization of metallic precursor Mo/Zn/Cu/Sn. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2074-2079.	0.8	6
51	Benefit of Grain Boundaries in Organicâ€"Inorganic Halide Planar Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2015, 6, 875-880.	2.1	422
52	Micro-structural defects in polycrystalline silicon thin-film solar cells on glass by solid-phase crystallisation and laser-induced liquid-phase crystallisation. Solar Energy Materials and Solar Cells, 2015, 132, 282-288.	3.0	20
53	Effect of deposition temperature on electron-beam evaporated polycrystalline silicon thin-film and crystallized by diode laser. Applied Physics Letters, 2014, 104, .	1.5	13
54	Photoluminescence Characterization of Phosphorus Diffusion and Hydrogenation in Continuous Wave Diode Laser Crystallized Si Thin-Film on Glass.. Materials Research Society Symposia Proceedings, 2014, 1638, 1.	0.1	0

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55	Diode laser crystallization processes of Si thin-film solar cells on glass. EPJ Photovoltaics, 2014, 5, 55204.	0.8	7
56	Material characteristics of crystalline Si thin-film solar cells on glass fabricated by diode laser crystallization. , 2013, , .		0
57	Polycrystalline silicon on glass thin-film solar cells: A transition from solid-phase to liquid-phase crystallised silicon. Solar Energy Materials and Solar Cells, 2013, 119, 246-255.	3.0	48
58	Fabrication of Thin and Thick Films of Photocatalytic Titania. Advances in Science and Technology, 0, , .	0.2	0