

Hae-Seok Lee

List of Publications by Year in descending order

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66
papers

1,735
citations

448610

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41
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docs citations

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times ranked

3572
citing authors

#	ARTICLE	IF	CITATIONS
1	Sustainable Electrochemical NO Capture and Storage System Based on the Reversible Fe ²⁺ /Fe ³⁺ +EDTA Redox Reaction. <i>Catalysts</i> , 2022, 12, 79.	1.6	3
2	Potential of NiOx/Nickel Silicide/n+ Poly-Si Contact for Perovskite/TOPCon Tandem Solar Cells. <i>Energies</i> , 2022, 15, 870.	1.6	5
3	Utilization of Multifunctional Environment-Friendly Organic Dopants Inspired from Nature for Carbon Nanotube-Based Planar Heterojunction Silicon Solar Cells. <i>Advanced Energy and Sustainability Research</i> , 2022, 3, .	2.8	2
4	Wearable fabric supercapacitors based on <sc>CNTs</sc> and polyhedral <sc>ZnO</sc> with a wide potential window. <i>International Journal of Energy Research</i> , 2022, 46, 8186-8200.	2.2	5
5	Perovskite/Silicon Tandem Solar Cells with a V_{oc} of 1784 mV Based on an Industrially Feasible 25 cm ² TOPCon Silicon Cell. <i>ACS Applied Energy Materials</i> , 2022, 5, 5449-5456.	2.5	14
6	Lowering firing temperature of a p-type passivated emitter rear contact Si solar cell via current injection. <i>Solar Energy Materials and Solar Cells</i> , 2022, 239, 111587.	3.0	5
7	Toward Understanding Chalcopyrite Solar Cells via Advanced Characterization Techniques. <i>Advanced Materials Interfaces</i> , 2022, 9, .	1.9	1
8	Effective Recycling Method for Silicon Photovoltaic Modules With Electrical Sacrificial Layer. <i>IEEE Journal of Photovoltaics</i> , 2022, 12, 999-1004.	1.5	1
9	Ambient Air-Processed Wide-Bandgap Perovskite Solar Cells with Well-Controlled Film Morphology for Four-Terminal Tandem Application. <i>Solar Rrl</i> , 2022, 6, .	3.1	4
10	19.2%-Efficient Multicrystalline Silicon Solar Cells via Additive-Free Mechanical Grinding Surface Pretreatment for Diamond-Wire-Sawn Wafers. <i>IEEE Journal of Photovoltaics</i> , 2021, 11, 36-42.	1.5	4
11	Effective Surface Texturing of Diamond-Wire-Sawn Multicrystalline Silicon Wafers Via Crystallization of the Native Surface Amorphous Layer. <i>IEEE Journal of Photovoltaics</i> , 2021, 11, 43-49.	1.5	2
12	Monolithic Perovskite-Carrier Selective Contact Silicon Tandem Solar Cells Using Molybdenum Oxide as a Hole Selective Layer. <i>Energies</i> , 2021, 14, 3108.	1.6	7
13	Characterization of Potential-Induced Degradation and Recovery in CIGS Solar Cells. <i>Energies</i> , 2021, 14, 4628.	1.6	7
14	Novel Polymer-Based Organic/c-Si Monolithic Tandem Solar Cell: Enhanced Efficiency using Interlayer and Transparent Top Electrode Engineering. <i>Macromolecular Rapid Communications</i> , 2021, 42, 2100305.	2.0	4
15	W@Ag dendrites as efficient and durable electrocatalyst for solar-to-CO conversion using scalable photovoltaic-electrochemical system. <i>Applied Catalysis B: Environmental</i> , 2021, 297, 120427.	10.8	20
16	Characterization of MOCVD-Prepared CIS Solar Cells. <i>Energies</i> , 2021, 14, 7721.	1.6	2
17	Efficient n-i-p Monolithic Perovskite/Silicon Tandem Solar Cells with Tin Oxide via a Chemical Bath Deposition Method. <i>Energies</i> , 2021, 14, 7614.	1.6	7
18	Amorphous Silicon Thin Film Deposition for Poly-Si/SiO ₂ Contact Cells to Minimize Parasitic Absorption in the Near-Infrared Region. <i>Energies</i> , 2021, 14, 8199.	1.6	3

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19	Conformal perovskite films on 100Åcm ² textured silicon surface using two-step vacuum process. <i>Thin Solid Films</i> , 2020, 693, 137694.	0.8	17
20	Silicon Solar Cells: Multifunctional Effect of p-Doping, Antireflection, and Encapsulation by Polymeric Acid for High Efficiency and Stable Carbon Nanotube-Based Silicon Solar Cells (<i>Adv. Energy</i>) Tj ETQq0 010.0gBT /Overlock 10	10.2	40
21	Assessing the impact of R&D policy on PV market development: The case of South Korea. <i>Wiley Interdisciplinary Reviews: Energy and Environment</i> , 2020, 9, e366.	1.9	8
22	Multifunctional Effect of p-Doping, Antireflection, and Encapsulation by Polymeric Acid for High Efficiency and Stable Carbon Nanotube-Based Silicon Solar Cells. <i>Advanced Energy Materials</i> , 2020, 10, 1902389.	10.2	40
23	Historical Analysis of High-Efficiency, Large-Area Solar Cells: Toward Upscaling of Perovskite Solar Cells. <i>Advanced Materials</i> , 2020, 32, e2002202.	11.1	103
24	Variations in Minority Carrier-Trapping Effects Caused by Hydrogen Passivation in Multicrystalline Silicon Wafer. <i>Energies</i> , 2020, 13, 5783.	1.6	2
25	Carbon Nanotube Electrode-Based Perovskite-Silicon Tandem Solar Cells. <i>Solar Rrl</i> , 2020, 4, 2000353.	3.1	19
26	Novel Double Acidic Texturing Process for Saw-Damage-Free Kerfless Multicrystalline Silicon Wafers. <i>IEEE Journal of Photovoltaics</i> , 2020, 10, 1545-1551.	1.5	8
27	Absorber Delamination-Induced Shunt Defects in Alcohol-Based Solution-Processed Cu(In,Ga)(S,Se) ₂ Solar Modules. <i>ACS Applied Energy Materials</i> , 2020, 3, 10384-10392.	2.5	4
28	Dependence of the Optimization of the Front Grid Design in Passivated Emitter and Rear Contact c-Si Solar Cells on the Finger Width and the Aspect Ratio. <i>Journal of the Korean Physical Society</i> , 2020, 76, 774-780.	0.3	1
29	Perovskites fabricated on textured silicon surfaces for tandem solar cells. <i>Communications Chemistry</i> , 2020, 3, .	2.0	31
30	An Analysis of Fill Factor Loss Depending on the Temperature for the Industrial Silicon Solar Cells. <i>Energies</i> , 2020, 13, 2931.	1.6	7
31	Properties of Thermally Evaporated Titanium Dioxide as an Electron-Selective Contact for Silicon Solar Cells. <i>Energies</i> , 2020, 13, 678.	1.6	14
32	Layer-by-Layer Self-Assembly of Hollow Nitrogen-Doped Carbon Quantum Dots on Cationized Textured Crystalline Silicon Solar Cells for an Efficient Energy Down-Shift. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 10369-10381.	4.0	21
33	Effective Additive-Free Acidic-Solution Texturing for Surface-Damage-Free Kerfless Silicon Wafers. <i>IEEE Journal of Photovoltaics</i> , 2020, 10, 431-437.	1.5	5
34	Wet Chemical Oxidation to Improve Interfacial Properties of Al ₂ O ₃ /Si and Interface Analysis of Al ₂ O ₃ /SiO _x /Si Structure Using Surface Carrier Lifetime Simulation and Capacitance-Voltage Measurement. <i>Energies</i> , 2020, 13, 1803.	1.6	1
35	Sputtering of TiO ₂ for High-Efficiency Perovskite and 23.1% Perovskite/Silicon 4-Terminal Tandem Solar Cells. <i>ACS Applied Energy Materials</i> , 2019, 2, 6263-6268.	2.5	19
36	Surface Passivation of Boron Emitters on n-Type Silicon Solar Cells. <i>Sustainability</i> , 2019, 11, 3784.	1.6	2

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37	Role of polysilicon in poly-Si/SiO _x passivating contacts for high-efficiency silicon solar cells. RSC Advances, 2019, 9, 23261-23266.	1.7	39
38	Tunnel oxide passivating electron contacts for high-efficiency n-type silicon solar cells with amorphous silicon passivating hole contacts. Progress in Photovoltaics: Research and Applications, 2019, 27, 1104-1114.	4.4	14
39	Effective Contact Formation Method on High-Sheet-Resistance Boron-Doped Emitter With Current Injection. IEEE Journal of Photovoltaics, 2019, 9, 615-620.	1.5	5
40	Impact of Buffer Layer Process and Na on Shunt Paths of Monolithic Series-connected CIGSSe Thin Film Solar Cells. Scientific Reports, 2019, 9, 3666.	1.6	13
41	Passivation quality control in poly-Si/SiO ₂ /c-Si passivated contact solar cells with 734 mV implied open circuit voltage. Solar Energy Materials and Solar Cells, 2019, 189, 21-26.	3.0	46
42	Optimization of Controllable Factors in the Aluminum Silicon Eutectic Paste and Rear Silicon Nitride Mono-Passivation Layer of PERC Solar Cells. Metals and Materials International, 2018, 24, 664-671.	1.8	5
43	Study on hydrogen passivation behavior of SiN _x film and its thermal annealing effect. , 2018, , .		1
44	Potential induced degradation of n-type crystalline silicon solar cells with p ⁺ front junction. Energy Science and Engineering, 2017, 5, 30-37.	1.9	45
45	Effects of Plasma Enhanced Chemical Vapor Deposition Radio Frequency on the Properties of SiN _x :H Films. Journal of Nanoscience and Nanotechnology, 2017, 17, 4687-4693.	0.9	0
46	Characterization of Methylammonium Lead Iodide Perovskite Solar Cells by Surface Morphology Changes. Journal of Nanoscience and Nanotechnology, 2017, 17, 4817-4821.	0.9	2
47	Relationship between ion migration and interfacial degradation of CH ₃ NH ₃ PbI ₃ perovskite solar cells under thermal conditions. Scientific Reports, 2017, 7, 1200.	1.6	137
48	Effects of Annealing on Firing Stability of a Al ₂ O ₃ /SiN _x Stack Passivation Layer for Crystalline Silicon Solar Cells. Journal of Nanoscience and Nanotechnology, 2017, 17, 5050-5054.	0.9	3
49	Lifetime Analysis for Comparing POCl ₃ Diffused Emitter Doping Characteristics in p-Type Silicon Solar Cells Using QSSPC. Journal of Nanoscience and Nanotechnology, 2017, 17, 4914-4919.	0.9	1
50	Structural evolution of tunneling oxide passivating contact upon thermal annealing. Scientific Reports, 2017, 7, 12853.	1.6	48
51	Optical Transmittance Enhancement of Flexible Copper Film Electrodes with a Wetting Layer for Organic Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 38695-38705.	4.0	44
52	Investigation of Thermally Induced Degradation in CH ₃ NH ₃ PbI ₃ Perovskite Solar Cells using In-situ Synchrotron Radiation Analysis. Scientific Reports, 2017, 7, 4645.	1.6	177
53	Gapless point back surface field for the counter doping of large-area interdigitated back contact solar cells using a blanket shadow mask implantation process. Progress in Photovoltaics: Research and Applications, 2017, 25, 989-995.	4.4	4
54	Improved performance and thermal stability of perovskite solar cells prepared via a modified sequential deposition process. Organic Electronics, 2017, 41, 266-273.	1.4	21

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55	Investigation of damage caused by partial shading of $\text{CuIn}_x\text{Ga}_{1-x}\text{Se}_2$ photovoltaic modules with bypass diodes. Progress in Photovoltaics: Research and Applications, 2016, 24, 1035-1043.	4.4	38
56	Bendable Solar Cells from Stable, Flexible, and Transparent Conducting Electrodes Fabricated Using a Nitrogen-Doped Ultrathin Copper Film. Advanced Functional Materials, 2016, 26, 4180-4191.	7.8	100
57	UV Degradation and Recovery of Perovskite Solar Cells. Scientific Reports, 2016, 6, 38150.	1.6	269
58	Effects of Current-injection Firing with Ag Paste in a Boron Emitter. Scientific Reports, 2016, 6, 21553.	1.6	10
59	Influence of Particle Velocity of Copper on Emitter Contact by Cold-Spray Method. Journal of Thermal Spray Technology, 2016, 25, 465-472.	1.6	5
60	Electric-Field-Induced Degradation of Methylammonium Lead Iodide Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2016, 7, 3091-3096.	2.1	169
61	Electrocatalytic activity of NiO on silicon nanowires with a carbon shell and its application in dye-sensitized solar cell counter electrodes. Nanoscale, 2016, 8, 7761-7767.	2.8	28
62	Effects of Pre-annealing on Firing Stability of Atomic Layer-Deposited Al_2O_3 . Israel Journal of Chemistry, 2015, 55, 1075-1080.	1.0	1
63	Migration of Sn and Pb from Solder Ribbon onto Ag Fingers in Field-Aged Silicon Photovoltaic Modules. International Journal of Photoenergy, 2015, 2015, 1-7.	1.4	8
64	Graphene Quantum Dot Layers with Energy-Down-Shift Effect on Crystalline-Silicon Solar Cells. ACS Applied Materials & Interfaces, 2015, 7, 19043-19049.	4.0	49
65	Light trapping in bendable organic solar cells using silica nanoparticle arrays. Energy and Environmental Science, 2015, 8, 932-940.	15.6	50
66	Advanced yield strength of interconnector ribbon for photovoltaic module using crystallographic texture control. Metals and Materials International, 2014, 20, 229-232.	1.8	4