Hyeongsik Park

List of Publications by Year
in descending order

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66	710	623734	677142
papers	citations	14 h-index	22 g-index

68	68	68	630
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Application of rear-emitter silicon heterojunction solar cells with mitigation of the damage on the amorphous silicon by an atomic-layered ZnO. Journal of Materials Science: Materials in Electronics, 2021, 32, 3912-3919.	2.2	0
2	Influence on the Haze Effect of Si Thin-Film Solar Cell on Multi-Surface Textures of Periodic Honeycomb Glass. Transactions on Electrical and Electronic Materials, 2021, 22, 80-90.	1.9	3
3	Plasma etched PMMA/CaF2 anti-reflection coating for light weight PV module. Optical Materials, 2021, 112, 110813.	3.6	9
4	Current Status of Low-temperature TCO Electrode for Solar-cell Application: A Short Review. New & Renewable Energy, 2021, 17, 1-6.	0.4	2
5	Reactive-ion-etched glass surface with 2D periodic surface texture for application in solar cells. Optik, 2021, 229, 166304.	2.9	9
6	Design of front emitter layer for improving efficiency in silicon heterojunction solar cells via numerical calculations. Optik, 2021, 235, 166580.	2.9	5
7	Corrosion, LID and LeTID in Silicon PV Modules and Solution Methods to Improve Reliability. Transactions on Electrical and Electronic Materials, 2021, 22, 575-583.	1.9	5
8	Effect on the reduction of the barrier height in rear-emitter silicon heterojunction solar cells using Ar plasma-treated ITO film. Current Applied Physics, 2020, 20, 219-225.	2.4	9
9	Theoretical investigation of transparent front surface field layer on the performance of heterojunction silicon solar cell. Solar Energy Materials and Solar Cells, 2020, 204, 110238.	6.2	6
10	Computer modeling of the front surface field layer on the performance of the rear-emitter silicon heterojunction solar cell with 25 % efficiency. Optik, 2020, 205, 164011.	2.9	8
11	Surface Modifications for Light Trapping in Silicon Heterojunction Solar Cells: A Brief Review. Transactions on Electrical and Electronic Materials, 2020, 21, 349-354.	1.9	11
12	ITO: Zr bi-layers deposited by reactive O2 and Ar plasma with high work function for silicon heterojunction solar cells. Current Applied Physics, 2020, 20, 994-1000.	2.4	6
13	The light-trapping effect in various textured cover glass for enhancing the current density in silicon heterojunction solar cells. Optics Communications, 2020, 467, 125657.	2.1	3
14	Simulation of Silicon Heterojunction Solar Cells for High Efficiency with Lithium Fluoride Electron Carrier Selective Layer. Energies, 2020, 13, 1635.	3.1	10
15	A reliability study of silicon heterojunction photovoltaic modules exposed to damp heat testing. Microelectronic Engineering, 2019, 216, 111081.	2.4	12
16	Front and Back TCO Research Review of a-Si/c-Si Heterojunction with Intrinsic Thin Layer (HIT) Solar Cell. Transactions on Electrical and Electronic Materials, 2018, 19, 165-172.	1.9	29
17	Using the light scattering properties of multi-textured AZO films on inverted hemisphere textured glass surface morphologies to improve the efficiency of silicon thin film solar cells. Applied Surface Science, 2018, 447, 866-875.	6.1	18
18	Advanced Light scattering through various textured glass surface morphologies in thin film silicon solar cells. , 2018, , .		4

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19	HF etched glass substrates for improved thin-film solar cells. Heliyon, 2018, 4, e00835.	3.2	12
20	Efficient light trapping for maskless large area randomly textured glass structures with various haze ratios in silicon thin film solar cells. Solar Energy, 2018, 173, 1173-1180.	6.1	12
21	Fabrication of honeycomb textured glass substrate and nanotexturing of zinc oxide front electrode for its application in high efficiency thin film amorphous silicon solar cell. Journal of Photonics for Energy, 2017, 7, 025502.	1.3	6
22	Investigation of 3-dimensional structural morphology for enhancing light trapping with control of surface haze. Optical Materials, 2017, 66, 404-409.	3.6	9
23	Wideband Light Scattering of Periodic Micro Textured Glass Substrates for Silicon Thin-Film Solar Cells. Journal of Nanoscience and Nanotechnology, 2017, 17, 8562-8566.	0.9	6
24	Light scattering through multi-textured periodic glass surface morphologies for a-Si thin film solar cells. , 2017, , .		0
25	Light scattering through multi-textured periodic glass surface morphologies for a-Si thin film solar cells. , 2016, , .		2
26	Application of PCBM Layer as a Back Reflector of Micromorph Tandem Silicon Solar Cells. Journal of Nanoscience and Nanotechnology, 2016, 16, 10385-10388.	0.9	0
27	Effective Light Trapping in Thin Film Silicon Solar Cells with Nano- and Microscale Structures on Glass Substrate. Journal of Nanoscience and Nanotechnology, 2016, 16, 4978-4983.	0.9	2
28	Method for Fabricating Textured High-Haze ZnO:Al Transparent Conduction Oxide Films on Chemically Etched Glass Substrates. Journal of Nanoscience and Nanotechnology, 2016, 16, 4886-4892.	0.9	2
29	Improvement of hydrogenated amorphous silicon germanium thin film solar cells by different p-type contact layer. Materials Science in Semiconductor Processing, 2016, 41, 480-484.	4.0	19
30	Plasma Textured Glass Surface Morphologies for Amorphous Silicon Thin Film Solar Cells-A review. Transactions on Electrical and Electronic Materials, 2016, 17, 98-103.	1.9	14
31	Present Status of Thin Film Solar Cells Using Textured Surfaces: A Brief Review. Transactions on Electrical and Electronic Materials, 2016, 17, 275-279.	1.9	1
32	Study on the Structural and Mechanical Characteristics of ITO Films Deposited by Pulsed DC Magnetron Sputtering. Transactions on Electrical and Electronic Materials, 2016, 17, 351-354.	1.9	0
33	Light scattering effect of ITO:Zr/AZO films deposited on periodic textured glass surface morphologies for silicon thin film solar cells. Applied Physics A: Materials Science and Processing, 2015, 120, 823-828.	2.3	9
34	Influence of working pressure on the structural, optical and electrical properties of sputter deposited AZO thin films. Materials Science in Semiconductor Processing, 2015, 37, 29-36.	4.0	22
35	Uniform 3D hydrothermally deposited zinc oxide nanorods with high haze ratio. Materials Science in Semiconductor Processing, 2015, 37, 99-104.	4.0	14
36	SF6/Ar plasma textured periodic glass surface morphologies with high transmittance and haze ratio of ITO:Zr films for amorphous silicon thin film solar cells. Vacuum, 2015, 117, 91-97.	3.5	14

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37	Effect of light trapping in an amorphous silicon solar cell. Thin Solid Films, 2015, 587, 117-125.	1.8	15
38	Boron Doped Nanocrystalline Film with Improved Work Function as a Buffer Layer in Thin Film Silicon Solar Cells. Journal of Nanoscience and Nanotechnology, 2015, 15, 2241-2246.	0.9	3
39	Light management for enhanced efficiency of textured nâ€“iâ€“p type amorphous silicon solar cell. Solar Energy Materials and Solar Cells, 2015, 132, 348-355.	6.2	26
40	Effect of wet textured glass surface morphology on the haze ratio and aspect ratio for amorphous silicon thin film solar cells. Journal of Renewable and Sustainable Energy, 2014, 6, 053141.	2.0	10
41	Effective optimization of indium tin oxide films by a statistical approach for shallow emitter based crystalline silicon solar cell applications. Solar Energy Materials and Solar Cells, 2014, 125, 176-183.	6.2	17
42	Improvement of haze ratio of DC (direct current)-sputtered ZnO:Al thin films through HF (hydrofluoric acid) vapor texturing. Energy, 2014, 66, 20-24.	8.8	15
43	A statistical approach for the optimization of indium tin oxide films used as a front contact in amorphous/crystalline silicon heterojunction solar cells. Energy Conversion and Management, 2014, 87, 191-198.	9.2	11
44	RF magnetron sputtered ITO:Zr thin films for the high efficiency a-Si:H/c-Si heterojunction solar cells. Metals and Materials International, 2014, 20, 565-569.	3.4	17
45	Analysis of optical absorption and quantum efficiency due to light trapping in a nâ€“iâ€“p type amorphous silicon solar cell with textured back reflector. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 924-931.	1.8	19
46	A Novel Method to Make Boron-Doped Microcrystalline Silicon Thin Films with Optimal Crystalline Volume Fraction for Thin Films Solar Cell Applications. Journal of Nanoscience and Nanotechnology, 2014, 14, 9388-9394.	0.9	3
47	Study of Low Resistivity and High Work Function ITO Films Prepared by Oxygen Flow Rates and N₂O Plasma Treatment for Amorphous/Crystalline Silicon Heterojunction Solar Cells. Journal of Nanoscience and Nanotechnology, 2014, 14, 9237-9241.	0.9	11
48	Effects of Target Angle on the Properties of Aluminum Doped Zinc Oxide Films Prepared by DC Magnetron Sputtering for Thin Film Solar Cell Applications. Journal of Nanoscience and Nanotechnology, 2014, 14, 7710-7717.	0.9	8
49	Light trapping scheme of ICP-RIE glass texturing by SF6/Ar plasma for high haze ratio. Vacuum, 2013, 94, 87-91.	3.5	32
50	A buffer-layer/a-SiOx:H(p) window-layer optimization for thin film amorphous silicon based solar cells. Thin Solid Films, 2013, 546, 331-336.	1.8	23
51	Interfacial barrier height modification of indium tin oxide/a-Si:H(p) via control of density of interstitial oxygen for silicon heterojunction solar cell application. Thin Solid Films, 2013, 546, 342-346.	1.8	8
52	Inserted Layer of AZO Thin Film with High Work Function Between Transparent Conductive Oxide and <I>p</I>-Layer and Its Solar Cell Application. Journal of Nanoscience and Nanotechnology, 2013, 13, 7116-7118.	0.9	4
53	Enhancing Light Trapping Properties of Thin Film Solar Cells by Plasmonic Effect of Silver Nanoparticles. Journal of Nanoscience and Nanotechnology, 2013, 13, 7860-7864.	0.9	7
54	Reduction of Tail State on Boron Doped Hydrogenated Amorphous Silicon Oxide Films Prepared at High Hydrogen Dilution. Journal of Nanoscience and Nanotechnology, 2013, 13, 7826-7833.	0.9	8

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55	Diffused transmission and texture-induced defect with transparent conducting oxide front electrode of amorphous silicon solar cell. Semiconductor Science and Technology, 2013, 28, 115012.	2.0	10
56	Influence of SnO2:F/ZnO:Al bi-layer as a front electrode on the properties of p-i-n amorphous silicon based thin film solar cells. Applied Physics Letters, 2013, 102, .	3.3	17
57	The Compromise Condition for High Performance of the Single Silicon Heterojunction Solar Cells. International Journal of Photoenergy, 2012, 2012, 1-6.	2.5	0
58	Impedance Spectroscopic Study of p-i-n Type a-Si Solar Cell by Doping Variation of p-Type Layer. International Journal of Photoenergy, 2012, 2012, 1-7.	2.5	9
59	Effect of ultraviolet light exposure to boron doped hydrogenated amorphous silicon oxide thin film. Applied Surface Science, 2012, 260, 17-22.	6.1	7
60	The role of buffer layer between TCO and p-layer in improving series resistance and carrier recombination of a-Si:H solar cells. Materials Research Bulletin, 2012, 47, 3023-3026.	5.2	8
61	The mechanisms of negative oxygen ion formation from Al-doped ZnO target and the improvements in electrical and optical properties of thin films using off-axis dc magnetron sputtering at low temperature. Semiconductor Science and Technology, 2011, 26, 105022.	2.0	15
62	Electrical mechanism analysis of Al2O3 doped zinc oxide thin films deposited by rotating cylindrical DC magnetron sputtering. Thin Solid Films, 2011, 519, 6910-6915.	1.8	10
63	rf-Magnetron sputtered ITO thin films for improved heterojunction solar cell applications. Current Applied Physics, 2010, 10, S506-S509.	2.4	52
64	Optical and electrical properties of 2wt.% Al2O3-doped ZnO films and characteristics of Al-doped ZnO thin-film transistors with ultra-thin gate insulators. Thin Solid Films, 2010, 518, 2808-2811.	1.8	43
65	Analytical estimation of high-frequency properties of RF micro-inductors prepared by direct-write techniques. Journal of Electroceramics, 2009, 23, 103-109.	2.0	1
66	Effect of Hydrogen Peroxide on the Stability of Undoped p-Type ZnO Prepared by Magnetron Sputtering. Journal of the Korean Physical Society, 2008, 52, 606-611.	0.7	7