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	rf-Magnetron sputtered ITO thin films for improved heterojunction solar cell applications. Current Applied Physics, 2010, 10, S506-S509.	2.4	52
2	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
3	Light trapping scheme of ICP-RIE glass texturing by SF6/Ar plasma for high haze ratio. Vacuum, 2013, 94, 87-91.	3.5	32
4	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
5	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
6	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
7	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
8	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
9	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
10	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
11	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
12	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
13	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
14	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
15	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
16	Effect of light trapping in an amorphous silicon solar cell. Thin Solid Films, 2015, 587, 117-125.	1.8	15
17	Uniform 3D hydrothermally deposited zinc oxide nanorods with high haze ratio. Materials Science in Semiconductor Processing, 2015, 37, 99-104.	4.0	14
18	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

#	Article	IF	Citations
19	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
20	HF etched glass substrates for improved thin-film solar cells. Heliyon, 2018, 4, e00835.	3.2	12
21	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
22	A reliability study of silicon heterojunction photovoltaic modules exposed to damp heat testing. Microelectronic Engineering, 2019, 216, 111081.	2.4	12
23	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
24	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
25	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
26	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
27	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
28	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
29	Simulation of Silicon Heterojunction Solar Cells for High Efficiency with Lithium Fluoride Electron Carrier Selective Layer. Energies, 2020, 13, 1635.	3.1	10
30	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
31	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
32	Investigation of 3-dimensional structural morphology for enhancing light trapping with control of surface haze. Optical Materials, 2017, 66, 404-409.	3.6	9
33	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
34	Plasma etched PMMA/CaF2 anti-reflection coating for light weight PV module. Optical Materials, 2021, 112, 110813.	3.6	9
35	Reactive-ion-etched glass surface with 2D periodic surface texture for application in solar cells. Optik, 2021, 229, 166304.	2.9	9
36	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

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37	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
38	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
39	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
40	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
41	Effect of ultraviolet light exposure to boron doped hydrogenated amorphous silicon oxide thin film. Applied Surface Science, 2012, 260, 17-22.	6.1	7
42	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
43	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
44	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
45	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
46	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
47	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
48	Design of front emitter layer for improving efficiency in silicon heterojunction solar cells via numerical calculations. Optik, 2021, 235, 166580.	2.9	5
49	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
50	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
51	Advanced Light scattering through various textured glass surface morphologies in thin film silicon solar cells. , 2018, , .		4
52	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
53	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
54	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

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55	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
56	Light scattering through multi-textured periodic glass surface morphologies for a-Si thin film solar cells. , 2016, , .		2
57	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
58	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
59	Current Status of Low-temperature TCO Electrode for Solar-cell Application: A Short Review. New & Renewable Energy, 2021, 17, 1-6.	0.4	2
60	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
61	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
62	The Compromise Condition for High Performance of the Single Silicon Heterojunction Solar Cells. International Journal of Photoenergy, 2012, 2012, 1-6.	2.5	0
63	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
64	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
65	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
66	Light scattering through multi-textured periodic glass surface morphologies for a-Si thin film solar cells. , 2017, , .		0