

Hyo Sik Chang

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

44
papers

230
citations

10
h-index

13
g-index

49
ext. papers

291
ext. citations

2.9
avg, IF

3.27
L-index

#	Paper	IF	Citations
44	Kerfless Si Wafering Using Al Metal Paste, Epoxy and Ni Electroplating as Stress-Induced Layer. <i>Journal of Korean Institute of Metals and Materials</i> , 2022 , 60, 370-375	1	
43	Enhanced Piezoelectric Output Performance of the SnS/SnS Heterostructure Thin-Film Piezoelectric Nanogenerator Realized by Atomic Layer Deposition. <i>ACS Nano</i> , 2021 , 15, 10428-10436	16.7	7
42	Analysis of electrical and thermal characteristics of PV array under mismatching conditions caused by partial shading and short circuit failure of bypass diodes. <i>Energy</i> , 2021 , 218, 119480	7.9	13
41	Charge Transporting Materials Grown by Atomic Layer Deposition in Perovskite Solar Cells. <i>Energies</i> , 2021 , 14, 1156	3.1	0
40	SiC Powder Manufacturing through Silicon Recovery from Waste Si Solar Cells. <i>Journal of the Korean Solar Energy Society</i> , 2021 , 41, 173-180	0.1	0
39	Three-dimensional nanoporous SnO ₂ /CdS heterojunction for high-performance photoelectrochemical water splitting. <i>Applied Surface Science</i> , 2021 , 560, 149904	6.7	4
38	Analysis of Soiling for the Installation Direction of PV Module. <i>New & Renewable Energy</i> , 2020 , 16, 76-82	0.4	
37	Efficient photo charge transfer of Al-doped ZnO inverse opal shells in SnS ₂ photoanodes prepared by atomic layer deposition. <i>Journal of Alloys and Compounds</i> , 2020 , 819, 153349	5.7	10
36	Passivation improvement of nitric acid oxide by ozone post-treatment for tunnel oxide passivated contacts silicon solar cells. <i>Applied Surface Science</i> , 2019 , 489, 330-335	6.7	2
35	Enhancement in Photoelectrochemical Performance of Optimized Amorphous SnS Thin Film Fabricated through Atomic Layer Deposition. <i>Nanomaterials</i> , 2019 , 9,	5.4	12
34	Change in atomic layer deposited Al ₂ O ₃ passivation characteristics by ozone concentration. <i>Thin Solid Films</i> , 2019 , 690, 137539	2.2	
33	Heterojunction Solar Cell with Carrier Selective Contact Using MoO _x Deposited by Atomic Layer Deposition. <i>Korean Journal of Materials Research</i> , 2019 , 29, 322-327	0.2	2
32	Characteristics of surface passivation of ozone- and water-based Al ₂ O ₃ films grown by atomic layer deposition for silicon solar cells. <i>Thin Solid Films</i> , 2018 , 649, 57-60	2.2	2
31	Passivation performance improvement of ultrathin ALD-Al ₂ O ₃ film by chemical oxidation. <i>Vacuum</i> , 2018 , 149, 180-184	3.7	9
30	Characterization of Atomic-Layer-Deposited (ALD) Al ₂ O ₃ -Passivated Sub-50-nm-thick Kerf-less Si Wafers by Controlled Spalling. <i>Electronic Materials Letters</i> , 2018 , 14, 363-369	2.9	7
29	Analysis of Output Characteristics of Lead-free Ribbon based PV Module Using Conductive Paste. <i>Journal of the Korean Solar Energy Society</i> , 2018 , 38, 45-55	0.1	1
28	Electrical Characteristics of c-Si Shingled Photovoltaic Module Using Conductive Paste based on SnBiAg. <i>Korean Journal of Materials Research</i> , 2018 , 28, 528-533	0.2	2

27	Use of antireflection layers to avoid ghost plating on Ni/Cu plated crystalline silicon solar cells. <i>Japanese Journal of Applied Physics</i> , 2016 , 55, 036502	1.4	3
26	Plasma nitridation of atomic layer deposition (ALD) Al ₂ O ₃ by NH ₃ in plasma-enhanced chemical vapor deposition (PECVD) for silicon solar cell. <i>Surface and Coatings Technology</i> , 2016 , 307, 1096-1099	4.4	16
25	Relation of lifetime to surface passivation for atomic-layer-deposited Al ₂ O ₃ on crystalline silicon solar cell. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2015 , 193, 160-163	3.1	1
24	Effects of plasma-enhanced chemical vapor deposition (PECVD) on the carrier lifetime of Al ₂ O ₃ passivation stack. <i>Journal of the Korean Physical Society</i> , 2015 , 67, 995-1000	0.6	5
23	Characteristics on Silicon Oxynitride Stack Layer of ALD-Al ₂ O ₂ Passivation Layer for c-Si Solar Cell. <i>Korean Journal of Materials Research</i> , 2015 , 25, 233-237	0.2	
22	A Comparison of Methods to Remove the Boron Rich Layer Formed at Boron Doping Process for c-Si Solar Cell Applications. <i>Journal of the Korean Institute of Electrical and Electronic Material Engineers</i> , 2015 , 28, 665-669		1
21	Selective deposition contact patterning using atomic layer deposition for the fabrication of crystalline silicon solar cells. <i>Thin Solid Films</i> , 2014 , 568, 1-5	2.2	5
20	Characterization and Cell Performance of Al Paste with an Inorganic Binder of Bi ₂ O ₃ B ₂ O ₃ ZnO System in Si Solar Cells. <i>Current Nanoscience</i> , 2014 , 10, 66-69	1.4	1
19	A Study on the Thermal Stability of an Al ₂ O ₃ /SiON Stack Structure for c-Si Solar Cell Passivation Application. <i>Journal of the Korean Ceramic Society</i> , 2014 , 51, 197-200	2.2	1
18	Atomic Layer Deposition of HfO ₂ Films on Ge. <i>Applied Science and Convergence Technology</i> , 2014 , 23, 40-43	0.8	
17	Enhanced boron gettering effect of n-type solar grade Si wafers by in situ oxidation. <i>Metals and Materials International</i> , 2013 , 19, 1377-1380	2.4	4
16	Effect of the Molar Ratio of B ₂ O ₃ to Bi ₂ O ₃ in Al Paste with Bi ₂ O ₃ B ₂ O ₃ ZnO Glass on Screen Printed Contact Formation and Si Solar Cell Performance. <i>Japanese Journal of Applied Physics</i> , 2013 , 52, 10MB22	1.4	
15	The fabrication of front electrodes of Si solar cell by dispensing printing. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2012 , 177, 217-222	3.1	16
14	Reduction of surface reflectivity in multi-crystalline silicon solar cells by wet nano-texturing. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2012 , 9, 2097-2100		1
13	Effect of passivation process in upgraded metallurgical grade (UMG)-silicon solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2011 , 95, 63-65	6.4	4
12	Nearly zero reflectance of nano-pyramids and dual-antireflection coating structure for monocrystalline silicon solar cells. <i>Journal of Nanoscience and Nanotechnology</i> , 2011 , 11, 3680-3	1.3	2
11	Improvement in Conversion Efficiency of Multicrystalline Silicon Solar Cells Using Efficient Hydrogen Treatment. <i>Electrochemical and Solid-State Letters</i> , 2010 , 13, B127		1
10	Effects of initial growth mode on the electrical properties of atomic-layer-deposited HfO ₂ films. <i>Electronic Materials Letters</i> , 2009 , 5, 187-190	2.9	2

9	Enhancement of Data Retention Time for 512-Mb DRAMs Using High-Pressure Deuterium Annealing. <i>IEEE Transactions on Electron Devices</i> , 2008 , 55, 3599-3601	2.9	5
8	Bismuth ion-implanted solid-phase epitaxially grown shallow junction for metaloxide semiconductor field-effect transistors. <i>Applied Physics Letters</i> , 2005 , 86, 032104	3.4	3
7	Investigation of the initial stage of growth of HfO ₂ films on Si(100) grown by atomic-layer deposition using in situ medium energy ion scattering. <i>Applied Physics Letters</i> , 2005 , 86, 031906	3.4	18
6	Atomic transport and stability during annealing of HfO ₂ and HfAlO with an ultrathin layer of SiO ₂ on Si(001). <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2004 , 22, 165-169	2.9	16
5	Antimony as a Proper Candidate for Low-Temperature Solid Phase Epitaxially Activated n ⁺ /p Junctions. <i>Electrochemical and Solid-State Letters</i> , 2004 , 7, G216		3
4	Thermal stability and decomposition of the HfO ₂ /Al ₂ O ₃ laminate system. <i>Applied Physics Letters</i> , 2004 , 84, 28-30	3.4	12
3	Effect of Si lattice strain on the reliability characteristics of ultrathin SiO ₂ on a 4° tilted wafer. <i>Applied Physics Letters</i> , 2002 , 80, 386-388	3.4	11
2	Excellent thermal stability of Al ₂ O ₃ /ZrO ₂ /Al ₂ O ₃ stack structure for metaloxide semiconductor gate dielectrics application. <i>Applied Physics Letters</i> , 2002 , 80, 3385-3387	3.4	25
1	Ultrathin nitrided-nanolaminate (Al ₂ O ₃ /ZrO ₂ /Al ₂ O ₃) for metaloxide semiconductor gate dielectric applications. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2002 , 20, 1143		1