

Keiichiro Sakurai

List of Publications by Year in descending order

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74
papers

2,569
citations

201674

27
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197818

49
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75
all docs

75
docs citations

75
times ranked

3163
citing authors

#	ARTICLE	IF	CITATIONS
1	Terawatt-scale photovoltaics: Transform global energy. <i>Science</i> , 2019, 364, 836-838.	12.6	320
2	Exploring suitable damp heat and potential induced degradation test procedures for Cu(In,Ga)(S,Se) photovoltaic modules. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 08RG02.	1.5	12
3	Accelerated Outdoor PID Testing of CIGS Modules and Comparison with Indoor PID Tests. , 2018, , .		3
4	Terawatt-scale photovoltaics: Trajectories and challenges. <i>Science</i> , 2017, 356, 141-143.	12.6	303
5	Effect of light irradiation and forward bias during PID tests of CIGS PV modules. , 2017, , .		1
6	Proposed new damp heat test standards for commercial CIGS modules with bias application or light irradiation. <i>Proceedings of SPIE</i> , 2016, , .	0.8	3
7	Multi angle laser light scattering evaluation of field exposed thermoplastic photovoltaic encapsulant materials. <i>Energy Science and Engineering</i> , 2016, 4, 40-51.	4.0	13
8	Field testing of thermoplastic encapsulants in high-temperature installations. <i>Energy Science and Engineering</i> , 2015, 3, 565-580.	4.0	29
9	Development of a resistivity standard for polymeric materials used in photovoltaic modules. , 2015, , .		1
10	Effects of light illumination during damp/dry heat tests on a flexible thin film photovoltaic module. <i>Proceedings of SPIE</i> , 2015, , .	0.8	2
11	Japanese Task Group 8 activities in international PV module quality assurance. , 2014, , .		1
12	Field experience and performance of CPV system in different climates. <i>AIP Conference Proceedings</i> , 2013, , .	0.4	7
13	Evaluation of Dynamic Mechanical Loading as an accelerated test method for ribbon fatigue. , 2013, , .		15
14	Performance of CPV system using three types of III-V multi-junction solar cells. , 2012, , .		13
15	Development of high-efficiency flexible Cu(In,Ga)Se ₂ solar cells: A study of alkali doping effects on CIS, CIGS, and CGS using alkali-silicate glass thin layers. <i>Current Applied Physics</i> , 2010, 10, S154-S156.	2.4	53
16	Temperature dependence of photocapacitance spectrum of CIGS thin-film solar cell. <i>Thin Solid Films</i> , 2009, 517, 2403-2406.	1.8	33
17	Influence of grain boundaries on current collection in Cu(In,Ga)Se ₂ thin-film solar cells. <i>Thin Solid Films</i> , 2009, 517, 2554-2557.	1.8	50
18	CIGS solar cell with CdS buffer layer deposited by ammonia-free process. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2009, 206, 1072-1075.	1.8	10

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19	Effects of Mo back contact thickness on the properties of CIGS solar cells. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1063-1066.	1.8	25
20	High sensitivity and wide bandwidth image sensor using $\text{CuIn}_{1-x}\text{Ga}_x\text{Se}_2$ thin films. Thin Solid Films, 2009, 517, 2392-2394.	1.8	7
21	Large grain $\text{Cu}(\text{In,Ga})\text{Se}_2$ thin film growth using a Se-radical beam source. Solar Energy Materials and Solar Cells, 2009, 93, 792-796.	6.2	24
22	CIGS solar cell with MBE-grown ZnS buffer layer. Solar Energy Materials and Solar Cells, 2009, 93, 970-972.	6.2	130
23	Effect of Se/(Ga+In) ratio on MBE grown $\text{Cu}(\text{In,Ga})\text{Se}_2$ thin film solar cell. Journal of Crystal Growth, 2009, 311, 2212-2214.	1.5	40
24	Effects of annealing under various atmospheres on electrical properties of $\text{Cu}(\text{In,Ga})\text{Se}_2$ films and $\text{CdS}/\text{Cu}(\text{In,Ga})\text{Se}_2$ heterostructures. Thin Solid Films, 2008, 516, 7036-7040.	1.8	24
25	Impact of the Ga concentration on the microstructure of $\text{CuIn}_{1-x}\text{Ga}_x\text{Se}_2$. Physica Status Solidi - Rapid Research Letters, 2008, 2, 135-137.	2.4	53
26	Alkali incorporation control in $\text{Cu}(\text{In,Ga})\text{Se}_2$ thin films using silicate thin layers and applications in enhancing flexible solar cell efficiency. Applied Physics Letters, 2008, 93, .	3.3	71
27	Photoluminescence Analysis of Proton Irradiation Effects in $\text{Cu}(\text{In,Ga})\text{Se}_2$ Solar Cells. Japanese Journal of Applied Physics, 2008, 47, 857.	1.5	10
28	<i>In-situ</i> Characterization of As-grown Surface of CIGS Films. Materials Research Society Symposia Proceedings, 2007, 1012, 1.	0.1	2
29	Study of Band Alignment at the Interface between CBD-CdS and CIGS grown by H ₂ O-introduced co-evaporation. Materials Research Society Symposia Proceedings, 2007, 1012, 1.	0.1	0
30	Growth of polycrystalline $\text{Cu}(\text{In,Ga})\text{Se}_2$ thin films using a radio frequency-cracked Se-radical beam source and application for photovoltaic devices. Applied Physics Letters, 2007, 91, .	3.3	29
31	Photoluminescence characterization of $\text{Zn}_{1-x}\text{Mg}_x\text{O}$ epitaxial thin films grown on ZnO by radical source molecular beam epitaxy. Applied Physics Letters, 2007, 90, 124104.	3.3	49
32	Effect of Cu excess on three-stage CuGaSe_2 thin films using in-situ process controls. Thin Solid Films, 2007, 515, 5862-5866.	1.8	18
33	Investigation of coevaporated $\text{Cu}(\text{In,Ga})\text{Se}_2$ thin films in highly efficient solar cell devices. Thin Solid Films, 2007, 515, 6217-6221.	1.8	32
34	Junction formation of CuInSe_2 with CdS: A comparative study of $\text{CuInSe}_2/\text{CdS}$ and $\text{CuGaSe}_2/\text{CdS}$ interfaces. Thin Solid Films, 2007, 515, 6112-6118.	1.8	22
35	Characteristics of scattered laser light signals from $\text{Cu}(\text{In,Ga})\text{Se}_2$ films. Thin Solid Films, 2007, 515, 6222-6225.	1.8	3
36	Investigation of relation between Ga concentration and defect levels of $\text{Al}/\text{Cu}(\text{In,Ga})\text{Se}_2$ Schottky junctions using admittance spectroscopy. Thin Solid Films, 2007, 515, 6208-6211.	1.8	6

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37	Control of the thin film properties of Cu(In,Ga)Se ₂ using water vapor introduction during growth. Journal of Applied Physics, 2006, 100, 096106.	2.5	11
38	Photoluminescence recombination centers in ZnO. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 1026-1029.	0.8	0
39	Study on electrical properties of Al/Cu(In,Ga)Se ₂ Schottky junction and ZnO/CdS/Cu(In,Ga)Se ₂ heterojunction using admittance spectroscopy. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 2576-2580.	0.8	2
40	Effects of water vapor introduction during Cu(In _{1-x} Ga _x)Se ₂ deposition on thin film properties and solar cell performance. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 2609-2614.	1.8	4
41	Crystallographic growth orientation of Cu(InGa)Se ₂ films in relation to substrate material nature. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 2639-2643.	1.8	6
42	Negative thermal quenching of photoluminescence in ZnO. Physica B: Condensed Matter, 2006, 376-377, 711-714.	2.7	46
43	Structural changes of CIGS during deposition investigated by spectroscopic light scattering: A study on Ga concentration and Se pressure. Solar Energy Materials and Solar Cells, 2006, 90, 3377-3384.	6.2	6
44	Piezoelectric photothermal investigation of proton irradiation induced defects in CuInSe ₂ epitaxial films. Thin Solid Films, 2005, 480-481, 250-253.	1.8	6
45	Improvement of ZnO TCO film growth for photovoltaic devices by reactive plasma deposition (RPD). Thin Solid Films, 2005, 480-481, 199-203.	1.8	57
46	Characterization of interface nature and band alignment in CBD-CdS/Cu(In,Ga)Se ₂ bi-layer structure by photoemission and inverse photoemission spectroscopy. Thin Solid Films, 2005, 480-481, 183-187.	1.8	43
47	Structural changes of CuGaSe ₂ films during the three-stage process observed by spectroscopic light scattering. Thin Solid Films, 2005, 480-481, 367-372.	1.8	2
48	SXPS investigation of the Cd partial electrolyte treatment of CuInSe ₂ absorbers. Thin Solid Films, 2005, 480-481, 218-223.	1.8	15
49	Fabrication of wide-gap Cu(In _{1-x} Ga _x)Se ₂ thin film solar cells: a study on the correlation of cell performance with highly resistive i-ZnO layer thickness. Solar Energy Materials and Solar Cells, 2005, 87, 541-548.	6.2	108
50	Growth of ZnO and device applications. Applied Surface Science, 2005, 244, 504-510.	6.1	32
51	A Study of the Diffusion and pn-Junction Formation in CIGS Solar Cells using EBIC and EDX Measurements. Materials Research Society Symposia Proceedings, 2005, 865, 631.	0.1	4
52	Built-in Potential and Open Circuit Voltage of Heterojunction CuIn _{1-x} Ga _x Se ₂ Solar Cells. Materials Research Society Symposia Proceedings, 2005, 865, 5191.	0.1	7
53	Excitation-Power Dependence of Free Exciton Photoluminescence of Semiconductors. Japanese Journal of Applied Physics, 2005, 44, 6113-6114.	1.5	48
54	Photoluminescence characterization of excitonic centers in ZnO epitaxial films. Applied Physics Letters, 2005, 86, 221907.	3.3	22

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55	Progress in the Efficiency of Wide-Gap Cu(In _{1-x} Ga _x)Se ₂ Solar Cells Using CIGSe Layers Grown in Water Vapor. Japanese Journal of Applied Physics, 2005, 44, L679-L682.	1.5	32
56	Proton-beam-induced defect levels in CuInSe ₂ thin-film absorbers: An investigation on nonradiative electron transitions. Applied Physics Letters, 2004, 85, 1347-1349.	3.3	3
57	Doping properties of ZnO thin films for photovoltaic devices grown by URT-IP (ion plating) method. Thin Solid Films, 2004, 451-452, 219-223.	1.8	25
58	In situ diagnostic methods for thin-film fabrication: utilization of heat radiation and light scattering. Progress in Photovoltaics: Research and Applications, 2004, 12, 219-234.	8.1	57
59	Characterization of ZnO crystals by photoluminescence spectroscopy. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 872-875.	0.8	22
60	Proton irradiation damages in CuInSe ₂ thin film solar cell materials by a piezoelectric photothermal spectroscopy. Solid-State Electronics, 2004, 48, 1815-1818.	1.4	9
61	An option for the surface science on Cu chalcopyrites: the selenium capping and decapping process. Surface Science, 2004, 557, 263-268.	1.9	21
62	Effect of band offset on the open circuit voltage of heterojunction CuIn _{1-x} Ga _x Se ₂ solar cells. Applied Physics Letters, 2004, 85, 5607-5609.	3.3	38
63	Properties of CuInGaSe ₂ solar cells based upon an improved three-stage process. Thin Solid Films, 2003, 431-432, 6-10.	1.8	30
64	In situ deposition rate monitoring during the three-stage-growth process of Cu(In,Ga)Se ₂ absorber films. Thin Solid Films, 2003, 431-432, 16-21.	1.8	18
65	ZnO transparent conducting films deposited by pulsed laser deposition for solar cell applications. Thin Solid Films, 2003, 431-432, 369-372.	1.8	237
66	Electron beam probe quantization of compound composition: surface phases and surface roughness. Thin Solid Films, 2003, 431-432, 277-283.	1.8	12
67	The chemical environment about Cd atoms in Cd chemical bath treated CuInSe ₂ and CuGaSe ₂ . Journal of Physics and Chemistry of Solids, 2003, 64, 1733-1735.	4.0	5
68	Adjusting the sodium diffusion into CuInGaSe ₂ absorbers by preheating of Mo/SLG substrates. Journal of Physics and Chemistry of Solids, 2003, 64, 1877-1880.	4.0	12
69	Cu(In _{1-x} Ga _x)Se ₂ growth studies by in situ spectroscopic light scattering. Applied Physics Letters, 2003, 82, 2091-2093.	3.3	43
70	Estimation and Correction Procedure for the Effects of Surface Roughness on Electron Probe Microanalysis. Japanese Journal of Applied Physics, 2003, 42, 5811-5812.	1.5	1
71	Electrical Properties of (Ca,Sr)Bi ₄ Ti ₄ O ₁₅ Thin Films Fabricated Using a Chemical Solution Deposition Method. Japanese Journal of Applied Physics, 2003, 42, 5990-5993.	1.5	15
72	Spatial composition fluctuations in blue-luminescent ZnCdO semiconductor films grown by molecular beam epitaxy. Journal of Crystal Growth, 2002, 237-239, 514-517.	1.5	80

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73	Effects of substrate offset angles on MBE growth of ZnO. Journal of Crystal Growth, 2000, 214-215, 92-94.	1.5	27
74	Blue Photoluminescence from ZnCdO Films Grown by Molecular Beam Epitaxy. Japanese Journal of Applied Physics, 2000, 39, L1146-L1148.	1.5	44