Yasuyoshi Kurokawa

List of Publications by Year
in descending order

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124	1,210	516710 16	526287 27
papers	citations	h-index	g-index

124	124	124	999
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Preparation of Nanocrystalline Silicon in Amorphous Silicon Carbide Matrix. Japanese Journal of Applied Physics, 2006, 45, L1064-L1066.	1.5	78
2	Photoluminescence from Silicon Quantum Dots in Si Quantum Dots/Amorphous SiC Superlattice. Japanese Journal of Applied Physics, 2007, 46, L833-L835.	1.5	74
3	Numerical study of Cu(In,Ga)Se₂ solar cell performance toward 23% conversion efficiency. Japanese Journal of Applied Physics, 2014, 53, 012301.	1.5	68
4	Improvement of carrier diffusion length in silicon nanowire arrays using atomic layer deposition. Nanoscale Research Letters, 2013, 8, 361.	5.7	39
5	Optical assessment of silicon nanowire arrays fabricated by metal-assisted chemical etching. Nanoscale Research Letters, 2013, 8, 216.	5.7	37
6	Effects of oxygen addition on electrical properties of silicon quantum dots/amorphous silicon carbide superlattice. Current Applied Physics, 2010, 10, S435-S438.	2.4	36
7	Effects of deposition rate on the structure and electron density of evaporated BaSi2 films. Journal of Applied Physics, 2016, 120, 045103.	2.5	28
8	Control of valence band offset at CdS/Cu(In,Ga)Se₂interface by inserting wide-bandgap materials for suppression of interfacial recombination in Cu(In,Ga)Se₂solar cells. Japanese Journal of Applied Physics, 2015, 54, 08KC08.	1.5	27
9	Hydrogen concentration at a-Si:H/c-Si heterointerfacesâ€"The impact of deposition temperature on passivation performance. AIP Advances, 2019, 9, .	1.3	27
10	Postannealing effects on undoped BaSi₂evaporated films grown on Si substrates. Japanese Journal of Applied Physics, 2017, 56, 05DB05.	1.5	25
11	Silicon quantum dot superlattice solar cell structure including silicon nanocrystals in a photogeneration layer. Nanoscale Research Letters, 2014, 9, 246.	5.7	23
12	TiO2-Coated Transparent Conductive Oxide (SnO2:F) Films Prepared by Atmospheric Pressure Chemical Vapor Deposition with High Durability against Atomic Hydrogen. Japanese Journal of Applied Physics, 2006, 45, L291-L293.	1.5	20
13	Numerical Approach to the Investigation of Performance of Silicon Nanowire Solar Cells Embedded in a SiO2Matrix. Japanese Journal of Applied Physics, 2012, 51, 11PE12.	1.5	20
14	Deposition of Ag(In,Ga)Se₂ Solar Cells by a Modified Three-Stage Method Using a Low-Temperature-Deposited Agâ€"Se Cap Layer. Japanese Journal of Applied Physics, 2013, 52, 055801.	1.5	19
15	Fabrication of Cu(In,Ga)Se₂ solar cells with a single graded band profile. Physica Status Solidi (B): Basic Research, 2015, 252, 1235-1238.	1.5	17
16	Numerical Approach to the Performance of Silicon Quantum Dots Superlattice Solar Cells Taking into Account the Quantum Effect. Japanese Journal of Applied Physics, 2012, 51, 10NE09.	1.5	17
17	Improvement of Electrical Properties of Silicon Quantum Dot Superlattice Solar Cells with Diffusion Barrier Layers. Japanese Journal of Applied Physics, 2013, 52, 04CR02.	1.5	16
18	Bandgap tuning of silicon nanowire arrays for application to all-silicon tandem solar cells. Japanese Journal of Applied Physics, 2017, 56, 04CS03.	1.5	16

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19	Improvement of Cu₂ZnSn(S,Se)₄ solar cell efficiency by surface treatment. Physica Status Solidi C: Current Topics in Solid State Physics, 2015, 12, 704-707.	0.8	15
20	Local Structure of High Performance TiO_x Electronâ€Selective Contact Revealed by Electron Energy Loss Spectroscopy. Advanced Materials Interfaces, 2019, 6, 1801645.	3.7	15
21	Effect of hydrogen plasma treatment on the passivation performance of TiOx on crystalline silicon prepared by atomic layer deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	2.1	15
22	Application of Bayesian optimization for improved passivation performance in TiO_x/SiO_y/c-Si heterostructure by hydrogen plasma treatment. Applied Physics Express, 2021, 14, 025503.	2.4	15
23	Alternative simple method to realize p-type BaSi2 thin films for Si heterojunction solar cell applications. MRS Advances, 2018, 3, 1435-1442.	0.9	14
24	Activation mechanism of TiO _x passivating layer on crystalline Si. Applied Physics Express, 2018, 11, 102301.	2.4	14
25	Metal-Assisted Chemical Etching Using Silica Nanoparticle for the Fabrication of a Silicon Nanowire Array. Japanese Journal of Applied Physics, 2012, 51, 02BP09.	1.5	14
26	Metal-Assisted Chemical Etching Using Silica Nanoparticle for the Fabrication of a Silicon Nanowire Array. Japanese Journal of Applied Physics, 2012, 51, 02BP09.	1.5	13
27	Electrophoretic deposition of high quality transparent conductive graphene films on insulating glass substrates. Journal of Physics: Conference Series, 2012, 352, 012003.	0.4	13
28	Investigation of p-type emitter layer materials for heterojunction barium disilicide thin film solar cells. Japanese Journal of Applied Physics, 2017, 56, 05DB04.	1.5	13
29	Effects of evaporation vapor composition and post-annealing conditions on carrier density of undoped BaSi₂ evaporated films. Japanese Journal of Applied Physics, 2020, 59, SFFA05.	1.5	13
30	Improved conversion efficiency of p-type BaSi₂/n-type crystalline Si heterojunction solar cells by a low growth rate deposition of BaSi₂. AIP Advances, 2022, 12, 045115.	1.3	13
31	Numerical Approach to the Investigation of Performance of Silicon Nanowire Solar Cells Embedded in a SiO₂ Matrix. Japanese Journal of Applied Physics, 2012, 51, 11PE12.	1.5	12
32	Development of spin-coated copper iodide on silicon for use in hole-selective contacts. Energy Procedia, 2017, 124, 598-603.	1.8	12
33	Evidence of solute PEDOT:PSS as an efficient passivation material for fabrication of hybrid c-Si solar cells. Sustainable Energy and Fuels, 2019, 3, 1448-1454.	4.9	12
34	Activation energy of hydrogen desorption from high-performance titanium oxide carrier-selective contacts with silicon oxide interlayers. Current Applied Physics, 2021, 21, 36-42.	2.4	12
35	Fabrication of heterojunction crystalline Si solar cells with BaSi₂ thin films prepared by a two-step evaporation method. Japanese Journal of Applied Physics, 2021, 60, 105503.	1.5	12
36	Improvement of the Band Profile of Cu(In,Ga)Se₂ Solar Cells with High-Ga Content Prepared Using a Five-Stage Method. Japanese Journal of Applied Physics, 2012, 51, 10NC03.	1.5	11

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37	Investigation of hydrogen plasma treatment for reducing defects in silicon quantum dot superlattice structure with amorphous silicon carbide matrix. Nanoscale Research Letters, 2014, 9, 72.	5.7	11
38	Formation of black silicon using SiGe self-assembled islands as a mask for selective anisotropic etching of silicon. Materials Science in Semiconductor Processing, 2018, 75, 143-148.	4.0	11
39	Silicon Nanowire Heterojunction Solar Cells with an Al2O3 Passivation Film Fabricated by Atomic Layer Deposition. Nanoscale Research Letters, 2019, 14, 99.	5.7	11
40	Fabrication of a Silicon Nanowire Solar Cell on a Silicon-on-Insulator Substrate. Applied Sciences (Switzerland), 2019, 9, 818.	2.5	11
41	Influence of the time-dependent vapor composition on structural properties of the BaSi₂ thin films fabricated by vacuum evaporation. Japanese Journal of Applied Physics, 2020, 59, SFFA10.	1.5	11
42	Silicon Nanocrystals Embedded in Nanolayered Silicon Oxide for Crystalline Silicon Solar Cells. ACS Applied Nano Materials, 2022, 5, 1820-1827.	5.0	11
43	Influence of Fabrication Processes and Annealing Treatment on the Minority Carrier Lifetime of Silicon Nanowire Films. Nanoscale Research Letters, 2017, 12, 242.	5.7	10
44	Undoped p-type BaSi₂ emitter prepared by thermal evaporation and post-annealing for crystalline silicon heterojunction solar cells. Applied Physics Express, 2020, 13, 051002.	2.4	10
45	Comparison of Interface Characterization between Ag(In,Ga)Se₂ and Cu(In,Ga)Se₂ Solar Cells by High-Angle-Annular Dark-Field Scanning Transmission Electron Microscopy. Japanese Journal of Applied Physics, 2011, 50, 126603.	1.5	9
46	Experimental and Theoretical Evaluation of Cu(In,Ga)Se$_{2}$ Concentrator Solar Cells. Japanese Journal of Applied Physics, 2012, 51, 014101.	1.5	9
47	Selective etching of Si, SiGe, Ge and its usage for increasing the efficiency of silicon solar cells. Semiconductors, 2017, 51, 1542-1546.	0.5	9
48	Fabrication of BaSi2 thin films capped with amorphous Si using a single evaporation source. Thin Solid Films, 2017, 636, 546-551.	1.8	9
49	Post-annealing effects on the surface structure and carrier lifetime of evaporated BaSi₂ films. Japanese Journal of Applied Physics, 2017, 56, 04CS07.	1.5	9
50	Impact of size distributions of Ge islands as etching masks for anisotropic etching on formation of anti-reflection structures. Japanese Journal of Applied Physics, 2019, 58, 045505.	1.5	9
51	Growth of Ag(In,Ga)Se₂Films by Modified Three-Stage Method and Influence of Annealing on Performance of Solar Cells. Japanese Journal of Applied Physics, 2012, 51, 10NC05.	1.5	9
52	Solid-phase crystallization of amorphous silicon nanowire array and optical properties. Japanese Journal of Applied Physics, 2014, 53, 02BE09.	1.5	8
53	Graphene transparent electrode for thin-film solar cells. Physica Status Solidi C: Current Topics in Solid State Physics, 2015, 12, 777-780.	0.8	8
54	Layer-by-Layer Assembled Transparent Conductive Graphene Films for Silicon Thin-Film Solar Cells. Japanese Journal of Applied Physics, 2012, 51, 11PF01.	1.5	8

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55	Size-Controlled Silicon Quantum Dots Superlattice for Thin-Film Solar Cell Applications. Materials Research Society Symposia Proceedings, 2008, 1101, 1.	0.1	7
56	Preparation of p-type Hydrogenated Nanocrystalline Cubic Silicon Carbide / n-type Crystalline Silicon Heterojunction Solar Cells by VHF-PECVD. Energy Procedia, 2011, 10, 14-19.	1.8	7
57	Growth of Ag(In,Ga)Se₂ Films by Modified Three-Stage Method and Influence of Annealing on Performance of Solar Cells. Japanese Journal of Applied Physics, 2012, 51, 10NC05.	1.5	7
58	Radical-assisted chemical doping for chemically derived graphene. Nanoscale Research Letters, 2013, 8, 534.	5.7	7
59	Fabrication of light-trapping structure by selective etching of thin Si substrates masked with a Ge dot layer and nanomasks. Japanese Journal of Applied Physics, 2018, 57, 08RF09.	1.5	7
60	The impact of highly excessive PbI₂ on the correlation of MAPbI₃ perovskite morphology and carrier lifetimes. Journal of Materials Chemistry C, 2020, 8, 14481-14489.	5.5	7
61	Impact of deposition of indium tin oxide double layers on hydrogenated amorphous silicon/crystalline silicon heterojunction. AIP Advances, 2020, 10, 065008.	1.3	7
62	Fabrication of Silicon Nanowire Metal-Oxide-Semiconductor Capacitors with Al2O3/TiO2/Al2O3 Stacked Dielectric Films for the Application to Energy Storage Devices. Energies, 2021, 14, 4538.	3.1	7
63	Application of Bayesian optimization for high-performance TiO /SiO /c-Si passivating contact. Solar Energy Materials and Solar Cells, 2021, 230, 111251.	6.2	7
64	Layer-by-Layer Assembled Transparent Conductive Graphene Films for Silicon Thin-Film Solar Cells. Japanese Journal of Applied Physics, 2012, 51, 11PF01.	1.5	6
65	Theoretical and experimental investigation of the recombination reduction at surface and grain boundaries in Cu(In,Ga)Se2 solar cells by valence band control. Materials Research Society Symposia Proceedings, 2015, 1771, 125-131.	0.1	6
66	Microstructural characterization of Cu₂ZnSn(S,Se)₄solar cells fabricated from nanoparticles. Japanese Journal of Applied Physics, 2015, 54, 08KC05.	1.5	6
67	Tuning the Electrical Properties of Titanium Oxide Bilayers Prepared by Atomic Layer Deposition at Different Temperatures. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900495.	1.8	6
68	Passivation mechanism of the high-performance titanium oxide carrier-selective contacts on crystalline silicon studied by spectroscopic ellipsometry. Japanese Journal of Applied Physics, 2021, 60, SBBF04.	1.5	6
69	Impact of chemically grown silicon oxide interlayers on the hydrogen distribution at hydrogenated amorphous silicon/crystalline silicon heterointerfaces. Applied Surface Science, 2021, 567, 150799.	6.1	6
70	Effect of the Niobium-Doped Titanium Oxide Thickness and Thermal Oxide Layer for Silicon Quantum Dot Solar Cells as a Dopant-Blocking Layer. Nanoscale Research Letters, 2020, 15, 39.	5.7	6
71	Improvement of the Band Profile of Cu(In,Ga)Se₂Solar Cells with High-Ga Content Prepared Using a Five-Stage Method. Japanese Journal of Applied Physics, 2012, 51, 10NC03.	1.5	6
72	Comparison of Interface Characterization between Ag(In,Ga)Se₂and Cu(In,Ga)Se₂Solar Cells by High-Angle-Annular Dark-Field Scanning Transmission Electron Microscopy. Japanese Journal of Applied Physics, 2011, 50, 126603.	1.5	6

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73	Observation of the photovoltaics effect from the solar cells using silicon quantum dots superlattice as a light absorption layer. Conference Record of the IEEE Photovoltaic Specialists Conference, 2008, , .	0.0	5
74	High open-circuit voltage oxygen-containing silicon quantum dots superlattice solar cells. , 2010, , .		5
75	Numerical Approach to the Performance of Silicon Quantum Dots Superlattice Solar Cells Taking into Account the Quantum Effect. Japanese Journal of Applied Physics, 2012, 51, 10NE09.	1.5	5
76	Flexible Cu(In,Ga)Se₂solar cells fabricated using a polyimide-coated soda-lime glass substrate. Japanese Journal of Applied Physics, 2015, 54, 08KC16.	1.5	5
77	Peeling process of thin-film solar cells using graphene layers. Applied Physics Express, 2017, 10, 082301.	2.4	5
78	Growth of BaSi₂film on Ge(100) by vacuum evaporation and its photoresponse properties. Japanese Journal of Applied Physics, 2017, 56, 05DB06.	1.5	5
79	Fabrication of silicon nanowire based solar cells using TiO2/Al2O3 stack thin films. MRS Advances, 2018, 3, 1419-1426.	0.9	5
80	Epitaxial growth of SiGe on Si substrate by printing and firing of Alâ€“Ge mixed paste. Japanese Journal of Applied Physics, 2019, 58, 045504.	1.5	5
81	Impact of Ge deposition temperature on parameters of c-Si solar cells with surface texture formed by etching of Si using SiGe islands as a mask. Materials Science in Semiconductor Processing, 2020, 114, 105065.	4.0	5
82	Effect of forming gas annealing on hydrogen content and surface morphology of titanium oxide coated crystalline silicon heterocontacts. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, 022415.	2.1	5
83	Light management of aâ€Si:H solar cells using textured zinc oxide with adjustable haze values. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2998-3001.	0.8	4
84	Electrical characterization of Cu(In,Ga)Se2thin films peeled off from Mo-coated soda-lime glass substrate by AC Hall measurement. Japanese Journal of Applied Physics, 2015, 54, 018001.	1.5	4
85	Formation of light-trapping structure using Ge islands grown by gas-source molecular beam epitaxy as etching masks. Japanese Journal of Applied Physics, 2018, 57, 08RB04.	1.5	4
86	Novel light trapping structure by alkaline etching using a Ge dot mask for crystalline Si solar cells. , 2016, , .		3
87	Effects of surface morphology randomness on optical properties of Si-based photonic nanostructures. Japanese Journal of Applied Physics, 2017, 56, 08MA02.	1.5	3
88	Influence of barrier layerâ€™s height on the performance of Si quantum dot solar cells. Japanese Journal of Applied Physics, 2018, 57, 08RF08.	1.5	3
89	Investigation of effective near-infrared light-trapping structure with submicron diameter for crystalline silicon thin film solar cells. Japanese Journal of Applied Physics, 2018, 57, 08RB21.	1.5	3
90	Improved Performance of Titanium Oxide/Silicon Oxide Electronâ€Selective Contacts by Implementation of Magnesium Interlayers. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2100296.	1.8	3

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91	Structure and physical properties of stable isotopic amorphous carbon films. Diamond and Related Materials, 2016, 63, 115-119.	3.9	2
92	Fabrication and properties characterization of BaSi2 thin-films thermally-evaporated on Ge (100) modified substrates. Thin Solid Films, 2018, 663, 14-20.	1.8	2
93	Fabrication of BaSi₂ homojunction diodes on Nb-doped TiO₂ coated glass substrates by aluminum-induced crystallization and two-step evaporation method. Japanese Journal of Applied Physics, 2022, 61, SC1029.	1.5	2
94	Characterization of Ag(In, Ga)Se<inf>2</inf>/CdS interface in AIGS solar cell by HAADF-STEM measurement. , 2011, , .		1
95	Effect of the Quantum Size Effect on the Performance of Solar Cells with a Silicon Nanowire Array Embedded in SiO₂. Materials Research Society Symposia Proceedings, 2012, 1439, 145-150.	0.1	1
96	Observation of light scattering properties of silicon nanowire arrays. , 2013, , .		1
97	Silicon nanowire arrays passivated by Al<inf>2</inf>O<inf>3</inf>/TiO<inf>2</inf> stack layers. , 2014, , .		1
98	Effect of tapered shape on performance of silicon nanowire solar cells. , 2014, , .		1
99	Application of new doping techniques to solar cells for low temperature fabrication. , 2016, , .		1
100	Optical characterization of double-side-textured silicon wafer based on photonic nanostructures for thin-wafer crystalline silicon solar cells. Japanese Journal of Applied Physics, 2017, 56, 04CS01.	1.5	1
101	Deposition and Characterization of Si Quantum Dot Multilayers Prepared by Plasma Enhanced Chemical Vapor Deposition using SiH<inf>4</inf> and CO<inf>2</inf> Gases. , 2018, , .		1
102	Structural, Optical and Electrical Characterization of Heterojunction Rib-Si Solar Cells. , 2018, , .		1
103	Improving Intrinsic Silicon Nanoparticle Film by Press Treatment for use in pâ€“iâ€“n Solar Cells. , 2018, , .		1
104	Synthesis of Mg₂Si thin film by thermal treatment under inert gas atmosphere and evaluation of film quality. Japanese Journal of Applied Physics, 2020, 59, SFFB03.	1.5	1
105	Preparation and thermoelectric characterization of phosphorus-doped Si nanocrystals/silicon oxide multilayers. Japanese Journal of Applied Physics, 2020, 59, SGGF09.	1.5	1
106	Nanocrystalline Silicon in Amorphous Silicon Carbide Matrix for Si Quantum Dots Superlattice. , 2006, , .		0
107	High thermostable and conductive niobium doped titanium oxide for the application to a diffusion barrier layer of silicon quantum dot superlattice solar cell structure. , 2011, , .		0
108	Effects of the deposition conditions of p-type hydrogenated nanocrystalline cubic silicon carbide on n-type crystalline silicon heterojunction solar cell performance. , 2011, , .		0

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109	Layer-by-layer assembled transparent conductive graphene films for solar cells application. Materials Research Society Symposia Proceedings, 2012, 1451, 75-81.	0.1	0
110	Estimation of the Crystallinity of P-type Hydrogenated Nanocrystalline Cubic Silicon Carbide by Conductive Atomic Force Microscopy. Materials Research Society Symposia Proceedings, 2012, 1426, 347-352.	0.1	0
111	Laser Scribing of W-textured ZnO Substrates Using Green Laser. Materials Research Society Symposia Proceedings, 2013, 1493, 207-212.	0.1	0
112	Influence of Surface Recombination on the Performance of SiNW Solar Cells and the Preparation of a Passivation Film. Materials Research Society Symposia Proceedings, 2013, 1512, 1.	0.1	0
113	Numerical simulation about effects of bandgap grading in Cu(In, Ga)Se<inf>2</inf> with a bandgap of 1.4 eV on solar cell performance. , 2013, , .		0
114	Control of the electrical properties of BaSi<inf>2</inf> evaporated films for solar cell applications. , 2016, , .		0
115	Overview of Surface Passivation Schemes for Thin Film Solar Cells. , 2017, , .		0
116	Fabrication of CuI/a-Si:H/c-Si Structure for Application to Hole-selective Contacts of Heterojunction Si Solar Cells. , 2017, , .		0
117	Local Structure of High Performance TiO<inf>x</inf> Passivating Layer Revealed by Electron Energy Loss Spectroscopy. , 2018, , .		0
118	Application of light trapping structure using Ge dot mask by alkaline etching to heterojunction solar cell. , 2018, , .		0
119	Development of the Passivation Layer For P-type CuI Thin Film Fabricated by the 2-step Method as the Novel Hole Selective Contact of Silicon Heterojunction Solar Cells. , 2018, , .		0
120	Realization of the Crystalline Silicon Solar Cell Using Nanocrystalline Transport Path in Ultra-thin Dielectrics for Reinforced Passivating Contact. , 2021, , .		0
121	Versatile fabrication of a passivation material, solute PEDOT:PSS, for a c-Si substrate using alcoholic solvents. Sustainable Energy and Fuels, 2021, 5, 666-670.	4.9	0
122	Electrical properties of TiO TiO_x bilayer prepared by atomic layer deposition at different temperatures. , 2019, , .		0
123	Work function of indium oxide thin films on p-type hydrogenated amorphous silicon. , 2020, , .		0
124	Fabrication of silicon-nanocrystals-embedded silicon oxide passivating contacts. , 2020, , .		0