

# Yasuyoshi Kurokawa

## List of Publications by Year in descending order

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124  
papers

1,210  
citations

586496

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591227

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124  
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124  
docs citations

124  
times ranked

1120  
citing authors

#	ARTICLE	IF	CITATIONS
1	Silicon Nanocrystals Embedded in Nanolayered Silicon Oxide for Crystalline Silicon Solar Cells. ACS Applied Nano Materials, 2022, 5, 1820-1827.	2.4	11
2	Fabrication of BaSi <sub>2</sub> homojunction diodes on Nb-doped TiO <sub>2</sub> coated glass substrates by aluminum-induced crystallization and two-step evaporation method. Japanese Journal of Applied Physics, 2022, 61, SC1029.	0.8	2
3	Improved conversion efficiency of p-type BaSi <sub>2</sub> /n-type crystalline Si heterojunction solar cells by a low growth rate deposition of BaSi <sub>2</sub> . AIP Advances, 2022, 12, 045115.	0.6	13
4	Activation energy of hydrogen desorption from high-performance titanium oxide carrier-selective contacts with silicon oxide interlayers. Current Applied Physics, 2021, 21, 36-42.	1.1	12
5	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.	0.8	6
6	Realization of the Crystalline Silicon Solar Cell Using Nanocrystalline Transport Path in Ultra-thin Dielectrics for Reinforced Passivating Contact. , 2021, , .		0
7	Fabrication of Silicon Nanowire Metal-Oxide-Semiconductor Capacitors with Al <sub>2</sub> O <sub>3</sub> /TiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> Stacked Dielectric Films for the Application to Energy Storage Devices. Energies, 2021, 14, 4538.	1.6	7
8	Improved Performance of Titanium Oxide/Silicon Oxide Electron-Selective Contacts by Implementation of Magnesium Interlayers. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2100296.	0.8	3
9	Application of Bayesian optimization for high-performance TiO <sub>2</sub> /SiO <sub>2</sub> /c-Si passivating contact. Solar Energy Materials and Solar Cells, 2021, 230, 111251.	3.0	7
10	Fabrication of heterojunction crystalline Si solar cells with BaSi <sub>2</sub> thin films prepared by a two-step evaporation method. Japanese Journal of Applied Physics, 2021, 60, 105503.	0.8	12
11	Impact of chemically grown silicon oxide interlayers on the hydrogen distribution at hydrogenated amorphous silicon/crystalline silicon heterointerfaces. Applied Surface Science, 2021, 567, 150799.	3.1	6
12	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.	2.5	0
13	Application of Bayesian optimization for improved passivation performance in TiO <sub>x</sub> /SiO <sub>y</sub> /c-Si heterostructure by hydrogen plasma treatment. Applied Physics Express, 2021, 14, 025503.	1.1	15
14	The impact of highly excessive PbI <sub>2</sub> on the correlation of MAPbI <sub>3</sub> perovskite morphology and carrier lifetimes. Journal of Materials Chemistry C, 2020, 8, 14481-14489.	2.7	7
15	Influence of the time-dependent vapor composition on structural properties of the BaSi <sub>2</sub> thin films fabricated by vacuum evaporation. Japanese Journal of Applied Physics, 2020, 59, SFFA10.	0.8	11
16	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.	1.9	5
17	Effects of evaporation vapor composition and post-annealing conditions on carrier density of undoped BaSi <sub>2</sub> evaporated films. Japanese Journal of Applied Physics, 2020, 59, SFFA05.	0.8	13
18	Impact of deposition of indium tin oxide double layers on hydrogenated amorphous silicon/crystalline silicon heterojunction. AIP Advances, 2020, 10, 065008.	0.6	7

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19	Effect of forming gas annealing on hydrogen content and surface morphology of titanium oxide coated crystalline silicon heterocontacts. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2020, 38, 022415.	0.9	5
20	Effect of hydrogen plasma treatment on the passivation performance of TiO <sub>x</sub> on crystalline silicon prepared by atomic layer deposition. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2020, 38, .	0.9	15
21	Synthesis of Mg <sub>2</sub> Si thin film by thermal treatment under inert gas atmosphere and evaluation of film quality. <i>Japanese Journal of Applied Physics</i> , 2020, 59, SFFB03.	0.8	1
22	Preparation and thermoelectric characterization of phosphorus-doped Si nanocrystals/silicon oxide multilayers. <i>Japanese Journal of Applied Physics</i> , 2020, 59, SGGF09.	0.8	1
23	Undoped p-type BaSi <sub>2</sub> emitter prepared by thermal evaporation and post-annealing for crystalline silicon heterojunction solar cells. <i>Applied Physics Express</i> , 2020, 13, 051002.	1.1	10
24	Effect of the Niobium-Doped Titanium Oxide Thickness and Thermal Oxide Layer for Silicon Quantum Dot Solar Cells as a Dopant-Blocking Layer. <i>Nanoscale Research Letters</i> , 2020, 15, 39.	3.1	6
25	Work function of indium oxide thin films on p-type hydrogenated amorphous silicon. , 2020, , .		0
26	Fabrication of silicon-nanocrystals-embedded silicon oxide passivating contacts. , 2020, , .		0
27	Hydrogen concentration at a-Si:H/c-Si heterointerfaces—The impact of deposition temperature on passivation performance. <i>AIP Advances</i> , 2019, 9, .	0.6	27
28	Tuning the Electrical Properties of Titanium Oxide Bilayers Prepared by Atomic Layer Deposition at Different Temperatures. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2019, 216, 1900495.	0.8	6
29	Impact of size distributions of Ge islands as etching masks for anisotropic etching on formation of anti-reflection structures. <i>Japanese Journal of Applied Physics</i> , 2019, 58, 045505.	0.8	9
30	Silicon Nanowire Heterojunction Solar Cells with an Al <sub>2</sub> O <sub>3</sub> Passivation Film Fabricated by Atomic Layer Deposition. <i>Nanoscale Research Letters</i> , 2019, 14, 99.	3.1	11
31	Evidence of solute PEDOT:PSS as an efficient passivation material for fabrication of hybrid c-Si solar cells. <i>Sustainable Energy and Fuels</i> , 2019, 3, 1448-1454.	2.5	12
32	Epitaxial growth of SiGe on Si substrate by printing and firing of Al-Ge mixed paste. <i>Japanese Journal of Applied Physics</i> , 2019, 58, 045504.	0.8	5
33	Fabrication of a Silicon Nanowire Solar Cell on a Silicon-on-Insulator Substrate. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 818.	1.3	11
34	Local Structure of High Performance TiO <sub>x</sub> Electron-Selective Contact Revealed by Electron Energy Loss Spectroscopy. <i>Advanced Materials Interfaces</i> , 2019, 6, 1801645.	1.9	15
35	Electrical properties of TiO <sub>x</sub> bilayer prepared by atomic layer deposition at different temperatures. , 2019, , .		0
36	Alternative simple method to realize p-type BaSi <sub>2</sub> thin films for Si heterojunction solar cell applications. <i>MRS Advances</i> , 2018, 3, 1435-1442.	0.5	14

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37	Fabrication of silicon nanowire based solar cells using TiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> stack thin films. MRS Advances, 2018, 3, 1419-1426.	0.5	5
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.	1.9	11
39	Influence of barrier layer's height on the performance of Si quantum dot solar cells. Japanese Journal of Applied Physics, 2018, 57, 08RF08.	0.8	3
40	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.	0.8	7
41	Deposition and Characterization of Si Quantum Dot Multilayers Prepared by Plasma Enhanced Chemical Vapor Deposition using SiH <sub>4</sub> and CO <sub>2</sub> Gases. , 2018, , .		1
42	Local Structure of High Performance TiO <sub>x</sub> Passivating Layer Revealed by Electron Energy Loss Spectroscopy. , 2018, , .		0
43	Application of light trapping structure using Ge dot mask by alkaline etching to heterojunction solar cell. , 2018, , .		0
44	Structural, Optical and Electrical Characterization of Heterojunction Rib-Si Solar Cells. , 2018, , .		1
45	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
46	Improving Intrinsic Silicon Nanoparticle Film by Press Treatment for use in "n Solar Cells. , 2018, , .		1
47	Activation mechanism of TiO <sub>x</sub> passivating layer on crystalline Si. Applied Physics Express, 2018, 11, 102301.	1.1	14
48	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.	0.8	3
49	Fabrication and properties characterization of BaSi <sub>2</sub> thin-films thermally-evaporated on Ge (100) modified substrates. Thin Solid Films, 2018, 663, 14-20.	0.8	2
50	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.	0.8	4
51	Bandgap tuning of silicon nanowire arrays for application to all-silicon tandem solar cells. Japanese Journal of Applied Physics, 2017, 56, 04CS03.	0.8	16
52	Investigation of p-type emitter layer materials for heterojunction barium disilicide thin film solar cells. Japanese Journal of Applied Physics, 2017, 56, 05DB04.	0.8	13
53	Influence of Fabrication Processes and Annealing Treatment on the Minority Carrier Lifetime of Silicon Nanowire Films. Nanoscale Research Letters, 2017, 12, 242.	3.1	10
54	Development of spin-coated copper iodide on silicon for use in hole-selective contacts. Energy Procedia, 2017, 124, 598-603.	1.8	12

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55	Peeling process of thin-film solar cells using graphene layers. Applied Physics Express, 2017, 10, 082301.	1.1	5
56	Effects of surface morphology randomness on optical properties of Si-based photonic nanostructures. Japanese Journal of Applied Physics, 2017, 56, 08MA02.	0.8	3
57	Selective etching of Si, SiGe, Ge and its usage for increasing the efficiency of silicon solar cells. Semiconductors, 2017, 51, 1542-1546.	0.2	9
58	Postannealing effects on undoped BaSi <sub>2</sub> evaporated films grown on Si substrates. Japanese Journal of Applied Physics, 2017, 56, 05DB05.	0.8	25
59	Fabrication of BaSi <sub>2</sub> thin films capped with amorphous Si using a single evaporation source. Thin Solid Films, 2017, 636, 546-551.	0.8	9
60	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.	0.8	1
61	Growth of BaSi <sub>2</sub> film on Ge(100) by vacuum evaporation and its photoresponse properties. Japanese Journal of Applied Physics, 2017, 56, 05DB06.	0.8	5
62	Post-annealing effects on the surface structure and carrier lifetime of evaporated BaSi <sub>2</sub> films. Japanese Journal of Applied Physics, 2017, 56, 04CS07.	0.8	9
63	Overview of Surface Passivation Schemes for Thin Film Solar Cells. , 2017, , .		0
64	Fabrication of Cu/a-Si:H/c-Si Structure for Application to Hole-selective Contacts of Heterojunction Si Solar Cells. , 2017, , .		0
65	Effects of deposition rate on the structure and electron density of evaporated BaSi <sub>2</sub> films. Journal of Applied Physics, 2016, 120, 045103.	1.1	28
66	Novel light trapping structure by alkaline etching using a Ge dot mask for crystalline Si solar cells. , 2016, , .		3
67	Application of new doping techniques to solar cells for low temperature fabrication. , 2016, , .		1
68	Control of the electrical properties of BaSi <sub>2</sub> evaporated films for solar cell applications. , 2016, , .		0
69	Structure and physical properties of stable isotopic amorphous carbon films. Diamond and Related Materials, 2016, 63, 115-119.	1.8	2
70	Flexible Cu(In,Ga)Se <sub>2</sub> solar cells fabricated using a polyimide-coated soda-lime glass substrate. Japanese Journal of Applied Physics, 2015, 54, 08KC16.	0.8	5
71	Control of valence band offset at CdS/Cu(In,Ga)Se <sub>2</sub> interface by inserting wide-bandgap materials for suppression of interfacial recombination in Cu(In,Ga)Se <sub>2</sub> solar cells. Japanese Journal of Applied Physics, 2015, 54, 08KC08.	0.8	27
72	Improvement of Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> solar cell efficiency by surface treatment. Physica Status Solidi C: Current Topics in Solid State Physics, 2015, 12, 704-707.	0.8	15

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73	Fabrication of Cu(In,Ga)Se <sub>2</sub> solar cells with a single graded band profile. Physica Status Solidi (B): Basic Research, 2015, 252, 1235-1238.	0.7	17
74	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
75	Theoretical and experimental investigation of the recombination reduction at surface and grain boundaries in Cu(In,Ga)Se <sub>2</sub> solar cells by valence band control. Materials Research Society Symposia Proceedings, 2015, 1771, 125-131.	0.1	6
76	Electrical characterization of Cu(In,Ga)Se <sub>2</sub> thin films peeled off from Mo-coated soda-lime glass substrate by AC Hall measurement. Japanese Journal of Applied Physics, 2015, 54, 018001.	0.8	4
77	Microstructural characterization of Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> solar cells fabricated from nanoparticles. Japanese Journal of Applied Physics, 2015, 54, 08KC05.	0.8	6
78	Silicon nanowire arrays passivated by Al <sub>2</sub> O <sub>3</sub> /TiO <sub>2</sub> stack layers. , 2014, , .		1
79	Effect of tapered shape on performance of silicon nanowire solar cells. , 2014, , .		1
80	Solid-phase crystallization of amorphous silicon nanowire array and optical properties. Japanese Journal of Applied Physics, 2014, 53, 02BE09.	0.8	8
81	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.	3.1	11
82	Numerical study of Cu(In,Ga)Se <sub>2</sub> solar cell performance toward 23% conversion efficiency. Japanese Journal of Applied Physics, 2014, 53, 012301.	0.8	68
83	Silicon quantum dot superlattice solar cell structure including silicon nanocrystals in a photogeneration layer. Nanoscale Research Letters, 2014, 9, 246.	3.1	23
84	Optical assessment of silicon nanowire arrays fabricated by metal-assisted chemical etching. Nanoscale Research Letters, 2013, 8, 216.	3.1	37
85	Improvement of carrier diffusion length in silicon nanowire arrays using atomic layer deposition. Nanoscale Research Letters, 2013, 8, 361.	3.1	39
86	Radical-assisted chemical doping for chemically derived graphene. Nanoscale Research Letters, 2013, 8, 534.	3.1	7
87	Laser Scribing of W-textured ZnO Substrates Using Green Laser. Materials Research Society Symposia Proceedings, 2013, 1493, 207-212.	0.1	0
88	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
89	Improvement of Electrical Properties of Silicon Quantum Dot Superlattice Solar Cells with Diffusion Barrier Layers. Japanese Journal of Applied Physics, 2013, 52, 04CR02.	0.8	16
90	Deposition of Ag(In,Ga)Se <sub>2</sub> Solar Cells by a Modified Three-Stage Method Using a Low-Temperature-Deposited Ag <sup>+</sup> Se Cap Layer. Japanese Journal of Applied Physics, 2013, 52, 055801.	0.8	19

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91	Observation of light scattering properties of silicon nanowire arrays. , 2013, , .		1
92	Numerical simulation about effects of bandgap grading in Cu(In, Ga)Se <sub>2</sub> with a bandgap of 1.4 eV on solar cell performance. , 2013, , .		0
93	Growth of Ag(In,Ga)Se <sub>2</sub> Films by Modified Three-Stage Method and Influence of Annealing on Performance of Solar Cells. Japanese Journal of Applied Physics, 2012, 51, 10NC05.	0.8	7
94	Experimental and Theoretical Evaluation of Cu(In,Ga)Se <sub>2</sub> Concentrator Solar Cells. Japanese Journal of Applied Physics, 2012, 51, 014101.	0.8	9
95	Layer-by-layer assembled transparent conductive graphene films for solar cells application. Materials Research Society Symposia Proceedings, 2012, 1451, 75-81.	0.1	0
96	Numerical Approach to the Investigation of Performance of Silicon Nanowire Solar Cells Embedded in a SiO <sub>2</sub> Matrix. Japanese Journal of Applied Physics, 2012, 51, 11PE12.	0.8	12
97	Layer-by-Layer Assembled Transparent Conductive Graphene Films for Silicon Thin-Film Solar Cells. Japanese Journal of Applied Physics, 2012, 51, 11PF01.	0.8	6
98	Improvement of the Band Profile of Cu(In,Ga)Se <sub>2</sub> Solar Cells with High-Ga Content Prepared Using a Five-Stage Method. Japanese Journal of Applied Physics, 2012, 51, 10NC03.	0.8	11
99	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.	0.8	5
100	Metal-Assisted Chemical Etching Using Silica Nanoparticle for the Fabrication of a Silicon Nanowire Array. Japanese Journal of Applied Physics, 2012, 51, 02BP09.	0.8	13
101	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
102	Electrophoretic deposition of high quality transparent conductive graphene films on insulating glass substrates. Journal of Physics: Conference Series, 2012, 352, 012003.	0.3	13
103	Effect of the Quantum Size Effect on the Performance of Solar Cells with a Silicon Nanowire Array Embedded in SiO <sub>2</sub> . Materials Research Society Symposia Proceedings, 2012, 1439, 145-150.	0.1	1
104	Metal-Assisted Chemical Etching Using Silica Nanoparticle for the Fabrication of a Silicon Nanowire Array. Japanese Journal of Applied Physics, 2012, 51, 02BP09.	0.8	14
105	Improvement of the Band Profile of Cu(In,Ga)Se <sub>2</sub> Solar Cells with High-Ga Content Prepared Using a Five-Stage Method. Japanese Journal of Applied Physics, 2012, 51, 10NC03.	0.8	6
106	Growth of Ag(In,Ga)Se <sub>2</sub> Films by Modified Three-Stage Method and Influence of Annealing on Performance of Solar Cells. Japanese Journal of Applied Physics, 2012, 51, 10NC05.	0.8	9
107	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.	0.8	17
108	Numerical Approach to the Investigation of Performance of Silicon Nanowire Solar Cells Embedded in a SiO <sub>2</sub> Matrix. Japanese Journal of Applied Physics, 2012, 51, 11PE12.	0.8	20

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109	Layer-by-Layer Assembled Transparent Conductive Graphene Films for Silicon Thin-Film Solar Cells. Japanese Journal of Applied Physics, 2012, 51, 11PF01.	0.8	8
110	Characterization of Ag(In, Ga)Se <sub>2</sub> /CdS interface in AIGS solar cell by HAADF-STEM measurement. , 2011, , .		1
111	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
112	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
113	Light management of a-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
114	Comparison of Interface Characterization between Ag(In,Ga)Se <sub>2</sub> and Cu(In,Ga)Se <sub>2</sub> Solar Cells by High-Angle-Annular Dark-Field Scanning Transmission Electron Microscopy. Japanese Journal of Applied Physics, 2011, 50, 126603.	0.8	9
115	Effects of the deposition conditions of p-type hydrogenated nanocrystalline cubic silicon carbide on n-type crystalline silicon heterojunction solar cell performance. , 2011, , .		0
116	Comparison of Interface Characterization between Ag(In,Ga)Se <sub>2</sub> and Cu(In,Ga)Se <sub>2</sub> Solar Cells by High-Angle-Annular Dark-Field Scanning Transmission Electron Microscopy. Japanese Journal of Applied Physics, 2011, 50, 126603.	0.8	6
117	Effects of oxygen addition on electrical properties of silicon quantum dots/amorphous silicon carbide superlattice. Current Applied Physics, 2010, 10, S435-S438.	1.1	36
118	High open-circuit voltage oxygen-containing silicon quantum dots superlattice solar cells. , 2010, , .		5
119	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
120	Size-Controlled Silicon Quantum Dots Superlattice for Thin-Film Solar Cell Applications. Materials Research Society Symposia Proceedings, 2008, 1101, 1.	0.1	7
121	Photoluminescence from Silicon Quantum Dots in Si Quantum Dots/Amorphous SiC Superlattice. Japanese Journal of Applied Physics, 2007, 46, L833-L835.	0.8	74
122	Preparation of Nanocrystalline Silicon in Amorphous Silicon Carbide Matrix. Japanese Journal of Applied Physics, 2006, 45, L1064-L1066.	0.8	78
123	Nanocrystalline Silicon in Amorphous Silicon Carbide Matrix for Si Quantum Dots Superlattice. , 2006, , .		0
124	TiO <sub>2</sub> -Coated Transparent Conductive Oxide (SnO <sub>2</sub> :F) Films Prepared by Atmospheric Pressure Chemical Vapor Deposition with High Durability against Atomic Hydrogen. Japanese Journal of Applied Physics, 2006, 45, L291-L293.	0.8	20