Kazuhiro Gotoh

List of Publications by Year
in descending order

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54 papers	382 citations	840776 11 h-index	996975 15 g-index
54 all docs	54 docs citations	54 times ranked	267 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.	5.0	11
2	Zn_{1â€“x}Ge_xO_y Passivating Interlayers for BaSi₂ Thin-Film Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 13828-13835.	8.0	10
3	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
4	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
5	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
6	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
7	Simulation study on lateral minority carrier transport in the surface inversion layer of the p-aSi:H/i-aSi:H/cSi heterojunction solar cell. Japanese Journal of Applied Physics, 2021, 60, 026503.	1.5	2
8	Mechanisms of carrier lifetime enhancement and conductivity-type switching on hydrogen-incorporated arsenic-doped BaSi2. Thin Solid Films, 2021, 724, 138629.	1.8	8
9	Realization of the Crystalline Silicon Solar Cell Using Nanocrystalline Transport Path in Ultra-thin Dielectrics for Reinforced Passivating Contact. , 2021, , .		0
10	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
11	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
12	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
13	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
14	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
15	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
16	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
17	Impact of deposition of indium tin oxide double layers on hydrogenated amorphous silicon/crystalline silicon heterojunction. AIP Advances, 2020, 10, 065008.	1.3	7
18	Significant enhancement of photoresponsivity in As-doped n-BaSi₂epitaxial films by atomic hydrogen passivation. Applied Physics Express, 2020, 13, 051001.	2.4	8

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19	Atomic hydrogen passivation for photoresponsivity enhancement of boron-doped p-BaSi2 films and performance improvement of boron-doped p-BaSi2/n-Si heterojunction solar cells. Journal of Applied Physics, 2020, 127, .	2.5	13
20	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
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	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
23	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
24	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
25	Surface inversion layer effective minority carrier mobility as one of the measures of surface quality of the p-aSi:H/i-aSi:H/cSi heterojunction solar cell. Japanese Journal of Applied Physics, 2020, 59, SGGF06.	1.5	1
26	Work function of indium oxide thin films on p-type hydrogenated amorphous silicon. , 2020, , .		0
27	Fabrication of silicon-nanocrystals-embedded silicon oxide passivating contacts. , 2020, , .		0
28	Hydrogen concentration at a-Si:H/c-Si heterointerfacesâ€"The impact of deposition temperature on passivation performance. AIP Advances, 2019, 9, .	1.3	27
29	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
30	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
31	Silicon Nanowire Heterojunction Solar Cells with an Al2O3 Passivation Film Fabricated by Atomic Layer Deposition. Nanoscale Research Letters, 2019, 14, 99.	5.7	11
32	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
33	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
34	Fabrication of a Silicon Nanowire Solar Cell on a Silicon-on-Insulator Substrate. Applied Sciences (Switzerland), 2019, 9, 818.	2.5	11
35	Significant improvement on electrical properties of BaSi2 due to atomic H passivation by radio-frequency plasma. , 2019, , .		0
36	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

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37	Marked enhancement of the photoresponsivity and minority-carrier lifetime of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>BaS</mml:mi><mml:msub><mml:mi mathvariant="normal">i</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> passivated with atomic hydrogen. Physical Review Materials, 2019, 3, .	2.4	20
38	Effect of substrate type on the electrical and structural properties of TiO2 thin films deposited by reactive DC sputtering. Journal of Crystal Growth, 2018, 491, 120-125.	1.5	7
39	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
40	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
41	Local Structure of High Performance TiO<inf>x</inf> Passivating Layer Revealed by Electron Energy Loss Spectroscopy. , 2018, , .		0
42	Application of light trapping structure using Ge dot mask by alkaline etching to heterojunction solar cell. , 2018, , .		0
43	Photoresponsivity improvement of BaSi<inf>2</inf> epitaxial films by capping with hydrogenated amorphous Si layers by radio-frequency<inf>2</inf> plasma. , 2018, , .		0
44	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
45	Improving the photoresponse spectra of BaSi2 layers by capping with hydrogenated amorphous Si layers prepared by radio-frequency hydrogen plasma. AIP Advances, 2018, 8, 055306.	1.3	10
46	Activation mechanism of TiO _x passivating layer on crystalline Si. Applied Physics Express, 2018, 11, 102301.	2.4	14
47	Impact of boron incorporation on properties of silicon solar cells employing p-type polycrystalline silicon grown by aluminum-induced crystallization. Japanese Journal of Applied Physics, 2018, 57, 08RB12.	1.5	3
48	Boron-doped p-BaSi2/n-Si solar cells formed on textured n-Si(0 0 1) with a pyramid structure consisting of {1 1 1} facets. Journal of Crystal Growth, 2017, 475, 186-191.	1.5	9
49	Development of spin-coated copper iodide on silicon for use in hole-selective contacts. Energy Procedia, 2017, 124, 598-603.	1.8	12
50	Solar Cells Application of p-type poly-Si Thin Film by Aluminum Induced Crystallization. , 2017, , .		0
51	Fabrication of CuI/a-Si:H/c-Si Structure for Application to Hole-selective Contacts of Heterojunction Si Solar Cells. , 2017, , .		0
52	Strain-compensated Ge/Si1â^'C quantum dots with Si mediating layers grown by molecular beam epitaxy. Journal of Crystal Growth, 2015, 425, 167-171.	1.5	1
53	Effect of deposition rate on the characteristics of Ge quantum dots on Si (001) substrates. Thin Solid Films, 2014, 557, 80-83.	1.8	2
54	Optical and structural studies of highly uniform Ge quantum dots on Si (001) substrate grown by solid-source molecular beam epitaxy. Journal of Crystal Growth, 2013, 378, 439-441.	1.5	7