

Isao Takahashi

List of Publications by Year in descending order

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papers

555
citations

759233

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39
docs citations

39
times ranked

442
citing authors

#	ARTICLE	IF	CITATIONS
1	Generation mechanism of dislocations during directional solidification of multicrystalline silicon using artificially designed seed. Journal of Crystal Growth, 2010, 312, 897-901.	1.5	96
2	Electrical properties of $\text{In}_2\text{O}_3/\text{Ga}_2\text{O}_3$ pn heterojunction diode and band alignment of the heterostructure. Applied Physics Letters, 2018, 113, .	3.3	74
3	Relationship between grain boundary structures in Si multicrystals and generation of dislocations during crystal growth. Journal of Applied Physics, 2010, 107, .	2.5	46
4	Seed manipulation for artificially controlled defect technique in new growth method for quasi-monocrystalline Si ingot based on casting. Applied Physics Express, 2015, 8, 105501.	2.4	38
5	Ultra-wide bandgap corundum-structured p-type In^{1+} -(Ir,Ga) O_3 alloys for In^{1+} -Ga O_3 electronics. Applied Physics Letters, 2021, 118, .	3.3	36
6	Floating cast method to realize high-quality Si bulk multicrystals for solar cells. Journal of Crystal Growth, 2009, 311, 228-231.	1.5	35
7	Defect-insensitive current-voltage characteristics of Schottky barrier diode formed on heteroepitaxial In^{1+} -Ga O_3 grown by mist chemical vapor deposition. AIP Advances, 2020, 10, .	1.3	24
8	Impact of type of crystal defects in multicrystalline Si on electrical properties and interaction with impurities. Journal of Applied Physics, 2011, 109, .	2.5	22
9	Implementation of faceted dendrite growth on floating cast method to realize high-quality multicrystalline Si ingot for solar cells. Journal of Applied Physics, 2011, 109, .	2.5	20
10	Computational Investigation of Relationship between Shear Stress and Multicrystalline Structure in Silicon. Japanese Journal of Applied Physics, 2010, 49, 04DP01.	1.5	16
11	Alternative simple method to realize p-type BaSi $_2$ thin films for Si heterojunction solar cell applications. MRS Advances, 2018, 3, 1435-1442.	0.9	14
12	Improved multicrystalline silicon ingot quality using single layer silicon beads coated with silicon nitride as seed layer. Journal of Crystal Growth, 2016, 441, 124-130.	1.5	13
13	Towards implementation of floating cast method for growing large-scale high-quality multicrystalline silicon ingot using designed double crucibles. Progress in Photovoltaics: Research and Applications, 2014, 22, 726-732.	8.1	12
14	Relationship between dislocation density and contact angle of dendrite crystals in practical size silicon ingot. Journal of Applied Physics, 2015, 117, .	2.5	12
15	Development of spin-coated copper iodide on silicon for use in hole-selective contacts. Energy Procedia, 2017, 124, 598-603.	1.8	12
16	Impact of Defect Density in Si Bulk Multicrystals on Gettering Effect of Impurities. Japanese Journal of Applied Physics, 2008, 47, 8790-8792.	1.5	11
17	Effects of grain boundary structure controlled by artificially designed seeds on dislocation generation. Japanese Journal of Applied Physics, 2017, 56, 075501.	1.5	10
18	Controlling impurity distributions in crystalline Si for solar cells by using artificial designed defects. Journal of Crystal Growth, 2017, 468, 610-613.	1.5	9

#	ARTICLE	IF	CITATIONS
19	Enhanced Phosphorus Gettering of Impurities in Multicrystalline Silicon at Low Temperature. Energy Procedia, 2014, 55, 203-210.	1.8	8
20	Controlling impurity distribution in quasi-mono crystalline Si ingot by seed manipulation for artificially controlled defects technique. Energy Procedia, 2017, 124, 734-739.	1.8	8
21	Effect of grain boundary character of multicrystalline Si on external and internal (phosphorus) gettering of impurities. Progress in Photovoltaics: Research and Applications, 2016, 24, 1615-1625.	8.1	6
22	Towards optimized nucleation control in multicrystalline silicon ingot for solar cells. Journal of Crystal Growth, 2017, 468, 620-624.	1.5	6
23	On the growth mechanism of multicrystalline silicon ingots with small grains fabricated using single-layer silicon beads. Japanese Journal of Applied Physics, 2017, 56, 075502.	1.5	5
24	Fabrication of silicon nanowire based solar cells using TiO ₂ /Al ₂ O ₃ stack thin films. MRS Advances, 2018, 3, 1419-1426.	0.9	5
25	Effects of surface morphology randomness on optical properties of Si-based photonic nanostructures. Japanese Journal of Applied Physics, 2017, 56, 08MA02.	1.5	3
26	Influence of barrier layer's height on the performance of Si quantum dot solar cells. Japanese Journal of Applied Physics, 2018, 57, 08RF08.	1.5	3
27	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
28	Growth direction control of dendrite crystals in parallel direction to realize high-quality multicrystalline silicon ingot. Japanese Journal of Applied Physics, 2016, 55, 091302.	1.5	2
29	Application of heterojunction to Si-based solar cells using photonic nanostructures coupled with vertically aligned Ge quantum dots. Japanese Journal of Applied Physics, 2015, 54, 08KA06.	1.5	1
30	Comparison of phosphorus gettering effect in faceted dendrite and small grain of multicrystalline silicon wafers grown by floating cast method. Japanese Journal of Applied Physics, 2015, 54, 08KD11.	1.5	1
31	Application of new doping techniques to solar cells for low temperature fabrication. , 2016, , .		1
32	Light-induced Recovery of Effective Carrier Lifetime in Boron-doped Czochralski Silicon at Room Temperature. Energy Procedia, 2016, 92, 801-807.	1.8	1
33	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
34	Mössbauer spectroscopic microscope study on diffusion and segregation of Fe impurities in mc-Si wafer. Hyperfine Interactions, 2019, 240, 1.	0.5	1
35	Simulation study of Ge/Si heterostructure solar cells yielding improved open-circuit voltage and quantum efficiency. Japanese Journal of Applied Physics, 2014, 53, 110312.	1.5	0
36	Improvement of annealing procedure to suppress defect generation during impurity gettering in multicrystalline silicon for solar cells. , 2014, , .		0

#	ARTICLE	IF	CITATIONS
37	Structural control of dendrite crystals in practical size silicon ingots grown by floating cast method. , 2015, , .		0
38	Solar Cells Application of p-type poly-Si Thin Film by Aluminum Induced Crystallization. , 2017, , .		0
39	Fabrication of CuI/a-Si:H/c-Si Structure for Application to Hole-selective Contacts of Heterojunction Si Solar Cells. , 2017, , .		0