

Koji Arafune

List of Publications by Year in descending order

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62
papers

1,096
citations

687363

13
h-index

414414

32
g-index

62
all docs

62
docs citations

62
times ranked

991
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | Industrial Crystallization of Potassium Sulfate Using a Suspension Crystallizer: Inclusion of Mother Liquor and an Impurity Distribution Model. <i>Journal of Chemical Engineering of Japan</i> , 2022, 55, 188-192. | 0.6 | 4 |
| 2 | Carrier injection behaviors from a band semiconductor to strongly correlated electron system in perovskite lanthanum vanadate/silicon junctions. <i>Applied Physics Letters</i> , 2022, 120, 232106. | 3.3 | 0 |
| 3 | Purification of Phosphoric Acid by Adsorption-Assisted Crystallization. <i>Kagaku Kogaku Ronbunshu</i> , 2020, 46, 152-155. | 0.3 | 4 |
| 4 | Effect of post-deposition annealing on electrical properties and structures of aluminum oxide passivation film on a crystalline silicon substrate. <i>Japanese Journal of Applied Physics</i> , 2019, 58, 125502. | 1.5 | 1 |
| 5 | Use of ethanol with triolein for fatty acid ethyl ester as biodiesel fuel in a Novozym \hat{A} 435 fixed-bed reactor. <i>Biomass and Bioenergy</i> , 2018, 108, 433-438. | 5.7 | 9 |
| 6 | Control of dipole properties in high- k and SiO ₂ stacks on Si substrates with tricolor superstructure. <i>Applied Physics Letters</i> , 2018, 113, . | 3.3 | 10 |
| 7 | Crystallizing Concentration of the Diatom <i>Chaetoceros gracilis</i> Cell Solutions. <i>Kagaku Kogaku Ronbunshu</i> , 2018, 44, 18-22. | 0.3 | 0 |
| 8 | Investigation of the static electric field effect of strontium silicate layers on silicon substrates. <i>Journal of Applied Physics</i> , 2017, 121, 225302. | 2.5 | 3 |
| 9 | Transesterification of Triolein and Methanol by Novozym 435 with Dimethyl Ether. <i>Journal of Chemical Engineering of Japan</i> , 2017, 50, 924-928. | 0.6 | 3 |
| 10 | Investigation of new stacking surface passivation structures with interfacial tuning layers on p-type crystalline silicon. <i>Japanese Journal of Applied Physics</i> , 2016, 55, 04ES03. | 1.5 | 0 |
| 11 | Correlation between chemical-bonding states and fixed-charge states of Sr-silicate film on Si(100) substrate. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2016, 34, . | 2.1 | 4 |
| 12 | Room temperature formation of Hf-silicate layer by pulsed laser deposition with Hf-Si-O ternary reaction control. <i>AIP Advances</i> , 2016, 6, 105303. | 1.3 | 0 |
| 13 | Application of Industrial Crystallization Model for Charge/Discharge Cycle of Lead/Acid Batteries at High Pressure. <i>Journal of Chemical Engineering of Japan</i> , 2015, 48, 815-820. | 0.6 | 2 |
| 14 | Surface passivation of crystalline silicon by sputtered AlO _x /AlN _x stacks toward low-cost high-efficiency silicon solar cells. <i>Japanese Journal of Applied Physics</i> , 2015, 54, 08KD18. | 1.5 | 4 |
| 15 | Relationship between passivation properties and band alignment in O ₃ -based atomic-layer-deposited AlO _x on crystalline Si for photovoltaic applications. <i>Japanese Journal of Applied Physics</i> , 2015, 54, 08KD19. | 1.5 | 6 |
| 16 | Passivation properties of aluminum oxide films deposited by mist chemical vapor deposition for solar cell applications. <i>Japanese Journal of Applied Physics</i> , 2015, 54, 08KD25. | 1.5 | 2 |
| 17 | Effects of stacking passivation structure with interface tuning layer for crystalline Si solar cell applications. , 2015, , . | | 0 |
| 18 | Anti-solvent crystallization of a ternary Lennard-Jones mixture performed by molecular dynamics. <i>Journal of Molecular Liquids</i> , 2015, 209, 1-5. | 4.9 | 7 |

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|----|--|-----|-----------|
| 19 | Detailed study of the effects of interface properties of ozone-based atomic layer deposited AlO _x on the surface passivation of crystalline silicon. Japanese Journal of Applied Physics, 2014, 53, 04ER06. | 1.5 | 3 |
| 20 | Nickel distribution and recombination activity in as-grown and annealed multicrystalline silicon. Japanese Journal of Applied Physics, 2014, 53, 04ER20. | 1.5 | 4 |
| 21 | Room-temperature photoluminescence evaluation of small-angle grain boundaries in multicrystalline silicon. Japanese Journal of Applied Physics, 2014, 53, 112401. | 1.5 | 2 |
| 22 | Structure Analyses of Room Temperature Deposited AlO _x Passivation Films for Crystalline Silicon Solar Cells. Japanese Journal of Applied Physics, 2013, 52, 122303. | 1.5 | 1 |
| 23 | Effect of initial oxidized layer condition on passivation quality of AlO _x films deposited by atomic layer deposition technique at room temperature. , 2013, , . | | 0 |
| 24 | Combinatorial Synthesis Study of Passivation Layers for Solar Cell Applications. Materials Science Forum, 2012, 725, 161-164. | 0.3 | 4 |
| 25 | Surface Recombination of Crystalline Silicon Substrates Passivated by Atomic-Layer-Deposited AlO _x . Japanese Journal of Applied Physics, 2012, 51, 04DP06. | 1.5 | 11 |
| 26 | Filtration of waste coolant from fixed-abrasive wire sawing and recycle of retrieved silicon powder for feedstock. , 2012, , . | | 3 |
| 27 | Interaction between Metal Impurities and Small-Angle Grain Boundaries on Recombination Properties in Multicrystalline Silicon for Solar Cells. Applied Physics Express, 2012, 5, 042301. | 2.4 | 23 |
| 28 | Impact of Light-Element Impurities on Crystalline Defect Generation in Silicon Wafer. Japanese Journal of Applied Physics, 2012, 51, 02BP08. | 1.5 | 7 |
| 29 | Correlation between carbon incorporation and defect formation in quasi-single crystalline silicon. , 2012, , . | | 1 |
| 30 | Evaluation of defects generation in crystalline silicon ingot grown by cast technique with seed crystal for solar cells. Journal of Applied Physics, 2012, 111, 074505. | 2.5 | 24 |
| 31 | Interface engineering for the passivation of c-Si with O ₃ -based atomic layer deposited AlO _x for solar cell application. Applied Physics Letters, 2012, 100, . | 3.3 | 29 |
| 32 | Impact of Light-Element Impurities on Crystalline Defect Generation in Silicon Wafer. Japanese Journal of Applied Physics, 2012, 51, 02BP08. | 1.5 | 9 |
| 33 | Material Research on High-Quality Passivation Layers with Controlled Fixed Charge for Crystalline Silicon Solar Cells. Japanese Journal of Applied Physics, 2011, 50, 04DP09. | 1.5 | 4 |
| 34 | Impacts of Metal Impurities on Recombination Properties at Small Angle Grain Boundaries in Multicrystalline Silicon for Solar Cells. ECS Transactions, 2011, 41, 29-36. | 0.5 | 1 |
| 35 | Material Research on High-Quality Passivation Layers with Controlled Fixed Charge for Crystalline Silicon Solar Cells. Japanese Journal of Applied Physics, 2011, 50, 04DP09. | 1.5 | 6 |
| 36 | Evaluation of Multi-Crystalline Silicon Substrates for Solar Cells by Raman Spectroscopy. ECS Transactions, 2010, 25, 33-39. | 0.5 | 5 |

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|----|---|-----|-----------|
| 37 | Structural Change by Annealing Process at ≈ 9 Grain Boundaries in Multicrystalline Silicon Substrate for Solar Cells. <i>Electrochemical and Solid-State Letters</i> , 2010, 13, B79. | 2.2 | 2 |
| 38 | Measurement of strain distribution in multi-crystalline silicon substrates for solar cells using synchrotron radiation. , 2010, , . | | 0 |
| 39 | Microscopic Distributions of Light Elements and Their Precipitates in Multicrystalline Silicon for Solar Cells. <i>Japanese Journal of Applied Physics</i> , 2010, 49, 110202. | 1.5 | 14 |
| 40 | Real-time study of strain relaxation in lattice-mismatched InGaAs/GaAs by x-ray diffraction. , 2009, , . | | 0 |
| 41 | Study of the Degradation of p-n Diode Characteristics Caused by Small-Angle Grain Boundaries in Multi-Crystalline Silicon Substrate for Solar Cells. <i>Japanese Journal of Applied Physics</i> , 2009, 48, 121202. | 1.5 | 15 |
| 42 | Growth and characterization of n-type polycrystalline silicon ingots. <i>Solar Energy Materials and Solar Cells</i> , 2009, 93, 1047-1050. | 6.2 | 2 |
| 43 | Effect of crucible rotation on oxygen concentration during unidirectional solidification process of multicrystalline silicon for solar cells. <i>Journal of Crystal Growth</i> , 2009, 311, 1123-1128. | 1.5 | 7 |
| 44 | EBIC imaging using scanning transmission electron microscopy: experiment and analysis. <i>Journal of Materials Science: Materials in Electronics</i> , 2008, 19, 324-327. | 2.2 | 8 |
| 45 | Analysis of oxygen incorporation in unidirectionally solidified multicrystalline silicon for solar cells. <i>Journal of Crystal Growth</i> , 2008, 310, 2204-2208. | 1.5 | 49 |
| 46 | Estimation of growth rate in unidirectionally solidified multicrystalline silicon by the growth-induced striation method. <i>Journal of Crystal Growth</i> , 2008, 310, 2697-2701. | 1.5 | 11 |
| 47 | Thermodynamical analysis of oxygen incorporation from a quartz crucible during solidification of multicrystalline silicon for solar cell. <i>Journal of Crystal Growth</i> , 2008, 310, 4666-4671. | 1.5 | 70 |
| 48 | Directional Solidification of Multicrystalline Silicon Using the Accelerated Crucible Rotation Technique. <i>Crystal Growth and Design</i> , 2008, 8, 2525-2527. | 3.0 | 8 |
| 49 | Wide-Angle Antireflection Effect of Subwavelength Structures for Solar Cells. <i>Japanese Journal of Applied Physics</i> , 2007, 46, 3333-3336. | 1.5 | 90 |
| 50 | Directional solidification of polycrystalline silicon ingots by successive relaxation of supercooling method. <i>Journal of Crystal Growth</i> , 2007, 308, 5-9. | 1.5 | 56 |
| 51 | Light trapping effect of submicron surface textures in crystalline Si solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , 2007, 15, 415-423. | 8.1 | 203 |
| 52 | Numerical Analysis and Demonstration of Submicron Antireflective Textures for Crystalline Silicon Solar Cells. , 2006, , . | | 3 |
| 53 | Antireflective subwavelength structures on crystalline Si fabricated using directly formed anodic porous alumina masks. <i>Applied Physics Letters</i> , 2006, 88, 201116. | 3.3 | 146 |
| 54 | Growth and Characterization of Multicrystalline Silicon Ingots Grown by Directional Solidification Technique. , 2006, , . | | 1 |

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|----|--|-----|-----------|
| 55 | Study on Iron Distribution and Electrical Activities at Grain Boundaries in Polycrystalline Silicon Substrate for Solar Cells. Japanese Journal of Applied Physics, 2006, 45, 6153-6156. | 1.5 | 23 |
| 56 | Evaluation of Polycrystalline Silicon for Solar Cells by Small p-n Diode Array. Materials Research Society Symposia Proceedings, 2006, 974, 1. | 0.1 | 0 |
| 57 | Surface Passivation of Crystalline Silicon Solar Cells by Atmospheric Pressure Chemical Vapor Deposition. , 2006, , . | | 0 |
| 58 | Thermal and solutal Marangoni convection in In-Ga-Sb system. Journal of Crystal Growth, 1999, 197, 811-817. | 1.5 | 129 |
| 59 | Investigation of Thermal Marangoni Convection in Low- and High-Prandtl-Number Fluids.. Journal of Chemical Engineering of Japan, 1999, 32, 104-109. | 0.6 | 23 |
| 60 | <i>In situ</i> Real-Time X-ray Reciprocal Space Mapping during InGaAs/GaAs Growth for Understanding Strain Relaxation Mechanisms. Applied Physics Express, 0, 2, 085501. | 2.4 | 36 |
| 61 | Evaluation of Silicon Substrates Fabricated by Seeding Cast Technique. Materials Science Forum, 0, 725, 133-136. | 0.3 | 1 |
| 62 | Continuous Crystallization of Phosphoric Acid Using Suspension Crystallizer: Effect of Operating Conditions on Purity of Crystals. Crystal Research and Technology, 0, , 2100102. | 1.3 | 3 |