Mutsumi Sugiyama

List of Publications by Year
in descending order

92 papers	1,295 citations	331538 21 h-index	414303 32 g-index
92 all docs	92 docs citations	92 times ranked	1292 citing authors

#	Article	IF	Citations
1	Effect of Seâ€Free Annealing on Cesium Fluorideâ€Treated Cu(In,Ga)Se₂ Thin Films and Corresponding Solar Cells. Physica Status Solidi - Rapid Research Letters, 2022, 16, .	1.2	1
2	Complexing Agent-Dependent Properties of Chemically Deposited Tin Antimony Sulphide Thin Films for Use in Sustainable Energy Devices. Journal of Electronic Materials, 2022, 51, 1148-1162.	1.0	2
3	Reactive RF magnetron sputtering epitaxy of NiO thin films on (0001) sapphire and (100) MgO substrates. Japanese Journal of Applied Physics, 2022, 61, 025505.	0.8	3
4	Effect of the valence band maximum control of Cu(In,Ga)Se₂ photoelectrode surface on water splitting. Japanese Journal of Applied Physics, 2022, 61, 051003.	0.8	4
5	Fabrication of solar cells with CO₂ gas sensing capabilities based on a NiO/ZnO p-n junction for developing self-powered gas sensors. Japanese Journal of Applied Physics, 2022, 61, 054002.	0.8	5
6	Development of Stacked Image Sensor With Avalanche Multiplication in Surface-Enhanced Crystalline-Selenium-Based Photoconversion Layer. , 2022, 6, 1-4.		1
7	Avalanche Multiplication Image Sensor Bonded With Crystalline Se Photoconversion Layer Using Seâ€“Se Bonding Process. IEEE Transactions on Electron Devices, 2022, 69, 4325-4330.	1.6	1
8	Effects of Ag on the carrier lifetime and efficiency of (Cu_{1âˆ’x}Ag _x) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 462	0.8	4
9	Proton irradiation effects on NiO/ZnO visible-light-transparent solar cells for space applications. Japanese Journal of Applied Physics, 2021, 60, 048001.	0.8	3
10	Effect of combined treatment of cesium fluoride as precursor and post-treatment on Cu(In,Ga)Se2 thin film solar cell. Applied Physics Letters, 2021, 118, .	1.5	6
11	Electrical degradation and recovery of NiO/ZnO visible-light-transparent flexible solar cells. Japanese Journal of Applied Physics, 2021, 60, 064001.	0.8	0
12	Impact of Na and/or Sb on the CTS thin films and solar cell performance. Japanese Journal of Applied Physics, 2021, 60, 105506.	0.8	4
13	Effect of cesium fluoride treatment in bifacial Cu(In1-x,Gax)Se2 solar cell. Thin Solid Films, 2021, 736, 138913.	0.8	1
14	Emission properties of intrinsic and extrinsic defects in Cu₂SnS₃ thin films and solar cells. Japanese Journal of Applied Physics, 2021, 60, 015504.	0.8	12
15	Sulfurization of Cu₂(Sn,Ge)S₃thin films deposited by co-evaporation. Japanese Journal of Applied Physics, 2020, 59, SCCD01.	0.8	4
16	Alkali-induced grain boundary reconstruction on Cu(In,Ga)Se2 thin film solar cells using cesium fluoride post deposition treatment. Nano Energy, 2020, 68, 104299.	8.2	56
17	Temperatureâ€dependent currentâ€“voltage and admittance spectroscopy analysis on cesiumâ€treated Cu(In_{1 âˆ’ <i>x</i>},Ga_{<i>x</i>})Se₂ solar cell before and after heatâ€light soaking and subsequent heatâ€soaking treatments. Progress in Photovoltaics: Research and Applications, 2020, 28, 1158-1166.	4.4	10
18	Control of Eu Oxidation State in Y2O3âˆ’xSx:Eu Thin-Film Phosphors Prepared by Atomic Layer Deposition: A Structural and Photoluminescence Study. Materials, 2020, 13, 93.	1.3	5

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19	Characterization on proton irradiation-damaged interfaces of CIGS-related multilayered compound semiconductors for solar cells by electrochemical impedance spectroscopy. Japanese Journal of Applied Physics, 2020, 59, 058003.	0.8	7
20	Electron irradiation resistance of NiO/ZnO visible-light-transparent solar cells. Japanese Journal of Applied Physics, 2020, 59, 101004.	0.8	7
21	Investigation of VO2 directly deposited on a glass substrate using RF sputtering for a smart window. Japanese Journal of Applied Physics, 2020, 59, 105506.	0.8	2
22	Effect of heatâ€bias soaking on cesium fluorideâ€treated CIGS thin film solar cells. Progress in Photovoltaics: Research and Applications, 2019, 27, 22-29.	4.4	31
23	Impact of heatâ€light soaking and heatâ€bias soaking on NaFâ€treated CIGS thin film solar cells. Progress in Photovoltaics: Research and Applications, 2019, 27, 623-629.	4.4	18
24	PL properties and defects of SnS layers based on n-type buffer layers/p-type SnS structures. Japanese Journal of Applied Physics, 2019, 58, 051004.	0.8	7
25	Non-polar GaN thin films deposition on glass substrate at low temperatures by conventional RF sputtering. Thin Solid Films, 2019, 675, 1-4.	0.8	6
26	Investigation of LaVO3 based compounds as a photovoltaic absorber. Solar Energy, 2018, 162, 1-7.	2.9	22
27	Impact of heatâ€light soaking on potassium fluoride treated <scp>CIGS</scp> solar cells with <scp>CdS</scp> buffer layer. Progress in Photovoltaics: Research and Applications, 2018, 26, 171-178.	4.4	46
28	Influence of carrier mobility on sensitivity of room-temperature-operation CO₂ sensor based on SnO₂ thin film. Japanese Journal of Applied Physics, 2018, 57, 115503.	0.8	6
29	Electrical properties of ZnO:H films fabricated by RF sputtering deposition and fabrication of p-NiO/n-ZnO heterojunction devices. Japanese Journal of Applied Physics, 2018, 57, 071101.	0.8	13
30	Modelling of an equivalent circuit for Cu₂ZnSnS₄- and Cu₂ZnSnSe₄-based thin film solar cells. RSC Advances, 2017, 7, 25347-25352.	1.7	34
31	Ultraviolet light-absorbing and emitting diodes consisting of a p-type transparent-semiconducting NiO film deposited on an n-type GaN homoepitaxial layer. Applied Physics Letters, 2017, 110, .	1.5	20
32	Effects of combined additional indium deposition and potassium fluoride post-deposition treatments on Cu(In,Ga)Se₂ thin film solar cells. Progress in Photovoltaics: Research and Applications, 2017, 25, 871-877.	4.4	29
33	Influence of electron and proton irradiation on the soaking and degradation of Cu2ZnSnS4 solar cells. Thin Solid Films, 2017, 642, 311-315.	0.8	12
34	Effect of Na on sulfurization growth of SnS thin films and solar cells using NaF/Sn-S precursor. Thin Solid Films, 2016, 615, 25-28.	0.8	12
35	Absorption Wavelength Extension for Dye-Sensitized Solar Cells by Varying the Substituents of Chiral Salen Cu(II) Complexes. Journal of Applied Solution Chemistry and Modeling, 2016, 5, 48-56.	0.4	3
36	Fabrication of visibleâ€light transparent solar cells composed of NiO/Ni_xZn_{1â€x}O/ZnO heterostructures. Physica Status Solidi C: Current Topics in Solid State Physics, 2015, 12, 785-788.	0.8	21

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37	Investigation of the sulfurization process of Cu₂SnS₃ thin films and estimation of band offsets of Cu₂SnS₃â€related solar cell structure. Physica Status Solidi C: Current Topics in Solid State Physics, 2015, 12, 757-760.	0.8	37
38	RF magnetron sputtering deposition of amorphous Zn-Sn-O thin films as a buffer layer for CIS solar cells. Physica Status Solidi C: Current Topics in Solid State Physics, 2015, 12, 688-691.	0.8	4
39	Growth of amorphous Znâ€“Snâ€“O thin films by RF sputtering for buffer layers of CuInSe2 and SnS solar cells. Thin Solid Films, 2015, 589, 408-411.	0.8	4
40	Quantification of sputtering damage during NiO film deposition on a Si/SiO2 substrate using electrochemical impedance spectroscopy. Thin Solid Films, 2015, 592, 150-154.	0.8	11
41	Experimental determination of band offsets of NiO-based thin film heterojunctions. Journal of Applied Physics, 2014, 116, .	1.1	59
42	Investigation of Sputtering Damage around pn Interfaces of Cu(In,Ga)Se2 Solar Cells by Impedance Spectroscopy. Electrochimica Acta, 2014, 131, 236-239.	2.6	41
43	Preparation of CuInS2 thin films by sulfurization using ditertiarybutylsulfide. Thin Solid Films, 2014, 558, 400-404.	0.8	4
44	Effect of Co-doping on the properties of Zn 1âˆ’x Co x O films deposited by spray pyrolysis. Surface and Coatings Technology, 2013, 231, 149-152.	2.2	12
45	Application of impedance spectroscopy to investigate the electrical properties around the pn interface of Cu(In,Ga)Se2 solar cells. Thin Solid Films, 2013, 535, 287-290.	0.8	46
46	Photoluminescence studies in CuInS2 thin films grown by sulfurization using ditertiarybutylsulfide. Journal of Applied Physics, 2012, 112, 123521.	1.1	7
47	Advantages of using amorphous indium zinc oxide films for window layer in Cu(In,Ga)Se2 solar cells. Thin Solid Films, 2012, 520, 2119-2122.	0.8	21
48	Effects of Proton Irradiation on Optical and Electrical Properties of Cu(In,Ga)Se₂Solar Cells. Japanese Journal of Applied Physics, 2012, 51, 111802.	0.8	6
49	Photoluminescence Study of Deep Levels in CuInS2Thin Films Grown by Sulfurization Using Ditertiarybutylsulfide. Japanese Journal of Applied Physics, 2012, 51, 122403.	0.8	3
50	Studies on the Energy Band Discontinuities in SnS/ZnMgO Thin Film Heterojunction. Energy Procedia, 2011, 10, 172-176.	1.8	20
51	Optical and electrical properties of electron-irradiated Cu(In,Ga)Se2 solar cells. Thin Solid Films, 2011, 519, 7321-7323.	0.8	8
52	Band offset of SnS solar cell structure measured by X-ray photoelectron spectroscopy. Thin Solid Films, 2011, 519, 7429-7431.	0.8	60
53	Growth of single-phase Cu(In,Al)Se2 photoabsorbing films by selenization using diethylselenide. Thin Solid Films, 2009, 517, 2175-2177.	0.8	28
54	Preparation of Cu(In,Al)Se₂ thin films by selenization using diethylselenide. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1016-1018.	0.8	4

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55	Preparation of SnS films by low temperature sulfurization. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1221-1224.	0.8	20
56	Fabrication of an-type ZnO/p-type Cu-Al-O heterojunction diode by sputtering deposition methods. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1105-1108.	0.8	16
57	Gaâ€doped ZnO transparent conducting films prepared by heliconâ€waveâ€excited plasma sputtering. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1109-1111.	0.8	2
58	Fabrication of Znâ€doped Cu(In,Ga)Se₂ thin film solar cells prepared by Zn diffusion from the gas phase using dimethylzinc. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1213-1216.	0.8	3
59	Photoluminescence properties of ZnSnP₂ single crystals. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1116-1119.	0.8	13
60	Heliconâ€waveâ€excited plasma sputtering deposition of CuAlO₂ thin films. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 3101-3103.	0.8	3
61	Preparation of ZnO:Ga thin films by heliconâ€waveâ€excited plasma sputtering. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 3135-3137.	0.8	0
62	Formation of Zn-doped CuInSe2 films by thermal annealing using dimethylzinc. Journal of Crystal Growth, 2008, 310, 794-797.	0.7	15
63	Effect of alternating Cu poor/Cu rich/Cu poor/Cu rich/ layers of metal naphthenates in the growth process on the properties of CuInSe2 thin films prepared by the spin coating technique. Thin Solid Films, 2008, 516, 7335-7339.	0.8	11
64	Photoluminescence Property of ZnSnP₂ by Solution Growth and Normal Freezing Methods. Japanese Journal of Applied Physics, 2008, 47, 5342.	0.8	8
65	Preparation of SnS Films by Sulfurization of Sn Sheet. Japanese Journal of Applied Physics, 2008, 47, 4494-4495.	0.8	27
66	Sulfurization Growth of SnS Films and Fabrication of CdS/SnS Heterojunction for Solar Cells. Japanese Journal of Applied Physics, 2008, 47, 8723.	0.8	22
67	Effect of Deposition Conditions on Photoluminescence of CuInSe2Thin Films Prepared by Spin Coating Technique. Japanese Journal of Applied Physics, 2008, 47, 8284-8286.	0.8	5
68	Growth of single-phase CuInGaSe2 photo-absorbing alloy films by the selenization method using diethylselenide as a less-hazardous Se source. Thin Solid Films, 2007, 515, 5867-5870.	0.8	30
69	Use of diethylselenide for the preparation of CuInGaSe2 films by selenization of metal precursors premixed with Se. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 2543-2546.	0.8	1
70	Preparation of high Ga-content CuInGaSe2 films by selenization of metal precursors using diethylselenide as a less-hazardous source. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 2539-2542.	0.8	7
71	Helicon-wave-excited plasma sputtering deposition of Ga-doped ZnO transparent conducting films. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 2882-2886.	0.8	9
72	The use of diethylselenide as a less-hazardous source in CuInGaSe2 photoabsorbing alloy formation by selenization of metal precursors premixed with Se. Journal of Crystal Growth, 2006, 294, 214-217.	0.7	24

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73	Generation of Cubic Phase in Molecular-Beam-Epitaxy-Grown Hexagonal InGaN Epilayers on InN. Japanese Journal of Applied Physics, 2006, 45, 57-60.	0.8	5
74	Growth of ZnInGaS4 by normal freezing method. Journal of Physics and Chemistry of Solids, 2005, 66, 2127-2129.	1.9	2
75	Reduced Defect Densities in Cubic GaN Epilayers with AlGaN/GaN Superlattice Underlayers Grown on (001) GaAs Substrates by Metalorganic Vapor Phase Epitaxy. Japanese Journal of Applied Physics, 2004, 43, 958-965.	0.8	6
76	Critical Roles of Decomposition-Shielding Layer Deposited at Low Temperature Governing the Structural and Photoluminescence Properties of Cubic GaN Epilayers Grown on (001) GaAs by Metalorganic Vapor Phase Epitaxy. Japanese Journal of Applied Physics, 2004, 43, 106-110.	0.8	4
77	Reduction of point defect density in cubic GaN epilayers on (001) GaAs substrates using AlGaN/GaN superlattice underlayers. Journal of Crystal Growth, 2004, 272, 481-488.	0.7	6
78	Interface Fermi level pinning in a Cu/p-CuGaS2 Schottky diode. Journal of Physics and Chemistry of Solids, 2003, 64, 1787-1790.	1.9	4
79	Metalorganic vapor phase epitaxy of Cu(AlxGa1â^'x)(SySe1â^'y)2 chalcopyrite semiconductors and their band offsets. Journal of Physics and Chemistry of Solids, 2003, 64, 1481-1489.	1.9	23
80	Fermi-level pinning at the metal/p-type CuGaS2 interfaces. Journal of Applied Physics, 2002, 92, 7317-7319.	1.1	8
81	Use of diethylselenide as a less-hazardous source for preparation of CuInSe2 photo-absorbers by selenization of metal precursors. Journal of Crystal Growth, 2002, 243, 404-409.	0.7	42
82	Experimental Determination of Valence Band Discontinuities at Cu(Al,Ga)(S,Se)2/GaAs(001) Heterointerfaces Using Ultraviolet Photoemission Spectroscopy. Japanese Journal of Applied Physics, 2001, 40, L428-L430.	0.8	25
83	Localized exciton dynamics in strained cubic In0.1Ga0.9N/GaN multiple quantum wells. Applied Physics Letters, 2001, 79, 4319-4321.	1.5	81
84	Band gap bowing and exciton localization in strained cubic InxGa1â^'xN films grown on 3C-SiCâ€‰(001) by rf molecular-beam epitaxy. Applied Physics Letters, 2001, 79, 3600-3602.	1.5	20
85	Effective Localization of Quantum Well Excitons in InGaN Quantum Well Structures with High InN Mole Fraction. Physica Status Solidi A, 2000, 180, 321-325.	1.7	1
86	Evidence of localization effects in InGaN single-quantum-well ultraviolet light-emitting diodes. Applied Physics Letters, 2000, 76, 1671-1673.	1.5	52
87	Crystal Growth of High Purity AgIn(SxSe1-x)2Single Crystals. Japanese Journal of Applied Physics, 2000, 39, 50.	0.8	0
88	Optical Properties of an InGaN Active Layer in Ultraviolet Light Emitting Diode. Japanese Journal of Applied Physics, 1999, 38, L975-L977.	0.8	5
89	Influence of Sb inclusion on morphologies and carrier concentration properties of CTS thin films grown by sulfurization of Cu-Sn precursors. Japanese Journal of Applied Physics, 0, , .	0.8	1
90	Tin monosulfide (SnS) epitaxial films grown by RF magnetron sputtering and sulfurization on MgO(100) substrates. Japanese Journal of Applied Physics, 0, , .	0.8	1

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91	Fabrication of solar cells with CO2 gas sensing capabilities based on a NiO/ZnO p-n junction for developing self-powered gas sensors. Japanese Journal of Applied Physics, 0, , .	0.8	0
92	Elucidation of electrical properties of undoped and Sb-induced Cu₂SnS₃ (CTS) thin films and degradation properties on CTS thin films and solar cells by intentional proton irradiation. Japanese Journal of Applied Physics, 0, , .	0.8	0