

Takashi Koida

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

87
papers

4,127
citations

31
h-index

64
g-index

92
ext. papers

4,464
ext. citations

4.4
avg, IF

5.06
L-index

#	Paper	IF	Citations
87	Mg _x Zn _{1-x} O as a II-VI widegap semiconductor alloy. <i>Applied Physics Letters</i> , 1998 , 72, 2466-2468	3.4	1333
86	Correlation between the photoluminescence lifetime and defect density in bulk and epitaxial ZnO. <i>Applied Physics Letters</i> , 2003 , 82, 532-534	3.4	215
85	Hydrogen-doped In ₂ O ₃ as High-mobility Transparent Conductive Oxide. <i>Japanese Journal of Applied Physics</i> , 2007 , 46, L685-L687	1.4	180
84	Ferromagnetism in Co-Doped TiO ₂ Rutile Thin Films Grown by Laser Molecular Beam Epitaxy. <i>Japanese Journal of Applied Physics</i> , 2001 , 40, L1204-L1206	1.4	166
83	Rapid construction of a phase diagram of doped Mott insulators with a composition-spread approach. <i>Applied Physics Letters</i> , 2000 , 77, 3426-3428	3.4	155
82	High-mobility hydrogen-doped In ₂ O ₃ transparent conductive oxide for a-Si:H/c-Si heterojunction solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2009 , 93, 851-854	6.4	108
81	Hydrogen-doped In ₂ O ₃ transparent conducting oxide films prepared by solid-phase crystallization method. <i>Journal of Applied Physics</i> , 2010 , 107, 033514	2.5	104
80	Defects in ZnO thin films grown on ScAlMgO ₄ substrates probed by a monoenergetic positron beam. <i>Journal of Applied Physics</i> , 2003 , 93, 2481-2485	2.5	98
79	Effect of A-site cation ordering on the magnetoelectric properties in [(LaMnO ₃) _m /(SrMnO ₃) _m] _n artificial superlattices. <i>Physical Review B</i> , 2002 , 66,	3.3	98
78	High-efficiency amorphous silicon solar cells: Impact of deposition rate on metastability. <i>Applied Physics Letters</i> , 2015 , 106, 053901	3.4	81
77	Triple-junction thin-film silicon solar cell fabricated on periodically textured substrate with a stabilized efficiency of 13.6%. <i>Applied Physics Letters</i> , 2015 , 106, 213902	3.4	77
76	High electron mobility of indium oxide grown on yttria-stabilized zirconia. <i>Journal of Applied Physics</i> , 2006 , 99, 123703	2.5	77
75	A passivating contact for silicon solar cells formed during a single firing thermal annealing. <i>Nature Energy</i> , 2018 , 3, 800-808	62.3	72
74	Reduction of Optical Loss in Hydrogenated Amorphous Silicon/Crystalline Silicon Heterojunction Solar Cells by High-Mobility Hydrogen-Doped In ₂ O ₃ Transparent Conductive Oxide. <i>Applied Physics Express</i> , 2008 , 1, 041501	2.4	69
73	Layer-by-layer growth of high-optical-quality ZnO film on atomically smooth and lattice relaxed ZnO buffer layer. <i>Applied Physics Letters</i> , 2003 , 83, 2784-2786	3.4	66
72	Interplay of annealing temperature and doping in hole selective rear contacts based on silicon-rich silicon-carbide thin films. <i>Solar Energy Materials and Solar Cells</i> , 2017 , 173, 18-24	6.4	62
71	High-mobility transparent conductive Zr-doped In ₂ O ₃ . <i>Applied Physics Letters</i> , 2006 , 89, 082104	3.4	61

70	High-efficiency microcrystalline silicon solar cells on honeycomb textured substrates grown with high-rate VHF plasma-enhanced chemical vapor deposition. <i>Japanese Journal of Applied Physics</i> , 2015 , 54, 08KB05	1.4	59
69	Improved near-infrared transparency in sputtered In ₂ O ₃ -based transparent conductive oxide thin films by Zr-doping. <i>Journal of Applied Physics</i> , 2007 , 101, 063705	2.5	53
68	Parallel integration and characterization of nanoscaled epitaxial lattices by concurrent molecular layer epitaxy and diffractometry. <i>Applied Physics Letters</i> , 2001 , 79, 536-538	3.4	52
67	Radiative and nonradiative excitonic transitions in nonpolar (112 0) and polar (0001) and (0001) ZnO epilayers. <i>Applied Physics Letters</i> , 2004 , 84, 1079-1081	3.4	50
66	Improved quantum efficiency in nonpolar (112 0) AlGaIn/GaN quantum wells grown on GaN prepared by lateral epitaxial overgrowth. <i>Applied Physics Letters</i> , 2004 , 84, 3768-3770	3.4	50
65	Temperature-gradient epitaxy under in situ growth mode diagnostics by scanning reflection high-energy electron diffraction. <i>Applied Physics Letters</i> , 2002 , 80, 565-567	3.4	50
64	Comparative studies of transparent conductive Ti-, Zr-, and Sn-doped In ₂ O ₃ using a combinatorial approach. <i>Journal of Applied Physics</i> , 2007 , 101, 063713	2.5	48
63	Microcrystalline Silicon Solar Cells with 10.5% Efficiency Realized by Improved Photon Absorption via Periodic Textures and Highly Transparent Conductive Oxide. <i>Applied Physics Express</i> , 2013 , 6, 104101 ^{2.4}	2.4	47
62	High-efficiency thin-film silicon solar cells realized by integrating stable a-Si:H absorbers into improved device design. <i>Japanese Journal of Applied Physics</i> , 2015 , 54, 08KB10	1.4	43
61	Application of hydrogen-doped In ₂ O ₃ transparent conductive oxide to thin-film microcrystalline Si solar cells. <i>Thin Solid Films</i> , 2010 , 518, 2930-2933	2.2	38
60	Effects of long-term heat-light soaking on Cu(In,Ga)Se ₂ solar cells with KF postdeposition treatment. <i>Applied Physics Express</i> , 2017 , 10, 092301	2.4	37
59	Structural and electrical properties of hydrogen-doped . <i>Journal of Non-Crystalline Solids</i> , 2008 , 354, 2805-2808 ^{3.7}	3.7	37
58	In ₂ O ₃ -Based Transparent Conducting Oxide Films with High Electron Mobility Fabricated at Low Process Temperatures. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2018 , 215, 1700506	1.6	36
57	Toward Annealing-Stable Molybdenum-Oxide-Based Hole-Selective Contacts For Silicon Photovoltaics. <i>Solar Rrl</i> , 2018 , 2, 1700227	7.1	31
56	Correlation between oxygen stoichiometry, structure, and opto-electrical properties in amorphous In ₂ O ₃ :H films. <i>Journal of Applied Physics</i> , 2012 , 111, 063721	2.5	29
55	Double Heterostructure Based on ZnO and Mg _x Zn _{1-x} O. <i>Materials Science Forum</i> , 1998 , 264-268, 1463-0	0.4	28
54	A combinatorial approach in oxide/semiconductor interface research for future electronic devices. <i>Applied Surface Science</i> , 2002 , 189, 284-291	6.7	27
53	Amorphous and crystalline In ₂ O ₃ -based transparent conducting films for photovoltaics. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2017 , 214, 1600464	1.6	24

52	Development of scanning microwave microscope with a lumped-constant resonator probe for high-throughput characterization of combinatorial dielectric materials. <i>Applied Surface Science</i> , 2002 , 189, 222-226	6.7	23
51	Cu(In,Ga)Se ₂ Solar Cells With Amorphous Oxide Semiconducting Buffer Layers. <i>IEEE Journal of Photovoltaics</i> , 2015 , 5, 956-961	3.7	22
50	Influences of deposition temperature on characteristics of B-doped ZnO films deposited by metalorganic chemical vapor deposition. <i>Thin Solid Films</i> , 2014 , 559, 83-87	2.2	21
49	Carrier Compensation Induced by Thermal Annealing in Al-Doped ZnO Films. <i>Materials</i> , 2017 , 10,	3.5	18
48	Crystal Structure and Valence Distribution of [(LaMnO ₃) _m (SrMnO ₃) _m] _n Artificial Superlattices. <i>Journal of the Physical Society of Japan</i> , 2009 , 78, 024602	1.5	18
47	Direct comparison of photoluminescence lifetime and defect densities in ZnO epilayers studied by time-resolved photoluminescence and slow positron annihilation techniques. <i>Physica Status Solidi A</i> , 2004 , 201, 2841-2845		18
46	Parallel fabrication of artificially designed superlattices by combinatorial laser MBE. <i>Applied Physics A: Materials Science and Processing</i> , 1999 , 69, S29-S31	2.6	17
45	Comparison of ZnO:B and ZnO:Al layers for Cu(In,Ga)Se ₂ submodules. <i>Thin Solid Films</i> , 2016 , 614, 79-83	2.2	15
44	Multi Junction Solar Cells Stacked with Transparent and Conductive Adhesive. <i>Japanese Journal of Applied Physics</i> , 2011 , 50, 052301	1.4	15
43	Cu(In,Ga)Se Solar Cells with Amorphous InO-Based Front Contact Layers. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 29677-29686	9.5	13
42	Improved efficiency of Cu(In,Ga)Se ₂ mini-module via high-mobility In ₂ O ₃ :W,H transparent conducting oxide layer. <i>Progress in Photovoltaics: Research and Applications</i> , 2019 , 27, 491-500	6.8	11
41	Si-Doping Effects in Cu(In,Ga)Se Thin Films and Applications for Simplified Structure High-Efficiency Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 31119-31128	9.5	11
40	New Route for "Cold-Passivation" of Defects in Tin-Based Oxides. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 17612-17620	3.8	10
39	In ₂ O ₃ :H transparent conductive oxide films with high mobility and near infrared transparency for optoelectronic applications. <i>Surface Engineering</i> , 2012 , 28, 102-107	2.6	10
38	Design of compact pulsed laser deposition chambers for the growth of combinatorial oxide thin film libraries. <i>Applied Surface Science</i> , 2002 , 189, 205-209	6.7	9
37	Textured surface structures formed using new techniques on transparent conducting Al-doped zinc oxide films prepared by magnetron sputtering. <i>Thin Solid Films</i> , 2016 , 614, 56-61	2.2	9
36	Reduced recombination in a surface-sulfurized Cu(InGa)Se ₂ thin-film solar cell. <i>Japanese Journal of Applied Physics</i> , 2018 , 57, 055701	1.4	8
35	Impact of front contact layers on performance of Cu(In,Ga)Se ₂ solar cells in relaxed and metastable states. <i>Progress in Photovoltaics: Research and Applications</i> , 2018 , 26, 789-799	6.8	8

34	Effect of Front TCO Layer on Properties of Substrate-Type Thin-Film Microcrystalline Silicon Solar Cells. <i>IEEE Journal of Photovoltaics</i> , 2015 , 5, 1528-1533	3.7	8
33	Diffusion induced amorphization in the crystalline SrTiO ₃ thin films grown on Si (1 0 0) investigated by combinatorial method. <i>Applied Surface Science</i> , 2002 , 189, 307-312	6.7	8
32	Si-Doped Cu(In,Ga)Se ₂ Photovoltaic Devices with Energy Conversion Efficiencies Exceeding 16.5% without a Buffer Layer. <i>Advanced Energy Materials</i> , 2018 , 8, 1702391	21.8	7
31	Metal/Insulator/Metal transition in Sr ₂ Rh _{1-x} Ru _x O ₄ (0 ≤ x ≤ 1). <i>Applied Physics Letters</i> , 2002 , 81, 4955-4957	3.4	7
30	Structure and Numerical Simulation of Field Effect Solar Cell. <i>Materials Research Society Symposia Proceedings</i> , 1996 , 426, 95		7
29	Reduced Defect Densities in Cubic GaN Epilayers with AlGa _N /Ga _N Superlattice Underlayers Grown on (001) GaAs Substrates by Metalorganic Vapor Phase Epitaxy. <i>Japanese Journal of Applied Physics</i> , 2004 , 43, 958-965	1.4	6
28	Impact of rough substrates on hydrogen-doped indium oxides for the application in CIGS devices. <i>Solar Energy Materials and Solar Cells</i> , 2020 , 206, 110300	6.4	6
27	Degradation mechanism of Cu(In,Ga)Se ₂ solar cells induced by exposure to air. <i>Japanese Journal of Applied Physics</i> , 2016 , 55, 072301	1.4	6
26	Bilayer contacts composed of amorphous and solid-phase crystallized transparent conducting oxides for solar cells. <i>Japanese Journal of Applied Physics</i> , 2014 , 53, 05FA08	1.4	5
25	Heat treatment of amorphous silicon p-i-n solar cells with high-pressure H ₂ O vapor. <i>Journal of Non-Crystalline Solids</i> , 2012 , 358, 2285-2288	3.9	5
24	Oscillation of surface in-plane lattice spacing during epitaxial growth of BaTiO ₃ and SrTiO ₃ on SrTiO ₃ (1 0 0). <i>Applied Surface Science</i> , 2002 , 185, 226-230	6.7	5
23	A composition-spread approach to investigate band-filling dependence on magnetic and electronic phases for Perovskite manganite. <i>Applied Surface Science</i> , 2002 , 189, 339-343	6.7	5
22	Nanocrystalline-silicon hole contact layers enabling efficiency improvement of silicon heterojunction solar cells: Impact of nanostructure evolution on solar cell performance. <i>Progress in Photovoltaics: Research and Applications</i> , 2021 , 29, 344-356	6.8	5
21	The sputter deposition of broadband transparent and highly conductive cerium and hydrogen co-doped indium oxide and its transfer to silicon heterojunction solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , 2021 , 29, 835	6.8	5
20	Sr ₂ Rh _{1-x} Ru _x O ₄ (0 ≤ x ≤ 1) composition-spread film growth on a temperature-gradient substrate by pulsed laser deposition. <i>Applied Surface Science</i> , 2004 , 223, 264-267	6.7	4
19	Current status of transparent conducting oxide layers with high electron mobility and their application in Cu(In,Ga)Se ₂ mini-modules. <i>Thin Solid Films</i> , 2019 , 673, 26-33	2.2	3
18	An over 18%-efficient completely buffer-free Cu(In,Ga)Se ₂ solar cell. <i>Applied Physics Express</i> , 2018 , 11, 075502	2.4	3
17	Improved surface morphology in GaN homoepitaxy by NH ₃ -source molecular-beam epitaxy. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2004 , 22, 2158		2

16	Combinatorial methodology for optimizing oxide/semiconductor interface with atomic interfacial layers 2001 ,		2
15	Anodic Bonding of Transparent Conductive Oxide Coated Silicon Wafer to Glass Substrate for Solar Cell Applications. <i>Applied Physics Express</i> , 2013 , 6, 012302	2.4	1
14	Combinatorial approach to the interface structure characterizations of SrTiO ₃ on Si(100) 2001 , 4281, 43		1
13	Nano-Scale Resolved Detection of Photo-Current in a-Si:H Films. <i>Materials Research Society Symposia Proceedings</i> , 1996 , 420, 895		1
12	High and broadband sensitivity front-side illuminated InGaAs photo field-effect transistors (photoFETs) with SWIR transparent conductive oxide (TCO) gate. <i>Applied Physics Letters</i> , 2021 , 119, 192101	3.4	1
11	Thermal and Damp Heat Stability of High-Mobility In ₂ O ₃ -Based Transparent Conducting Films Fabricated at Low Process Temperatures. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2021 , 218, 2000487	1.6	1
10	High-Mobility Transparent Conductive Oxide Layers. <i>Springer Series in Optical Sciences</i> , 2018 , 565-586	0.5	1
9	Inorganic Semiconductors and Passivation Layers. <i>Springer Series in Optical Sciences</i> , 2018 , 319-426	0.5	1
8	Anomalous pressure dependence of light emission in cubic InGaN. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2003 , 2682-2685		
7	Position Controlled GaN Nano-Structures Fabricated by Low Energy Focused Ion Beam System.. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 792, 621		
6	Reduction of bound-state and nonradiative defect densities in nonpolar (11 $\bar{2}$ 0) AlGa _N /Ga _N quantum wells by the use of lateral epitaxial overgrowth technique. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2005 , 2, 2700-2703		
5	Local magnetic measurements of composition-spread manganese oxide thin films with a scanning SQUID microscope. <i>Applied Physics A: Materials Science and Processing</i> , 2001 , 72, S273-S276	2.6	
4	Exploration of New Properties of Oxides by the Growth Control Using Pulsed Laser Epitaxy. <i>Materials Research Society Symposia Proceedings</i> , 2000 , 623, 329		
3	Nano-Scale Resolved Detection of Photo-Current in a-Si:H Films. <i>Materials Research Society Symposia Proceedings</i> , 1996 , 426, 53		
2	In ₂ O ₃ -based Transparent Conductive Oxide Films with High Electron Mobility. <i>Hyomen Kagaku</i> , 2008 , 29, 18-24		
1	Transparent Conductive Oxides. <i>Springer Series in Optical Sciences</i> , 2018 , 495-541	0.5	