Masashi Kuwahara

List of Publications by Year
in descending order

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88	1,369	331670 21	377865 34
papers	citations	h-index	g-index

93	93	93	1031
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Approaching ultrathin VO2 films on sapphire (001) substrates by biased reactive sputtering: Characteristic morphology and its effect on the infrared-light switching. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	2.1	5
2	Nanoscale phase change on Ge2Sb2Te5 thin films induced by optical near fields with photoassisted scanning tunneling microscope. Applied Physics Letters, 2020, 117, 211102.	3.3	3
3	Phase-change Janus particles with switchable dual properties. Applied Physics Letters, 2020, 117, 221601.	3.3	9
4	Stress-Induced In Situ Modification of Transition Temperature in VO2 Films Capped by Chalcogenide. Materials, 2020, 13, 5541.	2.9	1
5	Electrical and Thermal Conductivity and Conduction Mechanism of Ge2Sb2Te5 Alloy. Journal of Electronic Materials, 2018, 47, 3184-3188.	2.2	9
6	Coding two-dimensional patterns into mode spectrum of silicon microcavity covered with a phase-change film. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	2.3	0
7	First principles study of the electronic and optical properties of crystalline and liquid Sb₂Te₃: Phase-transition-induced changes in optical properties. Japanese Journal of Applied Physics, 2018, 57, 09SD01.	1.5	2
8	Pumpâ€“probe scanning-tunneling-microscope light-emission spectroscopy of Sb2Te3. Journal of Applied Physics, 2018, 124, 075104.	2.5	0
9	Thermal and Electrical Conductivity of Ge1Sb4Te7 Chalcogenide Alloy. Journal of Electronic Materials, 2017, 46, 955-960.	2.2	5
10	Current-driven phase-change optical gate switch using indiumâ€“tin-oxide heater. Applied Physics Express, 2017, 10, 072201.	2.4	125
11	Implementation of pulse timing discriminator functionality into a GeSbTe/GeCuTe double layer structure. Optics Express, 2017, 25, 26825.	3.4	1
12	Pumpâ€“probe STM light emission spectroscopy for detection of photo-induced semiconductorâ€“metal phase transition of VO2. Journal of Physics Condensed Matter, 2017, 29, 405001.	1.8	2
13	Optical Memories. Japanese Journal of Applied Physics, 2017, 56, 09N001.	1.5	1
14	Nanospectroscopy of single quantum dots with local strain control using a phase-change mask. Japanese Journal of Applied Physics, 2017, 56, 08LA02.	1.5	0
15	Response function of super-resolution readout of an optical disc studied by coupled electromagneticâ€“thermal simulation. Japanese Journal of Applied Physics, 2016, 55, 09SB02.	1.5	1
16	Optical Memories. Japanese Journal of Applied Physics, 2016, 55, 09S001.	1.5	0
17	Selective scanning tunneling microscope light emission from rutile phase of VO₂. Journal of Physics Condensed Matter, 2016, 28, 385002.	1.8	3
18	Electromagnetic properties of scanning tunneling microscope tipâ€“sample gap in the terahertz frequency range. Japanese Journal of Applied Physics, 2015, 54, 08LB06.	1.5	0

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19	Ultrafast time-resolved electron diffraction revealing the nonthermal dynamics of near-UV photoexcitation-induced amorphization in Ge2Sb2Te5. Scientific Reports, 2015, 5, 13530.	3.3	36
20	Tuning of emission energy of single quantum dots using phase-change mask for resonant control of their interactions. Applied Physics A: Materials Science and Processing, 2015, 121, 1329-1333.	2.3	1
21	Sbâ€“Te alloy nanostructures produced on a graphite surface by a simple annealing process. Applied Surface Science, 2015, 346, 366-371.	6.1	1
22	Measurement of the optical properties of a transparent, conductive carbon nanotube film using spectroscopic ellipsometry. Japanese Journal of Applied Physics, 2015, 54, 078001.	1.5	7
23	Study of the shape of an optical window in a super-resolution state by electromagnetic-thermal coupled simulation: Effects of melting of an active layer in an optical disc. Journal of Applied Physics, 2014, 115, .	2.5	3
24	Measurement of phonon energy of Sb2Te3 by scanning tunneling microscope light-emission spectroscopy. Solid State Communications, 2014, 177, 29-32.	1.9	4
25	Ultra-compact, self-holding asymmetric Mach-Zehnder interferometer switch using Ge₂Sb₂Te₅ phase-change material. IEICE Electronics Express, 2014, 11, 20140538-20140538.	0.8	34
26	Measurement complex refractive index for molten optical disk materials. Netsu Bussei, 2014, 26, 128-135.	0.1	3
27	Small-sized Mach-Zehnder Interferometer Optical Switch Using Thin Film Ge2Sb2Te5 Phase-change Material. , 2014, , .		12
28	Spectroscopic Ellipsometry Measurements for Liquid and Solid InSb around Its Melting Point. Applied Physics Express, 2013, 6, 082501.	2.4	9
29	Complex Refractive Index, Specific Heat Capacity, and Thermal Conductivity for Crystalline Sbâ€“Te Alloys and ZnSâ€“SiO₂with Various Compositions at High Temperatures. Japanese Journal of Applied Physics, 2013, 52, 128003.	1.5	6
30	Optical Measurement for Solid- and Liquid-Phase Sb2Te3around Its Melting Point. Japanese Journal of Applied Physics, 2013, 52, 118001.	1.5	4
31	Ultra-small, self-holding, optical gate switch using Ge_2Sb_2Te_5 with a multi-mode Si waveguide. Optics Express, 2012, 20, 10283.	3.4	92
32	Electrical and heat conduction mechanisms of GeTe alloy for phase change memory application. Journal of Applied Physics, 2012, 112, 053712.	2.5	22
33	Approach for measuring complex refractive index of molten Sb2Te3 by spectroscopic ellipsometry. Applied Physics Letters, 2012, 100, .	3.3	21
34	Small-sized self-holding optical switch using phase-change material. , 2011, , .		0
35	Thermal conductivities and conduction mechanisms of Sb-Te Alloys at high temperatures. Journal of Applied Physics, 2011, 110, 023701.	2.5	15
36	Phase change characteristics of Ge 2 Sb 2 Te 5 thin film for a self-holding optical gate switch. Proceedings of SPIE, 2011, , .	0.8	3

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37	Demonstration of 1000-times switching of phase-change optical gate with Si wire waveguides. Electronics Letters, 2011, 47, 268.	1.0	9
38	Thermal Conductivity Measurements of Solid Sb₂Te₃ by Hot-Strip Method. Japanese Journal of Applied Physics, 2010, 49, 078003.	1.5	21
39	Small-sized optical gate switch using Ge2Sb2Te5 phase-change material integrated with silicon waveguide. Electronics Letters, 2010, 46, 368.	1.0	52
40	Reversible optical gate switching in Si wire waveguide integrated with Ge2Sb2Te5 thin film. Electronics Letters, 2010, 46, 1460.	1.0	25
41	Electric Resistivity Measurements of Sb₂Te₃ and Ge₂Sb₂Te₅ Melts Using Four-Terminal Method. Japanese Journal of Applied Physics, 2010, 49, 065802.	1.5	38
42	Crystallization of Bi Doped Sb₈Te₂. Japanese Journal of Applied Physics, 2009, 48, 03A062.	1.5	5
43	What is the Origin of Activation Energy in Phase-Change Film?. Japanese Journal of Applied Physics, 2009, 48, 03A053.	1.5	48
44	Scanning tunneling microscope light emission spectra of polycrystalline <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" display="inline" overflow="scroll"><mml:msub><mml:mrow><mml:mstyle mathvariant="normal"><mml:mi>Ge</mml:mi></mml:mstyle></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:m mathvariant="normal"><mml:mi>Sb</mml:mi></mml:mstyle></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:m mathvar. Solid State Communications, 2009, 149, 1902-1904.	1.9	4
45	Thermal conductivity of low-k films of varying porosity and direct measurements on silicon substrate. Microelectronic Engineering, 2009, 86, 1009-1012.	2.4	5
46	Proposal of a grating-based optical reflection switch using phase change materials. Optics Express, 2009, 17, 16947.	3.4	13
47	In-situ Raman scattering spectroscopy for super resolution optical disk. , 2009, , .		0
48	Measurement of Refractive Index, Specific Heat Capacity, and Thermal Conductivity for Ag_{6.0}In_{4.5}Sb_{60.8}Te_{28.7} at High Temperature. Japanese Journal of Applied Physics, 2009, 48, 05EC02.	1.5	12
49	Thermal conductivity measurements of low-k films using thermoreflectance phenomenon. Microelectronic Engineering, 2008, 85, 796-799.	2.4	11
50	Large Optical Transitions in Rewritable Digital Versatile Discs: An Interlayer Atomic Zipper in a SbTe Alloy. Materials Research Society Symposia Proceedings, 2008, 1072, 1.	0.1	0
51	Temperature Dependence of Complex Refractive Index of Sputtered Sbâ€“Te Alloy Thin Films. Japanese Journal of Applied Physics, 2007, 46, 5278.	1.5	15
52	A Reversible Change of Reflected Light Intensity between Molten and Solidified Geâ€“Sbâ€“Te Alloy. Japanese Journal of Applied Physics, 2007, 46, L868-L870.	1.5	10
53	Thermal Conductivity Measurements of Sbâ€“Te Alloy Thin Films Using a Nanosecond Thermoreflectance Measurement System. Japanese Journal of Applied Physics, 2007, 46, 6863-6864.	1.5	20
54	Temperature Dependence of the Thermal Properties of Optical Memory Materials. Japanese Journal of Applied Physics, 2007, 46, 3909-3911.	1.5	39

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55	Measurement of the thermal conductivity of nanometer scale thin films by thermoreflectance phenomenon. Microelectronic Engineering, 2007, 84, 1792-1796.	2.4	40
56	Optical Disc Simulation Program Unified by Electromagnetic and Thermal Distributions. Japanese Journal of Applied Physics, 2006, 45, 1463-1465.	1.5	15
57	High-Speed Fabrication of Super-Resolution Near-Field Structure Read-Only Memory Master Disc using PtOxThermal Decomposition Lithography. Japanese Journal of Applied Physics, 2006, 45, 1379-1382.	1.5	9
58	Measurements of Temperature Dependence of Optical and Thermal Properties of Optical Disk Materials. Japanese Journal of Applied Physics, 2006, 45, 1419-1421.	1.5	43
59	On a thermally induced readout mechanism in super-resolution optical disks. Journal of Applied Physics, 2006, 100, 043106.	2.5	37
60	Improvement in the aspect ratio of fabricated minute dots by the volume change thermal lithography technique. Microelectronic Engineering, 2005, 78-79, 359-363.	2.4	3
61	Development of a geometrical evaluation apparatus for ultrahigh 100 GB optical disk masters. Review of Scientific Instruments, 2005, 76, 083706.	1.3	3
62	Nanoscale Dots Fabrication by Volume Change Thermal Lithography. Japanese Journal of Applied Physics, 2004, 43, L1045-L1047.	1.5	7
63	Super-Resolutional Readout Disk with Metal-Free Phthalocyanine Recording Layer. Japanese Journal of Applied Physics, 2004, 43, L88-L90.	1.5	19
64	Thermal Origin of Readout Mechanism of Light-Scattering Super-Resolution Near-Field Structure Disk. Japanese Journal of Applied Physics, 2004, 43, L8-L10.	1.5	41
65	Practical use of a carbon nanotube attached to a blunt apex in an atomic force microscope. Materials Characterization, 2004, 52, 43-48.	4.4	12
66	Ferroelectric catastrophe: beyond nanometre-scale optical resolution. Nanotechnology, 2004, 15, 411-415.	2.6	79
67	<title>Volume-change thermal-lithography technique for ultra-high density optical ROM mastering process</title>. , 2004, 5662, 51.		0
68	A volume change thermal lithography technique. Microelectronic Engineering, 2004, 73-74, 69-73.	2.4	1
69	Thermal Effect of Readout Mechanism on Super Resolution Near-field Structure Disk. Kyokai Joho Imeji Zasshi/Journal of the Institute of Image Information and Television Engineers, 2004, 58, 1429-1434.	0.1	3
70	Dot formation with 170-nm dimensions using a thermal lithography technique. Microelectronic Engineering, 2003, 67-68, 651-656.	2.4	12
71	Nonlinear features and response mechanisms of a PtO_2 mask layer for optical data storage with a superresolution near-field structure. Optics Letters, 2003, 28, 1805.	3.3	13
72	Single-Electron Transistor with Ultra-High Coulomb Energy of 5000 K Using Position Controlled Grown Carbon Nanotube as Channel. Japanese Journal of Applied Physics, 2003, 42, 2415-2418.	1.5	52

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73	Super-Resolution Near-Field Structure with Alternative Recording and Mask Materials. Japanese Journal of Applied Physics, 2003, 42, 1014-1017.	1.5	15
74	Local Structure of AgOxThin Layers Generating Optical Near Field: an X-Ray Absorption Fine Structure Study. Japanese Journal of Applied Physics, 2003, 42, 1022-1025.	1.5	6
75	A Thermal Lithography Technique Using a Minute Heat Spot of a Laser Beam for 100 nm Dimension Fabrication. Topics in Applied Physics, 2003, , 79-87.	0.8	1
76	Thermal Lithography for 100-nm Dimensions Using a Nano-Heat Spot of a Visible Laser Beam. Japanese Journal of Applied Physics, 2002, 41, L1022-L1024.	1.5	24
77	Thermal lithography for 0.1 Î¼m pattern fabrication. Microelectronic Engineering, 2002, 61-62, 415-421.	2.4	29
78	Ultra-Fast Anisotropic Silicon Etching with Resulting Mirror Surfaces in Ammonia Solutions. , 2001, , 608-611.		2
79	Less than 0.1 Î¼m linewidth fabrication by visible light using super-resolution near-field structure. Microelectronic Engineering, 2001, 57-58, 883-890.	2.4	10
80	Improved anisotropic deep etching in KOH-solutions to fabricate highly specular surfaces. Microelectronic Engineering, 2001, 57-58, 781-786.	2.4	8
81	Reactive recording with rare-earth transition metal. Applied Physics Letters, 2001, 79, 2600-2602.	3.3	16
82	A new lithography technique using super-resolution near-field structure. Microelectronic Engineering, 2000, 53, 535-538.	2.4	12
83	Comparison of Light-Emission Efficiencies from Siâ€“Metal-Oxide-Semiconductor Junctions and from Si in Scanning Tunneling Microscopy. Japanese Journal of Applied Physics, 2000, 39, 4904-4909.	1.5	4
84	High-Speed Optical Near-Field Photolithography by Super Resolution Near-Field Structure. Japanese Journal of Applied Physics, 1999, 38, L1079-L1081.	1.5	22
85	Effect of palladium particle size on the appearance of superstructure of graphite in palladium/graphite model catalyst. Surface Science, 1995, 344, L1259-L1263.	1.9	14
86	STM light emission spectroscopy of Au film. Applied Surface Science, 1992, 60-61, 448-453.	6.1	30
87	Absolute Raman scattering cross sections of surface adsorbed Cu-phthalocyanine molecules. Surface Science, 1991, 242, 544-548.	1.9	13
88	In-situRaman Scattering Spectroscopy for a Super Resolution Optical Disk during Readout. Applied Physics Express, 0, 2, 082402.	2.4	7