

Takayuki Shima

List of Publications by Year in descending order

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73
papers

982
citations

516710

16
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454955

30
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73
all docs

73
docs citations

73
times ranked

565
citing authors

#	ARTICLE	IF	CITATIONS
1	Rigid bubble pit formation and huge signal enhancement in super-resolution near-field structure disk with platinum-oxide layer. Applied Physics Letters, 2002, 81, 4697-4699.	3.3	127
2	Ferroelectric catastrophe: beyond nanometre-scale optical resolution. Nanotechnology, 2004, 15, 411-415.	2.6	79
3	Super-resolution by elliptical bubble formation with PtOx and AgInSbTe layers. Applied Physics Letters, 2003, 83, 1701-1703.	3.3	76
4	Role of Ge Switch in Phase Transition: Approach using Atomically Controlled GeTe/Sb ₂ Te ₃ Superlattice. Japanese Journal of Applied Physics, 2008, 47, 5763.	1.5	68
5	Observations of Immuno-Gold Conjugates on Influenza Viruses Using Waveguide-Mode Sensors. PLoS ONE, 2013, 8, e69121.	2.5	50
6	What is the Origin of Activation Energy in Phase-Change Film?. Japanese Journal of Applied Physics, 2009, 48, 03A053.	1.5	48
7	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
8	On a thermally induced readout mechanism in super-resolution optical disks. Journal of Applied Physics, 2006, 100, 043106.	2.5	37
9	Thermal decomposition of a thin AgOx layer generating optical near-field. Applied Physics Letters, 2004, 84, 1641-1643.	3.3	31
10	Optical and Structural Property Change by the Thermal Decomposition of Amorphous Platinum Oxide Film. Japanese Journal of Applied Physics, 2003, 42, 3479-3480.	1.5	28
11	Optical transmittance study of silver particles formed by AgOx thermal decomposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2003, 21, 634-637.	2.1	24
12	Thermally-induced optical property changes of sputtered PdOx films. Thin Solid Films, 2007, 515, 4774-4777.	1.8	21
13	Super-Resolutional Readout Disk with Metal-Free Phthalocyanine Recording Layer. Japanese Journal of Applied Physics, 2004, 43, L88-L90.	1.5	19
14	Thermal decomposition of sputtered thin PtOx layers used in super-resolution optical disks. Applied Physics Letters, 2005, 86, 121909.	3.3	19
15	Optical transmittance study of the thermal decomposition of sputtered PtAgO films. Thin Solid Films, 2003, 425, 31-34.	1.8	17
16	Effect of low-energy nitrogen molecular-ion impingement during the epitaxial growth of GaAs on the photoluminescence spectra. Applied Physics Letters, 1999, 74, 2675-2677.	3.3	16
17	First Playback of High-Definition Video Contents from Super-Resolution Near-Field Structure Optical Disc. Japanese Journal of Applied Physics, 2010, 49, 08KE02.	1.5	16
18	Optical characterization of low-energy nitrogen-ion doped GaAs. Nuclear Instruments & Methods in Physics Research B, 1997, 127-128, 437-441.	1.4	15

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19	Optical Disc Simulation Program Unified by Electromagnetic and Thermal Distributions. Japanese Journal of Applied Physics, 2006, 45, 1463-1465.	1.5	15
20	Super-RENS Disk for Blue Laser System Retrieving Signals from Polycarbonate Substrate Side. Japanese Journal of Applied Physics, 2005, 44, 3631-3633.	1.5	14
21	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
22	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
23	Metal-Free Phthalocyanine Layer Prepared on Read-Only-Memory Disc for Super-Resolution Readout. Japanese Journal of Applied Physics, 2006, 45, L1007-L1009.	1.5	11
24	High concentration nitrogen ion doping into GaAs for the fabrication of GaAsN. Nuclear Instruments & Methods in Physics Research B, 1996, 118, 743-747.	1.4	10
25	Less than 0.1 $\lambda/4$ m linewidth fabrication by visible light using super-resolution near-field structure. Microelectronic Engineering, 2001, 57-58, 883-890.	2.4	10
26	A Reversible Change of Reflected Light Intensity between Molten and Solidified Ge ₂ Sb ₂ Te Alloy. Japanese Journal of Applied Physics, 2007, 46, L868-L870.	1.5	10
27	Effect of SiO ₂ Addition to PtOx Recording Layer of Super-Resolution Near-Field Structure Disc. Japanese Journal of Applied Physics, 2007, 46, 3912-3916.	1.5	10
28	High-Speed Fabrication of Super-Resolution Near-Field Structure Read-Only Memory Master Disc using PtOx Thermal Decomposition Lithography. Japanese Journal of Applied Physics, 2006, 45, 1379-1382.	1.5	9
29	Readout Durability Improvement of Super-Resolution Near-Field Structure Discs with PtOx/SiO ₂ Recording and GeNy Interfacial Layers. Japanese Journal of Applied Physics, 2007, 46, L135-L137.	1.5	9
30	Spectroscopic Ellipsometry Measurements for Liquid and Solid InSb around Its Melting Point. Applied Physics Express, 2013, 6, 082501.	2.4	9
31	Low energy nitrogen ion doping into GaAs using combined ion-beam and molecular-beam epitaxy method. Nuclear Instruments & Methods in Physics Research B, 1996, 120, 293-297.	1.4	8
32	Refractive indices change at 633 nm of antimony thin films prepared by heliconwave-plasma sputtering method. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2001, 19, 826-829.	2.1	8
33	Optical Properties of Metal-Oxide Films in Super-RENS. Japanese Journal of Applied Physics, 2005, 44, 5156-5163.	1.5	7
34	Super-Resolution Readout of 50 nm Read-Only-Memory Pits Using Optics Based on High-Definition Digital Versatile Disc. Japanese Journal of Applied Physics, 2008, 47, 5842.	1.5	7
35	Detection and Two-Dimensional Imaging of Escherichia coli Attached to an Optical Disk. Japanese Journal of Applied Physics, 2013, 52, 108004.	1.5	7
36	In-situ Raman Scattering Spectroscopy for a Super Resolution Optical Disk during Readout. Applied Physics Express, 0, 2, 082402.	2.4	7

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37	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
38	A Study of Material Selection for Super-Resolution Readout of Optical Disk with PtOxRecording Layer. Japanese Journal of Applied Physics, 2006, 45, 136-137.	1.5	6
39	Growth control of InAs thin layers on GaAs substrates with several orientations. Applied Surface Science, 1994, 75, 279-284.	6.1	5
40	Read-out enhancement of super-resolution near-field structures using the pit shape. Nanotechnology, 2006, 17, 1481-1483.	2.6	5
41	Polarization-resolved photoluminescence of InAs/GaAs strained-layer structures on variously oriented substrates. Applied Surface Science, 1994, 75, 164-168.	6.1	4
42	An Approach to Lower the Threshold Laser Power of Super-Resolution-Readout Optical Disk Using Silver Telluride Layer. Japanese Journal of Applied Physics, 2004, 43, L1499-L1501.	1.5	4
43	Readout Power Dependence of Signal Distribution Observed in Fourier Plane of Focus Spot. Japanese Journal of Applied Physics, 2005, 44, 3350-3352.	1.5	4
44	High-energy implantation of Hg ⁺ ions into GaAs grown by liquid encapsulated Czochralski method: Formation of multiple shallow emissions. Applied Physics Letters, 1995, 67, 2845-2847.	3.3	3
45	Low-energy nitrogen-ion doping into GaAs and its optical properties. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1998, 253, 301-305.	5.6	3
46	Optical and electrical characterizations of Mn doped p-type $\hat{1}^2$ -FeSi ₂ . Nuclear Instruments & Methods in Physics Research B, 1999, 147, 337-342.	1.4	3
47	Readout process analysis of super-RENS disk. , 2004, , .		3
48	Super-Resolution Optical Disc with Radial Density Increased by Narrowed Track Pitch Corresponding to Diffraction Limit. Japanese Journal of Applied Physics, 2013, 52, 09LB03.	1.5	3
49	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
50	Optical-disk-based imaging system to be used as an optical microscope. Japanese Journal of Applied Physics, 2016, 55, 078002.	1.5	3
51	Blue-laser scanned imaging system using positioning marks formed on an optical disk substrate. Japanese Journal of Applied Physics, 2017, 56, 058003.	1.5	3
52	Heavily carbon-doped GaAs layers prepared by low-energy ion-beam impingement during molecular beam epitaxy. Nuclear Instruments & Methods in Physics Research B, 1995, 106, 133-136.	1.4	2
53	Photoluminescence characterization of dually Cd ⁺ and N ⁺ ion-implanted GaAs. Nuclear Instruments & Methods in Physics Research B, 1997, 121, 302-305.	1.4	2
54	Selective detection of Escherichia coliby imaging of the light intensity transmitted through an optical disk. Applied Physics Express, 2018, 11, 037001.	2.4	2

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55	Fluorescence imaging of <i>Escherichia coli</i> on a rotating optical disk. Japanese Journal of Applied Physics, 2018, 57, 088003.	1.5	2
56	Effects of Carbon-Ion Irradiation-Energies on the Molecular Beam Epitaxy of GaAs and InGaAs. Materials Research Society Symposia Proceedings, 1995, 388, 241.	0.1	1
57	C-energy-dependent residual ion damage in GaAs:C grown by the low-energy ion-beam doping method. Journal of Applied Physics, 1996, 80, 3828-3833.	2.5	1
58	Optical and electrical properties of Si ⁺ ion-implanted GaAs. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1998, 253, 306-309.	5.6	1
59	Highly Efficient Nitrogen Doping Into GaAs Using Low-Energy Nitrogen Molecular Ions. Materials Research Society Symposia Proceedings, 1998, 510, 73.	0.1	1
60	Readout durability improvement of super-resolution near-field structure disc using germanium nitride interface layers. , 2007, , .		1
61	Material selection and disc structure optimization studies for super-resolution readout with PtOx recording layer. , 2007, , .		1
62	Capacity Increase in Radial Direction of Super-Resolution Near-Field Structure Read-Only-Memory Disc. Japanese Journal of Applied Physics, 2007, 46, 3898-3901.	1.5	1
63	Response function of super-resolution readout of an optical disc studied by coupled electromagnetic-thermal simulation. Japanese Journal of Applied Physics, 2016, 55, 09SB02.	1.5	1
64	In-plane photoconductivity of InAs/GaAs strained-layer structures prepared on variously oriented GaAs substrates. Applied Surface Science, 1996, 107, 233-237.	6.1	0
65	Electrical and optical characterization of Cd ⁺ and P ⁺ dually ion-implanted GaAs. Nuclear Instruments & Methods in Physics Research B, 1997, 127-128, 433-436.	1.4	0
66	Correlation of electrical and optical properties in dually Cd ⁺ and N ⁺ ion-implanted GaAs. Nuclear Instruments & Methods in Physics Research B, 1997, 127-128, 451-455.	1.4	0
67	Residual ion damage in GaAs:C prepared by combined ion beam and molecular beam epitaxy. Nuclear Instruments & Methods in Physics Research B, 1997, 127-128, 884-887.	1.4	0
68	Carbon Doping into GaAs Using Low-Energy Hydrocarbon Ions. Materials Research Society Symposia Proceedings, 1998, 510, 61.	0.1	0
69	Effect of nitrogen ion impingement during molecular beam epitaxy growth of GaAs as a function of acceleration energy. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2000, 71, 192-195.	3.5	0
70	High coercivity thin film for high-density magneto-optical super-resolution near-field recording. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2002, 20, 437-440.	2.1	0
71	Super-RENS ROM Disc with Narrow Track Pitch. , 0, , .		0
72	Material Selection and Disc Structure Optimization Studies for Super-Resolution Readout with PtOx Recording Layer. , 0, , .		0

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73	Track error detection system with waveform comparison method for super-resolution optical read-only-memory disc. IEEE Transactions on Consumer Electronics, 2014, 60, 356-362.	3.6	0