Takayuki Shima

List of Publications by Year
in descending order

73 papers	982 citations	516710 16 h-index	454955 30 g-index
73 all docs	73 docs citations	73 times ranked	565 citing authors

#	Article	IF	Citations
1	Selective detection ofEscherichia coliby imaging of the light intensity transmitted through an optical disk. Applied Physics Express, 2018, 11, 037001.	2.4	2
2	Fluorescence imaging of <i>Escherichia coli</i> on a rotating optical disk. Japanese Journal of Applied Physics, 2018, 57, 088003.	1.5	2
3	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
4	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
5	Optical-disk-based imaging system to be used as an optical microscope. Japanese Journal of Applied Physics, 2016, 55, 078002.	1.5	3
6	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
7	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
8	Spectroscopic Ellipsometry Measurements for Liquid and Solid InSb around Its Melting Point. Applied Physics Express, 2013, 6, 082501.	2.4	9
9	Detection and Two-Dimensional Imaging ofEscherichia coliAttached to an Optical Disk. Japanese Journal of Applied Physics, 2013, 52, 108004.	1.5	7
10	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
11	Observations of Immuno-Gold Conjugates on Influenza Viruses Using Waveguide-Mode Sensors. PLoS ONE, 2013, 8, e69121.	2.5	50
12	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
13	What is the Origin of Activation Energy in Phase-Change Film?. Japanese Journal of Applied Physics, 2009, 48, 03A053.	1.5	48
14	Role of Ge Switch in Phase Transition: Approach using Atomically Controlled GeTe/Sb₂Te₃ Superlattice. Japanese Journal of Applied Physics, 2008, 47, 5763.	1.5	68
15	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
16	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
17	Effect of SiO2Addition to PtOxRecording Layer of Super-Resolution Near-Field Structure Disc. Japanese Journal of Applied Physics, 2007, 46, 3912-3916.	1.5	10
18	Readout Durability Improvement of Super-Resolution Near-Field Structure Discs with PtOxâ€"SiO2Recording and GeNyInterfacial Layers. Japanese Journal of Applied Physics, 2007, 46, L135-L137.	1.5	9

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19	Readout durability improvement of super-resolution near-field structure disc using germanium nitride interface layers. , 2007, , .		1
20	Material selection and disc structure optimization studies for super-resolution readout with PtOx recording layer. , 2007, , .		1
21	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
22	Thermally-induced optical property changes of sputtered PdOx films. Thin Solid Films, 2007, 515, 4774-4777.	1.8	21
23	Read-out enhancement of super-resolution near-field structures using the pit shape. Nanotechnology, 2006, 17, 1481-1483.	2.6	5
24	Optical Disc Simulation Program Unified by Electromagnetic and Thermal Distributions. Japanese Journal of Applied Physics, 2006, 45, 1463-1465.	1.5	15
25	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
26	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
27	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
28	On a thermally induced readout mechanism in super-resolution optical disks. Journal of Applied Physics, 2006, 100, 043106.	2.5	37
29	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
30	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
31	Optical Properties of Metal-Oxide Films in Super-RENS. Japanese Journal of Applied Physics, 2005, 44, 5156-5163.	1.5	7
32	Thermal decomposition of sputtered thin PtOx layers used in super-resolution optical disks. Applied Physics Letters, 2005, 86, 121909.	3.3	19
33	Super-Resolutional Readout Disk with Metal-Free Phthalocyanine Recording Layer. Japanese Journal of Applied Physics, 2004, 43, L88-L90.	1.5	19
34	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
35	An Approach to Lower the Threshold Laser Power of Super-Resolutional-Readout Optical Disk Using Silver Telluride Layer. Japanese Journal of Applied Physics, 2004, 43, L1499-L1501.	1.5	4
36	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

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37	Thermal decomposition of a thin AgOx layer generating optical near-field. Applied Physics Letters, 2004, 84, 1641-1643.	3.3	31
38	Ferroelectric catastrophe: beyond nanometre-scale optical resolution. Nanotechnology, 2004, 15, 411-415.	2.6	79
39	Readout process analysis of super-RENS disk. , 2004, , .		3
40	Optical transmittance study of the thermal decomposition of sputtered Ptâ€“Agâ€“O films. Thin Solid Films, 2003, 425, 31-34.	1.8	17
41	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
42	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
43	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
44	Super-resolution by elliptical bubble formation with PtOx and AgInSbTe layers. Applied Physics Letters, 2003, 83, 1701-1703.	3.3	76
45	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
46	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
47	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
48	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
49	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
50	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
51	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
52	Optical and electrical characterizations of Mn doped p-type Î²-FeSi2. Nuclear Instruments & Methods in Physics Research B, 1999, 147, 337-342.	1.4	3
53	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
54	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

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55	Carbon Doping into GaAs Using Low-Energy Hydrocarbon Ions. Materials Research Society Symposia Proceedings, 1998, 510, 61.	0.1	0
56	Highly Efficient Nitrogen Doping Into GaAs Using Low-Energy Nitrogen Molecular Ions. Materials Research Society Symposia Proceedings, 1998, 510, 73.	0.1	1
57	Photoluminescence characterization of dually Cd+ and N+ ion-implanted GaAs. Nuclear Instruments & Methods in Physics Research B, 1997, 121, 302-305.	1.4	2
58	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
59	Optical characterization of low-energy nitrogen-ion doped GaAs. Nuclear Instruments & Methods in Physics Research B, 1997, 127-128, 437-441.	1.4	15
60	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
61	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
62	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
63	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
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	C+â€energyâ€dependent residual ion damage in GaAs:C grown by the lowâ€energy ionâ€beam doping method. Journal of Applied Physics, 1996, 80, 3828-3833.	2.5	1
66	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
67	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
68	Highâ€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
69	Polarization-resolved photoluminescence of InAs/GaAs strained-layer structures on variously oriented substrates. Applied Surface Science, 1994, 75, 164-168.	6.1	4
70	Growth control of InAs thin layers on GaAs substrates with several orientations. Applied Surface Science, 1994, 75, 279-284.	6.1	5
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	In-situRaman Scattering Spectroscopy for a Super Resolution Optical Disk during Readout. Applied Physics Express, 0, 2, 082402.	2.4	7