

Takahiro Matsumoto

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6271481/publications.pdf>

Version: 2024-02-01

102
papers

2,461
citations

257450

24
h-index

206112

48
g-index

104
all docs

104
docs citations

104
times ranked

1884
citing authors

#	ARTICLE	IF	CITATIONS
1	Action Spectra of Bacteria and Purification of Pollutant Water at Faucets Using a Water Waveguide Method. <i>Water (Switzerland)</i> , 2022, 14, 1394.	2.7	4
2	Quantum proton entanglement on a nanocrystalline silicon surface. <i>Physical Review B</i> , 2021, 103, .	3.2	3
3	Determination of localized surface phonons in nanocrystalline silicon by inelastic neutron scattering spectroscopy and its application to deuterium isotope enrichment. <i>Physical Review Materials</i> , 2021, 5, .	2.4	0
4	Mechanism of transient photothermal inactivation of bacteria using a wavelength-tunable nanosecond pulsed laser. <i>Scientific Reports</i> , 2021, 11, 22310.	3.3	4
5	Transient photothermal inactivation of <i>Escherichia coli</i> stained with visible dyes by using a nanosecond pulsed laser. <i>Scientific Reports</i> , 2020, 10, 17805.	3.3	7
6	Instantaneous Water Purification by Deep Ultraviolet Light in Water Waveguide: <i>Escherichia Coli</i> Bacteria Disinfection. <i>Water (Switzerland)</i> , 2019, 11, 968.	2.7	24
7	Total Internal Reflection of Deep-Ultraviolet Light in a Water Waveguide and Its Application to Water Disinfection Technologies. <i>Water (Switzerland)</i> , 2019, 11, 294.	2.7	7
8	Giant and highly reflective Goos-Hänchen shift in a metal-dielectric multilayer Fano structure. <i>Optics Express</i> , 2019, 27, 28629.	3.4	17
9	Observation of Goos-Hänchen shift in plasmon-induced transparency. <i>Applied Physics Letters</i> , 2018, 112, .	3.3	19
10	Demonstration of electron beam laser excitation in the UV range using a GaN/AlGaIn multiquantum well active layer. <i>Scientific Reports</i> , 2017, 7, 2944.	3.3	15
11	Tailored plasmon-induced transparency in attenuated total reflection response in a metal-insulator-metal structure. <i>Scientific Reports</i> , 2017, 7, 17824.	3.3	15
12	Quantum twin spectra in nanocrystalline silicon. <i>Physical Review Materials</i> , 2017, 1, .	2.4	2
13	Attenuated total reflection response to wavelength tuning of plasmon-induced transparency in a metal-insulator-metal structure. <i>Optics Letters</i> , 2016, 41, 5274.	3.3	13
14	Transformation from plasmon-induced transparency to -induced absorption through the control of coupling strength in metal-insulator-metal structure. <i>Optics Express</i> , 2016, 24, 26201.	3.4	19
15	Demonstration of electron beam excitation laser using a GaInN-based multiquantum well active layer. <i>Applied Physics Express</i> , 2016, 9, 101001.	2.4	1
16	High quantum efficiency photocathode using surface plasmon resonance. , 2014, , .		0
17	Perfect blackbody radiation from a graphene nanostructure with application to high-temperature spectral emissivity measurements. <i>Optics Express</i> , 2013, 21, 30964.	3.4	41
18	Propagation of the centroid of the Poynting vector in transversely phase-modulated optical beams in spatially dispersive media. <i>Physical Review A</i> , 2013, 88, .	2.5	2

#	ARTICLE	IF	CITATIONS
19	Blue-shifted blackbody radiation from nano-structured multi-layer emitter. , 2013, , .		0
20	Necessary Conditions for Two-Lobe Patterns in Field Emission Microscopy. Japanese Journal of Applied Physics, 2012, 51, 115601.	1.5	3
21	Handheld deep ultraviolet emission device based on aluminum nitride quantum wells and graphene nanoneedle field emitters. Optics Express, 2012, 20, 24320.	3.4	32
22	New photo cathode driven by surface plasmon resonance. , 2012, , .		0
23	Fourier Analysis of Slow and Fast Image Propagation through Single and Coupled Image Resonators. International Journal of Optics, 2012, 2012, 1-9.	1.4	0
24	Necessary Conditions for Two-Lobe Patterns in Field Emission Microscopy. Japanese Journal of Applied Physics, 2012, 51, 115601.	1.5	3
25	Optical electron spin orientation in Ga-doped and undoped ZnO films. AIP Conference Proceedings, 2011, , .	0.4	1
26	Advanced and delayed optical images through single and coupled image resonators. , 2011, , .		0
27	Emission characteristics and application of graphite nanospine cathode. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, C2C31-C2C36.	1.2	8
28	P1–20: Specifying the necessary conditions for cloverleaf patterns formation in field emission microscope. , 2010, , .		0
29	Revealing real images of cloverleaf pattern emission sites by using field ion microscopy. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, C2A1-C2A4.	1.2	6
30	Advanced and delayed imagesâ€™ through an image resonator. Optics Express, 2010, 18, 12599.	3.4	7
31	Delayed optical images through coupled-resonator-induced transparency. Optics Letters, 2010, 35, 3414.	3.3	11
32	Modified blackbody radiation spectrum of a selective emitter with application to incandescent light source design. Optics Express, 2010, 18, A192.	3.4	18
33	Observation of Normal and Anomalous Dispersions in a Microsphere Taper Fiber System. Journal of the Physical Society of Japan, 2009, 78, 035001.	1.6	1
34	Field emission and ion microscopy about cloverleaf pattern. , 2009, , .		0
35	Tunable Fano interference effect in coupled-microsphere resonator-induced transparency. Journal of the Optical Society of America B: Optical Physics, 2009, 26, 813.	2.1	62
36	The fabrication of field emission lamps by using graphite nanoneedle cold cathodes. , 2009, , .		0

#	ARTICLE	IF	CITATIONS
37	Depth profiling the whispering gallery modes in TiO ₂ :Eu ³⁺ microspheres using cathode luminescence. Optics Letters, 2008, 33, 336.	3.3	2
38	Modification of the field enhancement factor for a field emitter with a surrounding electrode stabilized using a field effect transistor. Journal of Vacuum Science & Technology B, 2008, 26, 751-754.	1.3	0
39	Determining the physisorption energies of molecules on graphene nanostructures by measuring the stochastic emission-current fluctuation. Physical Review E, 2008, 77, 031611.	2.1	11
40	Smith-Purcell Radiation from Ultraviolet to Infrared Using a Si-field Emitter. , 2007, , .		0
41	Fabrication and characteristics of novel graphite field emitters for application to electron-beam-pumped light sources. Journal of Vacuum Science & Technology B, 2007, 25, 666.	1.3	5
42	The detailed analysis of field emission under stabilized operation using field effect transistor. , 2007, , .		0
43	Stabilization of electron emission from nanoneedles with two dimensional graphene sheet structure in a high residual pressure region. Applied Physics Letters, 2007, 90, 103516.	3.3	15
44	Dependence of the Light Emission Characteristics on the Ne Gas Pressure in an Electron-beam-pumped Light Source Using a Field Emitter. Shinku/Journal of the Vacuum Society of Japan, 2007, 50, 319-323.	0.2	0
45	A combinatorial approach to the discovery and optimization of YCa ₄ O(BO ₃) ₃ -based luminescent materials. Applied Surface Science, 2006, 252, 2493-2496.	6.1	8
46	Smith-Purcell radiation from ultraviolet to infrared using a Si field emitter. Journal of Vacuum Science & Technology B, 2006, 24, 924.	1.3	21
47	Influence of Oxygen Vacancies on the Polarization Properties in Bi ₄ Ti ₃ O ₁₂ Ferroelectric Single Crystals. Key Engineering Materials, 2006, 320, 19-22.	0.4	6
48	Observation of whispering gallery modes in cathode luminescence in TiO ₂ :Eu ³⁺ microspheres. Applied Physics Letters, 2006, 89, 061126.	3.3	8
49	Stable Electron Emission from Graphite-Nanoneedles and Their Application to Scanning Electron Microscopes. , 2006, , .		0
50	Field emission characteristics of a graphite nanoneedle cathode and its application to scanning electron microscopy. Applied Physics Letters, 2006, 88, 073511.	3.3	23
51	RECa ₄ O(BO ₃) ₃ thin films as new Luminescent materials screened by the combinatorial method. Journal of Physics and Chemistry of Solids, 2005, 66, 2112-2115.	4.0	2
52	High intensity pulse x-ray generation by using graphite-nanocrater cold cathode. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 831.	1.6	14
53	Y _{1-x} Eu _x Ca ₄ O(BO ₃) ₃ thin film as a luminescent material screened by the combinatorial method. Applied Physics Letters, 2005, 86, 021104.	3.3	8
54	Impact of Defect Control on the Polarization Properties in Bi ₄ Ti ₃ O ₁₂ Ferroelectric Single Crystals. Japanese Journal of Applied Physics, 2005, 44, L570-L572.	1.5	106

#	ARTICLE	IF	CITATIONS
55	Intense electron emission from graphite nanocraters and their application to time-resolved x-ray radiography. Applied Physics Letters, 2004, 84, 1804-1806.	3.3	27
56	Point x-ray source using graphite nanofibers and its application to x-ray radiography. Applied Physics Letters, 2003, 82, 1637-1639.	3.3	52
57	Ratio of deuterium to hydrogen termination on silicon surface in aqueous electrolyte solutions. Applied Physics Letters, 2002, 80, 4507-4509.	3.3	1
58	Correlation between grain size and optical properties in zinc oxide thin films. Applied Physics Letters, 2002, 81, 1231-1233.	3.3	157
59	Laser ultrasonics for measurements of high-temperature elastic properties and internal temperature distribution. Review of Scientific Instruments, 2001, 72, 2777-2783.	1.3	3
60	Evidence of quantum size effect in nanocrystalline silicon by optical absorption. Physical Review B, 2001, 63, .	3.2	64
61	Europium silicate thin films on Si substrates fabricated by a radio frequency sputtering method. Journal Physics D: Applied Physics, 2000, 33, 2074-2078.	2.8	40
62	Significant photoinduced refractive index change observed in porous silicon Fabry-Pérot resonators. Applied Physics Letters, 2000, 76, 1990-1992.	3.3	31
63	Studies on Microscopic Behavior of Ball Screw. (1st Report). Fundamental Experiments on Quasi-static Characteristics.. Journal of the Japan Society for Precision Engineering, 2000, 66, 1070-1075.	0.1	6
64	Deep-Level Energy States in Nanostructural Porous Silicon. Japanese Journal of Applied Physics, 1999, 38, 539-541.	1.5	11
65	Effect of Surface Termination on the Electronic States in Nanocrystalline Porous Silicon. Japanese Journal of Applied Physics, 1999, 38, 589-592.	1.5	7
66	Electroluminescence of europium silicate thin film on silicon. Applied Physics Letters, 1999, 74, 3203-3205.	3.3	26
67	Deep level energy states in porous silicon and porous silicon carbide determined by space-charge-limited current measurements. Applied Surface Science, 1999, 142, 569-573.	6.1	10
68	Determination of localized states in porous silicon. Journal of Luminescence, 1998, 80, 203-206.	3.1	4
69	The density of states in silicon nanostructures determined by space-charge-limited current measurements. Journal of Applied Physics, 1998, 84, 6157-6161.	2.5	19
70	Enhancement in electron emission from polycrystalline silicon field emitter arrays coated with diamondlike carbon. Journal of Applied Physics, 1998, 84, 3378-3381.	2.5	4
71	Reduction of Neutral Dangling Bond Density by Light Soaking in Nanocrystalline Silicon. Materials Research Society Symposia Proceedings, 1998, 507, 747.	0.1	0
72	Photo- and Electro-Luminescence from Deuterium Terminated Porous Silicon. Materials Research Society Symposia Proceedings, 1997, 486, 181.	0.1	1

#	ARTICLE	IF	CITATIONS
73	Luminescence from deuterium-terminated porous silicon. <i>Thin Solid Films</i> , 1997, 297, 31-34.	1.8	17
74	Precision Breaking of a Liquid Crystal Display Panel (STN Type) by YAG Laser.. <i>Journal of the Japan Society for Precision Engineering</i> , 1997, 63, 1018-1022.	0.1	6
75	Photoluminescence from Porous Silicon Anodized with Monochromatic Light Illumination. <i>Materials Research Society Symposia Proceedings</i> , 1996, 452, 535.	0.1	0
76	Light emitting devices using porous silicon and porous silicon carbide. <i>Solid-State Electronics</i> , 1996, 40, 501-504.	1.4	12
77	PL properties of porous Si anodized with various light illuminations. <i>Applied Surface Science</i> , 1996, 92, 396-399.	6.1	5
78	Si-based optical devices using porous materials. <i>Applied Surface Science</i> , 1996, 92, 598-605.	6.1	10
79	Precision Breaking of a Silicon Wafer by YAG Laser. Double Irradiation Breaking Assisted by Mirror Surface Cooling.. <i>Journal of the Japan Society for Precision Engineering</i> , 1996, 62, 95-99.	0.1	3
80	Photo- and Electroluminescence from Electrochemically Polished Silicon. <i>Japanese Journal of Applied Physics</i> , 1995, 34, L1318-L1321.	1.5	2
81	Optically Induced Absorption in Porous Silicon and Its Application to Logic Gates. <i>Journal of the Electrochemical Society</i> , 1995, 142, 3528-3533.	2.9	29
82	Observation and formulation of two-dimensional speckle in the space and the time domains. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1995, 12, 170.	2.1	15
83	Photoluminescence from Silicon Quantum Crystallites: Core and Surface States. <i>Japanese Journal of Applied Physics</i> , 1995, 34, 89.	1.5	1
84	Large Induced Absorption Change in Porous Silicon and Its Application to Optical Logic Gates. <i>Japanese Journal of Applied Physics</i> , 1994, 33, L35-L36.	1.5	29
85	Blue Light Emission from Rapid-Thermal-Oxidized Porous Silicon. <i>Japanese Journal of Applied Physics</i> , 1994, 33, 586-589.	1.5	53
86	Blue electroluminescence from porous silicon carbide. <i>Applied Physics Letters</i> , 1994, 65, 3350-3352.	3.3	57
87	Optical bistability using photoinduced absorption change in porous silicon. <i>Superlattices and Microstructures</i> , 1994, 15, 61.	3.1	0
88	Origin of the blue and red photoluminescence from oxidized porous silicon. <i>Physical Review B</i> , 1994, 49, 14732-14735.	3.2	101
89	Blue-green luminescence from porous silicon carbide. <i>Applied Physics Letters</i> , 1994, 64, 226-228.	3.3	235
90	Preparation of β -SiC and its application for light emitting diodes. <i>Applied Surface Science</i> , 1993, 65-66, 473-478.	6.1	18

#	ARTICLE	IF	CITATIONS
91	Microstructure and optical properties of free-standing porous silicon films: Size dependence of absorption spectra in Si nanometer-sized crystallites. <i>Physical Review B</i> , 1993, 48, 2827-2830.	3.2	430
92	Hydrogen Termination and Optical Properties of Porous Silicon: Photochemical Etching Effect. <i>Japanese Journal of Applied Physics</i> , 1993, 32, 411-414.	1.5	35
93	Visible light emission from apjunction of porous silicon and microcrystalline silicon carbide. <i>Applied Physics Letters</i> , 1993, 63, 1209-1210.	3.3	47
94	Ultrafast decay dynamics of luminescence in porous silicon. <i>Physical Review B</i> , 1993, 47, 13876-13879.	3.2	51
95	Picosecond Luminescence Decay in Porous Silicon. <i>Japanese Journal of Applied Physics</i> , 1992, 31, L619-L621.	1.5	39
96	Visible Electroluminescence from P-Type Crystalline Silicon/Porous Silicon/N-Type Microcrystalline Silicon Carbon PN Junction Diodes. <i>Japanese Journal of Applied Physics</i> , 1992, 31, L616-L618.	1.5	58
97	Visible photoluminescence of silicon-based nanostructures: Porous silicon and small silicon-based clusters. <i>Applied Physics Letters</i> , 1992, 61, 2446-2448.	3.3	82
98	Femtosecond vibrational relaxation measurement of azulene using temporally incoherent light. <i>Chemical Physics Letters</i> , 1992, 191, 627-632.	2.6	19
99	Stabilization of a CW Mode-Locked YAG Laser Using Feedback with an Acousto-Optic Modulator. <i>Japanese Journal of Applied Physics</i> , 1989, 28, 391-395.	1.5	1
100	Nonlinear dynamical relaxation processes in semiconductor-doped glasses at liquid-nitrogen temperature. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1989, 6, 165.	2.1	65
101	Field Emission from Graphene Nanosheets. , 0, , .		0
102	Influence of Oxygen Vacancies on the Polarization Properties in $\text{Bi}_{4-x}\text{Ti}_x\text{O}_{12}$ Ferroelectric Single Crystals. <i>Key Engineering Materials</i> , 0, , 19-22.	0.4	2