Naoto Kumagai

List of Publications by Year in descending order

94 papers	1,406 citations	471509 17 h-index	345221 36 g-index
94 all docs	94 docs citations	94 times ranked	1628 citing authors

#	Article	IF	Citations
1	Room temperature continuous-wave lasing in photonic crystal nanocavity. Optics Express, 2006, 14, 6308.	3.4	186
2	Native T1 Mapping and Extracellular Volume Mapping for the Assessment of Diffuse Myocardial Fibrosis in DilatedÂCardiomyopathy. JACC: Cardiovascular Imaging, 2018, 11, 48-59.	5.3	175
3	Spontaneous Two-Photon Emission from a Single Quantum Dot. Physical Review Letters, 2011, 107, 233602.	7.8	124
4	Photonic crystal nanocavity laser with a single quantum dot gain. Optics Express, 2009, 17, 15975.	3.4	110
5	Strong coupling between a photonic crystal nanobeam cavity and a single quantum dot. Applied Physics Letters, 2011, 98, .	3.3	84
6	Layer-resolved kinetics of Si oxidation investigated using the reflectance difference oscillation method. Physical Review B, 2003, 67, .	3.2	57
7	Temporal coherence of a photonic crystal nanocavity laser with high spontaneous emission coupling factor. Physical Review B, 2007, 75, .	3.2	49
8	Vacuum Rabi splitting with a single quantum dot embedded in a H1 photonic crystal nanocavity. Applied Physics Letters, 2009, 94, .	3.3	41
9	High Q H1 photonic crystal nanocavities with efficient vertical emission. Optics Express, 2012, 20, 28292.	3.4	39
10	Increase of Q-factor in photonic crystal H1-defect nanocavities after closing of photonic bandgap with optimal slab thickness. Optics Express, 2008, 16, 448.	3.4	36
11	Enhancement of Rashba coupling in vertical In<mmlmath xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>0.05</mml:mn></mml:mrow></mml:msub></mml:math>Ga<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>0.95</mml:mn></mml:mrow></mml:msub></mml:math>As/GaAs quantum dots. Physical Review B, 2011, 84, .	3.2	33
12	Vacuum Rabi Spectra of a Single Quantum Emitter. Physical Review Letters, 2015, 114, 143603.	7.8	31
13	Large vacuum Rabi splitting between a single quantum dot and an H0 photonic crystal nanocavity. Applied Physics Letters, 2018, 112, .	3.3	27
14	Ultra-low threshold photonic crystal nanocavity laser. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 1800-1803.	2.7	21
15	Investigation of the Spectral Triplet in Strongly Coupled Quantum Dotâ€“Nanocavity System. Applied Physics Express, 2009, 2, 122301.	2.4	20
16	Zero-cell photonic crystal nanocavity laser with quantum dot gain. Applied Physics Letters, 2010, 97, .	3.3	19
17	Coherently driven semiconductor quantum dot at a telecommunication wavelength. Optics Express, 2008, 16, 13949.	3.4	18
18	Enhanced photon emission and absorption of single quantum dot in resonance with two modes in photonic crystal nanocavity. Applied Physics Letters, 2008, 93, 183114.	3.3	15

#	Article	IF	Citations
19	Large Vacuum Rabi Splitting in Single Self-Assembled Quantum Dot-Nanocavity System. Applied Physics Express, 0, 1, 072102.	2.4	14
20	Photonic band-edge micro lasers with quantum dot gain. Optics Express, 2009, 17, 640.	3.4	14
21	Spin dynamics of excited trion states in a single InAs quantum dot. Physical Review B, 2010, 81, .	3.2	14
22	High-quality nanodisk of InGaN/GaN MQWs fabricated by neutral-beam-etching and GaN regrowth: towards directional micro-LED in top-down structure. Semiconductor Science and Technology, 2020, 35, 075001.	2.0	13
23	Atomic-layer resolved monitoring of thermal oxidation of Si(001) by reflectance difference oscillation technique. Thin Solid Films, 2004, 455-456, 759-763.	1.8	12
24	Optical properties of p-type modulation-doped InAs quantum dot structures grown by molecular beam epitaxy. Journal of Crystal Growth, 2007, 301-302, 805-808.	1.5	12
25	High guided modeâ€“cavity mode coupling for an efficient extraction of spontaneous emission of a single quantum dot embedded in a photonic crystal nanobeam cavity. Physical Review B, 2012, 86, .	3.2	12
26	In situreflectance difference spectroscopy and reflection high-energy electron diffraction observation of nitridation processes on GaAs(001) surfaces. Journal of Applied Physics, 1997, 82, 4684-4686.	2.5	11
27	Suppression of indefinite peaks in InAs/GaAs quantum dot spectrum by low temperature capping in the indium-flush method. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 2753-2756.	2.7	11
28	Chemical Vapor Deposition Growth of BN Thin Films Using B₂H₆ and NH₃. Physica Status Solidi (B): Basic Research, 2020, 257, 1900318.	1.5	11
29	Nitridation processes on GaAs(001) surfaces: Optical, structural, and chemical analysis. Journal of Applied Physics, 1998, 83, 5497-5503.	2.5	9
30	Optical characterization of surface roughness of diamond by spectroscopic ellipsometry. Diamond and Related Materials, 2004, 13, 2092-2095.	3.9	9
31	Enhancement of Valence Band Mixing in Individual InAs/GaAs Quantum Dots by Rapid Thermal Annealing. Japanese Journal of Applied Physics, 2013, 52, 125001.	1.5	9
32	Effect of cavity-layer thicknesses on two-color emission in coupled multilayer cavities with InAs quantum dots. Japanese Journal of Applied Physics, 2015, 54, 04DG10.	1.5	8
33	Two-color surface-emitting lasers using a semiconductor coupled multilayer cavity. Applied Physics Express, 2016, 9, 111201.	2.4	8
34	Comparative Study of Boron Precursors for Chemical Vaporâ€Phase Depositionâ€Grown Hexagonal Boron Nitride Thin Films. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2000241.	1.8	8
35	Two-Photon Control of Biexciton Population in Telecommunication-Band Quantum Dot. Applied Physics Express, 2010, 3, 064401.	2.4	7
36	Effects of growth temperature of partial GaAs cap on InAs quantum dots in Inâ€flush process for single dot spectroscopy. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 248-250.	0.8	7

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37	Surface Emitting Devices Based on a Semiconductor Coupled Multilayer Cavity for Novel Terahertz Light Sources. IEICE Transactions on Electronics, 2017, E100.C, 171-178.	0.6	7
38	In situ measurement of carrier concentration in n-ZnSe by reflectance difference spectroscopy (RDS). Journal of Crystal Growth, 2000, 214-215, 547-551.	1.5	6
39	Determination of carrier concentration in n-ZnSe by reflectance difference spectroscopy: Experimental results and model calculation. Journal of Applied Physics, 2002, 92, 139-143.	2.5	6
40	Charged and neutral biexcitonâ€“exciton cascade in a single quantum dot within a photonic bandgap. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 2563-2566.	2.7	6
41	Electro-Mechanical Q Factor Control of Photonic Crystal Nanobeam Cavity. Japanese Journal of Applied Physics, 2013, 52, 04CG01.	1.5	6
42	Two-color surface-emitting lasers by a GaAs-based coupled multilayer cavity structure for coherent terahertz light sources. Journal of Crystal Growth, 2017, 477, 249-252.	1.5	6
43	Sublattice reversal in GaAs/Ge/GaAs heterostructures grown on (113)B GaAs substrates. Applied Physics Express, 2018, 11, 015501.	2.4	6
44	Dielectric functions of CVDâ€“grown boron nitride from 1.1 to 9.0 eV by spectroscopic ellipsometry. Applied Physics Letters, 2021, 118, 112101.	3.3	6
45	Fabrication of two-color surface emitting device of a coupled vertical cavity structure with InAs quantum dots formed by wafer bonding. Japanese Journal of Applied Physics, 2016, 55, 04EH09.	1.5	5
46	Highâ€Efficiency, Highâ€Power AlGaInP Thinâ€Film LEDs with Micronâ€Sized Truncated Cones as Lightâ€Extraction Structures. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700562.	1.8	5
47	Room-temperature two-color lasing by current injection into a GaAs/AlGaAs coupled multilayer cavity fabricated by wafer bonding. Japanese Journal of Applied Physics, 2018, 57, 04FH03.	1.5	5
48	Effects of N2 and NH3 plasma exposure on the surface topography of p-GaN under quasi-atmospheric pressure. Surfaces and Interfaces, 2019, 14, 92-97.	3.0	5
49	Neutralization of positively charged excitonic state in single InAs quantum dot by Si delta doping. Journal of Physics: Conference Series, 2010, 245, 012088.	0.4	4
50	Growth Temperature Effects of Chemical Vapor Depositionâ€Grown Boron Nitride Layer Using B₂H₆ and NH₃. Physica Status Solidi (B): Basic Research, 2020, 257, 1900521.	1.5	4
51	Observation of unique photon statistics of single artificial atom laser. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 2489-2492.	2.7	3
52	Effects of cardiac resynchronization therapy on left ventricular mechanical dyssynchrony induced by right ventricular pacing in a patient with heart failure and preserved ejection fraction. International Journal of Cardiology, 2014, 177, 1069-1072.	1.7	3
53	Photoconductivity of Er-doped InAs quantum dots embedded in strain-relaxed InGaAs layers with 1.5 Âµm cw and pulse excitation. Japanese Journal of Applied Physics, 2016, 55, 04EH12.	1.5	3
54	Current-injection two-color lasing in a wafer-bonded coupled multilayer cavity with InGaAs multiple quantum wells. Japanese Journal of Applied Physics, 2017, 56, 04CH01.	1.5	3

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55	Enhanced optical Stark shifts in a single quantum dot embedded in an H1 photonic crystal nanocavity. Applied Physics Express, 2017, 10, 062002.	2.4	3
56	Fabrication of submicron active-region-buried GaN hexagonal frustum structures by selective area growth for directional micro-LEDs. Journal of Crystal Growth, 2019, 507, 437-441.	1.5	3
57	Measurements of nitrogen atom density in a microwaveâ€excited plasma jet produced under moderate pressures. IEEJ Transactions on Electrical and Electronic Engineering, 2020, 15, 1281-1287.	1.4	3
58	Mobility and activation energy of lateral photocurrent of InAs quantum dot layers with ultrafast carrier relaxation. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 126, 114478.	2.7	3
59	Measurements of a component of the piezo-optic tensor of Si by reflectance difference spectroscopy. Journal of Applied Physics, 2003, 94, 1458-1460.	2.5	2
60	Enhanced Maximum Modal Gain of 1.3-μm Antimony Mediated InAs Self-Assembled Quantum-Dot Lasers. , 2007, , .		2
61	Fabrication and characterization of a vertical pillar structure including a self-assembled quantum dot and a quantum well. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 2592-2594.	2.7	2
62	New method to isolate and distribute photoluminescence emissions from InAs quantum dots over a wide-wavelength range. Journal of Crystal Growth, 2011, 323, 250-253.	1.5	2
63	A single-electron probe for buried optically active quantum dot. AIP Advances, 2012, 2, 032103.	1.3	2
64	Shape evolution of low density InAs quantum dots in the partial capping process by using As2 source. Journal of Crystal Growth, 2013, 378, 549-552.	1.5	2
65	Heart Failure Exacerbation Associated with Newly Developed Atrioventricular Dyssynchrony after Chemical Conversion to a Sinus Rhythm in a Patient Receiving Cardiac Resynchronization Therapy. Internal Medicine, 2013, 52, 1359-1363.	0.7	2
66	A novel method for the quantitative evaluation of diurnal respiratory instability in patients with heart failure: A pilot study. Journal of Cardiology, 2018, 71, 159-167.	1.9	2
67	Sublattice reversal in GaAs/Ge/GaAs (113)B heterostructures and its application to THz emitting devices based on a coupled multilayer cavity. Japanese Journal of Applied Physics, 2018, 57, 04FH07.	1.5	2
68	Effects of sitagliptin on exercise capacity and hemodynamics in patients with type 2 diabetes mellitus and coronary artery disease. Heart and Vessels, 2020, 35, 605-613.	1.2	2
69	Comprehensive characterization of low-damaged GaN surface exposed to NH3 plasma toward plasma-induced metalorganic chemical vapor deposition. Applied Surface Science, 2022, 591, 153150.	6.1	2
70	Ammonia-free epitaxy of single-crystal InN using a plasma-integrated gas-injection module. Applied Materials Today, 2022, 27, 101489.	4.3	2
71	Measurements of the Linear Electro-Optic Coefficients of ZnTe by RDS. Physica Status Solidi (B): Basic Research, 2002, 229, 605-609.	1.5	1
72	Processâ€free estimation of threshold current density of InAs quantum dot laser. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 2935-2937.	0.8	1

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73	Anisotropic Exciton Rabi Oscillation in Single Telecommunication-Band Quantum Dot. Japanese Journal of Applied Physics, 2010, 49, 06GJ09.	1.5	1
74	Nanocavity-enhanced Optical Stark Shift in a Single Quantum Dot under Extremely Low Excitation Power. , 2012, , .		1
75	Rim formation on non-elongated InAs quantum dots grown by partial cap and annealing process at low temperature. Journal of Crystal Growth, 2013, 378, 558-561.	1.5	1
76	Effects of Sb-soak on InAs quantum dots grown on (001) and (113)B GaAs substrates. Journal of Crystal Growth, 2017, 477, 221-224.	1.5	1
77	Photonic Crystal Nanocavity Laser with Single Quantum Dot Gain. , 2009, , .		1
78	Observation of very narrow fine-structure splittings in self-assembled quantum dots by photocurrent spectroscopy. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 2192-2194.	2.7	0
79	Biexcitonic photocurrent induced by twoâ€photon process at a telecommunication band. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1445-1448.	0.8	0
80	Acoustic phonon effects on telecommunicationâ€band quantum dot exciton Rabi oscillation. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 2578-2581.	0.8	0
81	Nonlinear photonics in single quantum dot-photonic crystal nanocavity couples systems. , 2013, , .		0
82	Large vacuum Rabi splitting in an H0 photonic crystal nanocavity-quantum dot system. , 2013, , .		0
83	Wide range Q-factor control in a photonic crystal nanobeam cavity incorporating quantum dots. , 2013, , .		0
84	Effect of metal side claddings on emission decay rate of single quantum dots embedded in a subwavelength semiconductor waveguide. , 2015, , .		0
85	Two-color lasing from a GaAs/AlGaAs coupled multilayer cavity by current injection. , 2016, , .		0
86	GaAs/AlAs triple-coupled cavity with InAs quantum dots for ultrafast wavelength conversion devices. , 2016, , .		0
87	GaAs/AlAs triple-coupled cavity with InAs quantum dots for ultrafast wavelength conversion devices. Japanese Journal of Applied Physics, 2017, 56, 04CH02.	1.5	0
88	Time-resolved measurements of two-color laser light emitted from GaAs/AlGaAs-coupled multilayer cavity. Japanese Journal of Applied Physics, 2019, 58, SJJC03.	1.5	0
89	Efficient excitation and emission of single quantum dot by simultaneous coupling to two different photonic crystal nanocavity modes. , 2008, , .		0
90	Achievement of ultra-low threshold excitation power (8 nW) in a nearly-single quantum dot nanocavity laser. , 2008, , .		0

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91	Phonon-Induced Asymmetry in Vacuum Rabi Doublet for Coupled Quantum Dot-Cavity System. , 2010, , .		0
92	Circularly-Polarized Light Emission from Semiconductor Planar Chiral Photonic Crystals. , 2010, , .		0
93	Single Emitter Vacuum Rabi Splitting Measured Through Direct Free Space Spontaneous Emission. , 2015, , .		0
94	Simultaneous Oscillation of Two-Color Laser Lights from a GaAs/AlGaAs Coupled Multilayer Cavity. , 2018, , .		0