Hiroshi Kumagai

List of Publications by Year
in descending order

131	1,073	331670	454955
papers	citations	21 h-index	30 g-index

131	131	131	629
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Titanium oxide/aluminum oxide multilayer reflectors for â€œwater-windowâ€•wavelengths. Applied Physics Letters, 1997, 70, 2338-2340.	3.3	73
2	Fabrication of titanium oxide thin films by controlled growth with sequential surface chemical reactions. Thin Solid Films, 1995, 263, 47-53.	1.8	72
3	Comparative Study of Al2O3Optical Crystalline Thin Films Grown by Vapor Combinations of Al(CH3)3/N2O and Al(CH3)3/H2O2. Japanese Journal of Applied Physics, 1993, 32, 6137-6140.	1.5	60
4	Characterization of Nd:Y3Al5O12 thin films grown on various substrates by pulsed laser deposition. Applied Physics Letters, 1996, 69, 2977-2979.	3.3	54
5	Observation of the complex propagation of a femtosecond laser pulse in a dispersive transparent bulk material. Journal of the Optical Society of America B: Optical Physics, 2003, 20, 597.	2.1	54
6	New highâ€efficiency quasiâ€continuous operation of a KrF(Bâ†'X) excimer lamp excited by microwave discharge. Applied Physics Letters, 1989, 54, 2619-2621.	3.3	46
7	New highâ€efficiency quasiâ€continuous operation of an ArF(Bâ†'X) excimer lamp excited by microwave discharge. Applied Physics Letters, 1989, 55, 1583-1584.	3.3	45
8	Observation of Self-Channeled Plasma Formation and Bulk Modification in Optical Fibers Using High-Intensity Femtosecond Laser. Japanese Journal of Applied Physics, 1998, 37, L737-L739.	1.5	42
9	Development of a high-power deep-ultraviolet continuous-wave coherent light source for laser cooling of silicon atoms. Optics Letters, 2000, 25, 1457.	3.3	38
10	In situ observation of dynamics of plasma formation and refractive index modification in silica glasses excited by a femtosecond laser. Optics Communications, 2002, 207, 243-253.	2.1	33
11	Fabrication of Multilayers with Growth Controlled by Sequential Surface Chemical Reactions. Japanese Journal of Applied Physics, 1994, 33, 7086-7089.	1.5	30
12	Fabrication of double cladding structure in optical multimode fibers using plasma channeling excited by a high-intensity femtosecond laser. Optics Communications, 1999, 168, 287-295.	2.1	30
13	Femtosecond laser micromachining of TiO2 crystal surface for robust optical catalyst. Journal of Applied Physics, 2000, 87, 1604-1609.	2.5	30
14	In situ ellipsometric diagnostics for controlled growth of metal oxides with surface chemical reactions. Applied Surface Science, 1994, 82-83, 481-486.	6.1	27
15	Effect of Pulse Duration on Ablation Characteristics of Tetrafluoroethylene-hexafluoropropylene Copolymer Film Using Ti:sapphire Laser. Japanese Journal of Applied Physics, 1996, 35, 101-106.	1.5	27
16	Characteristics of an electron beam pumped KrF laser amplifier with an atmosphericâ€pressure Krâ€rich mixture in a strongly saturated region. Applied Physics Letters, 1987, 51, 218-220.	3.3	25
17	High-power regime of femtosecond-laser pulse propagation in silica: Multiple-cone formation. Physical Review E, 2002, 66, 056608.	2.1	24
18	Properties of a new highâ€efficiency vacuum ultraviolet fluorine lamp excited by a microwave discharge. Applied Physics Letters, 1991, 59, 2811-2813.	3.3	23

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19	Crystal Growth of Nd:YAG Laser Films on Various Substrates by Pulsed Laser Deposition. Japanese Journal of Applied Physics, 1995, 34, 6838-6841.	1.5	22
20	Creation of a three-dimensional spherical fluorescence spot for super-resolution microscopy using a two-color annular hybrid wave plate. Optics Letters, 2015, 40, 1057.	3.3	22
21	Efficient frequency doubling of 1-W continuous-wave Ti:sapphire laser with a robust high-finesse external cavity. Applied Optics, 2003, 42, 1036.	2.1	21
22	Efficient sum-frequency generation of continuous-wave single-frequency coherent light at 252 nm with dual wavelength enhancement. Optics Letters, 2003, 28, 1969.	3.3	19
23	Simultaneous atomization and ionization of large organic molecules using femtosecond laser ablation. Applied Surface Science, 2002, 197-198, 715-719.	6.1	18
24	Pulsed laser deposition of carbon nitride thin films in nitrogen gas ambient. Journal of Materials Research, 1997, 12, 3376-3379.	2.6	17
25	The growth of Cr4+:YAG and Cr4+:GGG thin films by pulsed laser deposition. Optics Communications, 2001, 187, 373-377.	2.1	17
26	A widely tunable (0.54â€“1.01 Î¼m) doubleâ€pass fiber Raman laser. Applied Physics Letters, 1996, 69, 1846-1848.	3.3	16
27	Noncascading THz-wave parametric oscillator synchronously pumped by mode-locked picosecond Ti:sapphire laser in doubly-resonant external cavity. Optics Communications, 2011, 284, 4663-4666.	2.1	14
28	A High-Efficiency, High-Repetition-Rate KrF(Bâ†'X) Excimer Lamp Excited by Microwave Discharge. Japanese Journal of Applied Physics, 1989, 28, L2228-L2231.	1.5	11
29	Ultraviolet and blue discretely tunable double-pass fiber Raman laser. Applied Physics Letters, 1997, 70, 3200-3202.	3.3	11
30	Tunable Picosecond Terahertz-Wave Parametric Oscillators Based on Noncollinear Pump-Enhanced Signal-Resonant Cavity. IEEE Journal of Selected Topics in Quantum Electronics, 2013, 19, 8500307-8500307.	2.9	11
31	Characterization of frequency-tripled nanosecond pulsed Ti:sapphire laser injection seeded by a frequency-scanning cw Ti:sapphire laser by use of optogalvanic spectroscopy of silicon atoms. Optics Letters, 2006, 31, 3037.	3.3	10
32	Femtosecond optical Kerr studies of photodarkening effect on nonlinear optical properties of CdSxSe1â^'x doped glass. Optics Communications, 1997, 142, 273-278.	2.1	9
33	Highâ€efficiency extraction study of an electron beam pumped ArF laser amplifier with an atmosphericâ€pressure Arâ€rich mixture. Applied Physics Letters, 1988, 52, 1294-1296.	3.3	8
34	Fabrication of multi-core structures in an optical fiber using plasma self-channeling. Optics Express, 2003, 11, 1780.	3.4	8
35	Comparison of Simulations of and Experiments on Femtosecond Laser Ablation of Nickel in Gaseous and Water Environments. Japanese Journal of Applied Physics, 2004, 43, 172-175.	1.5	8
36	Intrinsic efficiency comparison in various lowâ€pressure XeF laser mixtures pumped at high excitation rates and with shortâ€pulse electron beam pumping. Applied Physics Letters, 1988, 52, 1847-1849.	3.3	6

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37	Spatial Controllability of Periodic Ripple Structures Generated in Laser Etching of n-GaAs. Japanese Journal of Applied Physics, 1992, 31, 4433-4436.	1.5	6
38	A powerful and widely tunable double-pass fiber Raman laser. Optics Communications, 1997, 138, 337-340.	2.1	6
39	Optogalvanic spectroscopy of silicon atoms. Nuclear Instruments & Methods in Physics Research B, 2004, 215, 419-422.	1.4	6
40	Dynamics of permanent structural transformations in ZBLAN induced by self-channeled plasma filament. Optical Materials, 2004, 26, 57-63.	3.6	6
41	Fabrication of Periodic Submicron Dot Structures of N-InP by Laser-Induced Surface Electromagnetic Wave Etching. Japanese Journal of Applied Physics, 1992, 31, L928-L930.	1.5	5
42	<title>Time-resolved dynamics of plasma self-channeling and bulk modification in silica glasses induced by a high-intensity femtosecond laser</title>. , 2000, 4088, 40.		5
43	Fabrication of internal diffraction gratings in planar silica plates using low-density plasma formation induced by a femtosecond laser. Nuclear Instruments & Methods in Physics Research B, 2002, 197, 73-82.	1.4	5
44	In situ observation of dynamics of plasma formation and refractive index modification in silica glasses excited by a femtosecond laser. , 2003, , .		5
45	Fine frequency tuning in sum-frequency generation of continuous-wave single-frequency coherent light at 252 nm with dual-wavelength enhancement. Optics Letters, 2007, 32, 62.	3.3	5
46	Comparative study of lowâ€pressure rareâ€gas fluoride/chloride lasers excited by a shortâ€pulse electron beam. Journal of Applied Physics, 1988, 64, 1720-1725.	2.5	3
47	Simple wide-range method for angle measurement with a point fiber-optic output. Applied Optics, 1997, 36, 376.	2.1	3
48	Conversion efficiency of 56% in frequency doubling of single-frequency coherent light from Ti:sapphire laser at 778nm in high-finesse resonant cavity containing BiBO crystal. Nuclear Instruments & Methods in Physics Research B, 2009, 267, 3471-3474.	1.4	3
49	SU-8 ridge-waveguide with holographic grating embedded in nanoimprinted groove. Microelectronic Engineering, 2012, 98, 258-261.	2.4	3
50	Computational fluid dynamics analysis of the pump parameters in the helical flow pump. Journal of Artificial Organs, 2014, 17, 9-15.	0.9	3
51	<title>Surface modification of semiconductors by laser-induced surface electromagnetic wave etching</title>. , 1994, , .		2
52	Pulse duration dependence of metal ablation using a femtosecond titanium sapphire laser. , 2000, 3885, 509.		2
53	Toward nano-process applications with laser-cooled silicon atoms. , 2003, , .		2
54	Performance characteristics of external cavities to generate deep-ultraviolet coherent lights resonant to 3p3P14s3P0cyclic transition of28Si. Science and Technology of Advanced Materials, 2004, 5, 589-592.	6.1	2

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55	Atomic layer epitaxy of TiO 2 /ZnO multilayer optics using ZnO buffer layer for water-window x-ray. , 2011, , .		2
56	Derivation of NARX models by expanding activation functions in neural networks. IEEJ Transactions on Electrical and Electronic Engineering, 2019, 14, 1209-1218.	1.4	2
57	<title>Observation of self-channeling and modification in optical fibers using a high-intensity femtosecond laser</title>. , 1998, , .		2
58	<title>Planar laser and nonlinear optical waveguides fabricated by pulsed laser deposition</title>. , 1998, 3343, 796.		1
59	Isotopic separation of silicon atoms by atomic mirror. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 5047-5049.	1.4	1
60	Single-frequency nanosecond-pulsed deep-ultraviolet coherent light source at 252nm for manipulating silicon atoms resonantly. Optics Communications, 2008, 281, 3824-3826.	2.1	1
61	Fine spectroscopy of semiconductor atoms for controlling nuclear spins. , 2008, , .		1
62	Parametric generation of terahertz wave pumped by picosecond Ti:sapphire laser with MgO-doped LiNbO 3 installed in external enhancement cavity. Proceedings of SPIE, 2011, , .	0.8	1
63	70% frequency-doubling efficiency of 0.8-W mode-locked picosecond Ti:sapphire laser with external cavity. , 2011, , .		1
64	Sum-frequency generation of continuous-wave tunable ultraviolet coherent light in BBO-installed external cavity. Proceedings of SPIE, 2012, , .	0.8	1
65	Study on the Mechanism of Field Adsorption of Helium and Neon above a Single Tungsten Atom with a Pulse Counting Analysis of Field Ions. Hyomen Kagaku, 2013, 34, 409-414.	0.0	1
66	Coherent time-domain detection of terahertz pulses generated from noncollinear phase-matched, picosecond terahertz parametric oscillator. Applied Physics Express, 2014, 7, 022701.	2.4	1
67	ThreeâEDimensional Monitoring of Thawing of Biological Tissue Using Electrical Impedance Tomography. Electronics and Communications in Japan, 2018, 101, 24-33.	0.5	1
68	Fine Spectroscopy of Neutral Silicon Atoms. The Review of Laser Engineering, 2004, 32, 469-474.	0.0	1
69	Novel Optogalvanic Spectroscopy of Semiconductor Atoms with a Frequency-tripled ns Ti:sapphire Laser Injection-seeded by a cw Frequency-scanning Ti:sapphire Laser. The Review of Laser Engineering, 2008, 36, 1020-1023.	0.0	1
70	Increase of NMR/MIR signals under ultra-low B fields with hyperpolarized Xe using 1W CW single-frequency Ti:Sapphire laser. , 2019, , .		1
71	Preventing spin relaxation of optically pumped alkali metal atoms by atomically-thin hybrid polymer film coating. , 2019, , .		1
72	Growth and characterization of Nd:YAG epitaxial planar waveguides by pulsed laser deposition. , 1997, , .		0

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73	<title>Modification in optical fibers using high-intensity femtosecond lasers</title>. , 1999, , .		0
74	Fabrication study of double-cladding structure in optical fibers using plasma channeling induced by a femtosecond laser. , 2000, 3885, 293.		0
75	Sum-frequency generation of a cw single-frequency-mode coherent light at 252 nm for laser cooling of silicon. , 2001, 4269, 197.		0
76	Laser cooling for Si atom manipulation with atomic mirror. , 2004, , .		0
77	Development of a single-frequency nanosecond pulsed deep-UV coherent light source for manipulating silicon atoms. , 2007, , .		0
78	Single-frequency stabilization of frequency-tripled nanosecond Ti:sapphire laser injection-seeded for silicon atom optics. , 2007, , .		0
79	Optogalvanic spectroscopy using 389nm coherent light source accurately tuned to resonance frequency of 23S->33P of 3He. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 2623-2626.	1.4	0
80	Single-frequency 389-nm CW coherent light source for optical pumping of metastable3He atoms. , 2008, , .		0
81	Frequency stabilization of nanosecond deep-ultraviolet coherent light source with injection seeding. Proceedings of SPIE, 2008, , .	0.8	0
82	Frequency doubling of a single-frequency 778-nm Ti:Sapphire laser for nuclear spin polarization of 3He atoms. , 2009, , .		0
83	Atomic layer epitaxy of TiO 2 /ZnO multilayers for water-window attosecond optics. , 2009, , .		0
84	Nanosecond 389-nm coherent light source with injection seeding for nuclear spin polarization of³He atoms. Proceedings of SPIE, 2009, , .	0.8	0
85	Atomic layer epitaxy of ZnO and TiO 2 thin films on c-plane sapphire substrate for novel oxide soft x-ray mirrors. , 2010, , .		0
86	Generation of quasi-continuous wave 389-nm coherent light by frequency doubling of a Ti:sapphire laser for nuclear spin polarization of3He atoms. , 2010, , .		0
87	Recent Progress on Fabrication Technology of Short-Wavelength Soft X-Ray Multilayers and Their. The Review of Laser Engineering, 2010, 38, 976-980.	0.0	0
88	Fabrication of Al 2 O 3 /TiO 2 multilayer mirrors for water-window attosecond pulses. , 2010, , .		0
89	Atomic layer deposition of amorphous TiO 2 /ZnO multilayers for soft x-ray coherent optics. Proceedings of SPIE, 2011, , .	0.8	0
90	Study on periodic twinning of quartz crystal under bending stress. Proceedings of SPIE, 2011, , .	0.8	0

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91	A study on fabrication of BaMgF 4 thin film toward frequency-conversion device in UV/VUV region. , 2011, , .		0
92	Low-threshold, quasi-cw terahertz parametric amplification in an external ring cavity with an MgO:LiNbO 3 Crystal. Proceedings of SPIE, 2011, , .	0.8	0
93	Coherent electro-optical detection of THz-wave generated from synchronously pumped picosecond THz parametric oscillator. Proceedings of SPIE, 2012, , .	0.8	0
94	Quasi phase matching through periodic step structure: modeling of frequency conversion in consideration of heat influence. , 2012, , .		0
95	Tunable terahertz parametric oscillator synchronously pumped by mode-locked picosecond Ti:Sapphire laser with MgO-doped LiNbO3. Proceedings of SPIE, 2012, , .	0.8	0
96	Novel beam splitter for high-order harmonics with WO3/TiO2 bilayer grown on c-plane sapphire substrate by sequential surface chemical reactions. Proceedings of SPIE, 2012, , .	0.8	0
97	Comparative study on THz time-domain spectroscopy using 780-nm 1.3-ps laser pulses with different detections of LT-GaAs photoconductive antenna and ZnTe electro-optic sampling. , 2013, , .		0
98	Tunable picosecond THz-wave generation based on trapezoidal MgO:LiNbO₃crystal in novel pentagram-shaped pump-enhancement cavity. Proceedings of SPIE, 2013, , .	0.8	0
99	Fabrication of two-color annular hybrid wave plate for three-dimensional super-resolution microscopy. Proceedings of SPIE, 2016, , .	0.8	0
100	Theoretical analysis of lateral resolution given by annular super-resolution phase plate. Proceedings of SPIE, 2017, , .	0.8	0
101	Respiration and Heat Shock Protein After Short-Term Heating/Stretch-Fixing on Smooth Muscle Cells. Cardiovascular Engineering and Technology, 2020, 11, 308-315.	1.6	0
102	Room-temperature Molecular Layer Deposition of Organic-inorganic Hybrid Thin Films by Trimethylaluminum/Ethanol Combination. IEEJ Transactions on Electronics, Information and Systems, 2021, 141, 568-569.	0.2	0
103	Investigation of the Direction of Myofiber using Multichannel Surface EMG. IEEJ Transactions on Electronics, Information and Systems, 2021, 141, 578-579.	0.2	0
104	Basic Study to Verify Possibility for Detection of Human Cardiopulmonary Activity in Sediment Using Current-Induced Magnetic Modulation Spectroscopy. IEEJ Transactions on Electronics, Information and Systems, 2021, 141, 532-538.	0.2	0
105	Relationship between Conducting Wave and Muscle Thickness In Multi-channel Surface EMG. IEEJ Transactions on Electronics, Information and Systems, 2021, 141, 525-531.	0.2	0
106	Spin Relaxation Prevention Effect of Optically Pumped Atomic Magnetometer Cell by Room Temperature Molecular Layer Deposition of Inorganic-organic Hybrid Film. IEEJ Transactions on Electronics, Information and Systems, 2021, 141, 574-575.	0.2	0
107	Development of 100 kHz Optical Pumped Atomic Magnetometer Module for Non-Magnetic Shield. IEEJ Transactions on Electronics, Information and Systems, 2021, 141, 509-513.	0.2	0
108	Analysis of Paraffin Thin Film by Spectroscopic Ellipsometer. IEEJ Transactions on Electronics, Information and Systems, 2021, 141, 572-573.	0.2	0

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109	Development of 8ch Current Induced Magnetic Tomography. IEEJ Transactions on Electronics, Information and Systems, 2021, 141, 576-577.	0.2	0
110	Construction of a Gradiometer using Two Scalar-type Optically Pumped Atomic Magnetometers and Measurement of Biological Pseudo-signals. IEEJ Transactions on Electronics, Information and Systems, 2021, 141, 553-555.	0.2	0
111	Basic study to verify possibility for detection of human cardiopulmonary activity in sediment using currentâ€induced magnetic modulation spectroscopy. Electronics and Communications in Japan, 2021, 104, e12315.	0.5	0
112	Development of 100ÂkHz optical pumped atomic magnetometer module for nonâ€magnetic shield. Electronics and Communications in Japan, 2021, 104, e12319.	0.5	0
113	Injection Effects of Nanosecond Pulsed Deep-Ultraviolet Coherent Light Source for Manipulating Atomic Wave of Silicon Atom. IEEJ Transactions on Electronics, Information and Systems, 2007, 127, 1346-1347.	0.2	0
114	Development of a single-frequency deep-ultraviolet coherent light source. The Review of Laser Engineering, 2007, 35, 55-56.	0.0	0
115	Development of novel oxide multilayer mirrors at "water-window" wavelengths by atomic layer deposition / atomic layer epitaxy. Transactions of the Materials Research Society of Japan, 2009, 34, 605-608.	0.2	0
116	Design of novel titanium oxide/nickel oxide multilayer mirror for attosecond soft x rays. Transactions of the Materials Research Society of Japan, 2009, 34, 609-612.	0.2	0
117	Enhancement Effect of Fundamental Lights with External Cavity on Second Harmonic Generation. IEEJ Transactions on Electronics, Information and Systems, 2012, 132, 1273-1277.	0.2	0
118	Wavelength Tuning Characteristics of Idler Waves in Terahertz-Wave Parametric Oscillator Using Optical Double Resonance. IEEJ Transactions on Electronics, Information and Systems, 2012, 132, 1299-1300.	0.2	0
119	Novel Oxide Multilayer Mirrors at â€œWater-Windowâ€•Wavelengths Fabricated by Atomic Layer Epitaxy. IEEJ Transactions on Electronics, Information and Systems, 2013, 133, 479-483.	0.2	0
120	Time-Domain Measurements of Terahertz Waves Generated from Picosecond Optical Parametric Oscillator. The Review of Laser Engineering, 2013, 41, 125.	0.0	0
121	Microwave discharge-pumped excimer lamp.. The Review of Laser Engineering, 1990, 18, 456-473.	0.0	0
122	Analysis of Self-excited Oscillation in a Simulated Vascular Access Circuit. IEEJ Transactions on Electronics, Information and Systems, 2017, 137, 565-572.	0.2	0
123	Increase of Nuclear Magnetic Resonance Signal in Ultra-low-field by Hyperpolarization of ¹³¹Xe by Spin-exchange Optical Pumping. IEEJ Transactions on Electronics, Information and Systems, 2017, 137, 604-606.	0.2	0
124	Three Dimensional Monitoring of Thawing of Biological Tissue using Electrical Impedance Tomography. IEEJ Transactions on Electronics, Information and Systems, 2017, 137, 1062-1069.	0.2	0
125	Laser polarized Xe NMR and MRI at ultra-low magnetic fields. Proceedings of SPIE, 2017, , .	0.8	0
126	Improvement of spin-exchange optical pumping of xenon-129 using in situ NMR measurement in ultra-low magnetic field. , 2018, , .		0

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127	Observation of immunostained microtubules using three-dimensional super-resolution microscope with two-color annular wave plate. , 2018, , .		0
128	Drug contact time dominates a necessary time for myocardial cells necrosis by a photodynamic reaction. , 2019, , .		0
129	Evaluation of a combined two-color phase plate forming three-dimensional dark holes in super resolution microscopy. , 2020, , .		0
130	Enhancement of Xe-NMR signals at low magnetic field using optical pumping hyperpolarization. , 2020, , .		0
131	Salted cadaver brain measurement for light attenuation of PDT. , 2020, , .		0