

Shunichi Sato

List of Publications by Year in descending order

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155
papers

3,914
citations

126708

33
h-index

128067

60
g-index

157
all docs

157
docs citations

157
times ranked

2434
citing authors

#	ARTICLE	IF	CITATIONS
1	Synthesis of Noble Metals and Their Alloy Nanoparticles by Laser-Induced Nucleation in a Highly Intense Laser Field. KONA Powder and Particle Journal, 2022, 39, 110-118.	0.9	3
2	Wavefront engineered light needle microscopy for axially resolved rapid volumetric imaging. Biomedical Optics Express, 2022, 13, 1702.	1.5	9
3	Single-scan volumetric imaging throughout thick tissue specimens by one-touch installable light-needle creating device. Scientific Reports, 2022, 12, .	1.6	4
4	Small focal spot formation by vector beams. Progress in Optics, 2021, , 35-90.	0.4	6
5	Electron Round Lenses with Negative Spherical Aberration by a Tightly Focused Cylindrically Polarized Light Beam. Physical Review Applied, 2021, 16, .	1.5	5
6	Adaptive Optical Two-Photon Microscopy for Surface-Profiled Living Biological Specimens. ACS Omega, 2021, 6, 438-447.	1.6	12
7	Mechanical C-C Bond Formation by Laser Driven Shock Wave. ChemPhysChem, 2020, 21, 2104-2111.	1.0	4
8	Formation of C ₂ organic molecules from CO ₂ and H ₂ O by femtosecond laser induced chemical reactions in water. Japanese Journal of Applied Physics, 2020, 59, 057001.	0.8	4
9	Imaging with a longitudinal electric field in confocal laser scanning microscopy to enhance spatial resolution. Optics Express, 2020, 28, 18418.	1.7	14
10	Laser microprocessing of metal surfaces using a tightly focused radially polarized beam. Optics Letters, 2020, 45, 6234.	1.7	23
11	Development of self-resonating enhancement cavity operating in single-longitudinal-mode. , 2020, , .		0
12	Ultrafast laser ablation of 10-nm self-supporting membranes by two-beam interference processing. Optics Express, 2020, 28, 26200.	1.7	4
13	Dehydrogenation Condensation by Intense Laser Irradiation of Liquid Hexane Creating Dodecane Isomers. , 2020, , .		0
14	Laser Microfabrication of Metal Surfaces by Tightly Focused Higher-Order Vector Beams. , 2020, , .		0
15	Direct generation of the lowest-order vortex beam using a spot defect mirror in the ultraviolet region. Optics Letters, 2020, 45, 2115.	1.7	10
16	Light needle microscopy with spatially transposed detection for axially resolved volumetric imaging. Scientific Reports, 2019, 9, 11687.	1.6	9
17	Chain of optical vortices synthesized by a Gaussian beam and the double-phase-ramp converter. OSA Continuum, 2019, 2, 320.	1.8	8
18	Enhanced catalytic activity of inhomogeneous Rh-based solid-solution alloy nanoparticles. RSC Advances, 2019, 9, 38882-38890.	1.7	9

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19	Subtraction imaging by the combination of higher-order vector beams for enhanced spatial resolution. Optics Letters, 2019, 44, 883.	1.7	43
20	Optimization of Higher-Order Transverse Modes of Cylindrical Vector Beams for Enhanced Spatial Resolution in Image Subtraction. , 2019, , .		0
21	Laser Interference Processing of Electron Phase Holograms by Using a Femtosecond Laser. , 2019, , .		1
22	Creating electron phase holograms using femtosecond laser interference processing. Optics Express, 2019, 27, 20958.	1.7	4
23	Nonlinear optical properties of Rh ⁴⁺ Pd and Rh ⁴⁺ Pt solid-solution alloy nanoparticles prepared by a laser-induced nucleation method in aqueous solution. OSA Continuum, 2019, 2, 2891.	1.8	3
24	Superresolution imaging via superoscillation focusing of a radially polarized beam. Optica, 2018, 5, 86.	4.8	194
25	Micro-hole drilling by tightly focused vector beams. Optics Letters, 2018, 43, 1542.	1.7	42
26	Core-shell like Au-Ir nanoparticles with spatially variant electronic state of Au synthesized by femtosecond laser irradiation of solution. Applied Surface Science, 2018, 457, 1044-1049.	3.1	3
27	Electrochemical Water Oxidation Catalysed by Co ₂ O ₃ â€Co(OH) ₂ Multiphase Nanoparticles Prepared by Femtosecond Laser Ablation in Water. ChemistrySelect, 2018, 3, 4979-4984.	0.7	14
28	Acceleration of Micro-Hole Drilling by an Azimuthally Polarized Laser Beam under Tight Focusing Condition. , 2018, , .		0
29	Vector beam generation from vertical cavity surface emitting lasers. Optics Letters, 2018, 43, 5659.	1.7	8
30	Generation of Cylindrical Vector Beams from Vertical-Cavity Surface-Emitting Laser with Optical Feedback. , 2018, , .		0
31	Improvement of two-photon microscopic imaging in deep regions of living mouse brains by utilizing a light source based on an electrically controllable gain-switched laser diode. , 2018, , .		0
32	Spatial resolution enhancement in laser scanning microscopy using vector beams. , 2018, , .		0
33	Chemical surface modification of graphene oxide by femtosecond laser pulse irradiation in aqueous suspensions. Journal of Materials Science, 2017, 52, 749-759.	1.7	9
34	Long Depth-of-Focus Imaging by a Non-Diffracting Optical Needle under Strong Aberration. , 2017, , .		1
35	Spectroscopic monitoring on irradiation-induced formation of AuAg alloy nanoparticles by femtosecond laser. AIP Conference Proceedings, 2016, , .	0.3	7
36	780nm-range VCSEL array for laser printer system and other applications at Ricoh. , 2016, , .		1

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37	Photochemical reduction of graphene oxide (GO) by femtosecond laser irradiation. , 2016, , .		1
38	Super-Oscillation by Higher-Order Radially Polarized Laguerre-Gaussian Beams. , 2016, , .		2
39	Preface to The Special Issue on "Leading Edge of Neurophotonics": The Review of Laser Engineering, 2016, 44, 222.	0.0	0
40	All-proportional solid-solution Rh-Pd-Pt alloy nanoparticles by femtosecond laser irradiation of aqueous solution with surfactant. Journal of Nanoparticle Research, 2015, 17, 1.	0.8	14
41	Enhanced Detection of Longitudinal Field of a Radially Polarized Beam in Confocal Laser Microscopy. , 2015, , .		0
42	Unfolding of optical singularities in vector Laguerre-Gaussian beams. , 2015, , .		1
43	Synthesis of gold nanoparticle colloids by highly intense laser irradiation of aqueous solution by flow system. Applied Physics A: Materials Science and Processing, 2015, 120, 881-888.	1.1	16
44	Green and Facile Synthesis of Pd-Pt Alloy Nanoparticles by Laser Irradiation of Aqueous Solution. Journal of Nanoscience and Nanotechnology, 2015, 15, 426-432.	0.9	6
45	Numerical analysis of resolution enhancement in laser scanning microscopy using a radially polarized beam. Optics Express, 2015, 23, 2076.	1.7	39
46	In vivo two-photon imaging of mouse hippocampal neurons in dentate gyrus using a light source based on a high-peak power gain-switched laser diode. Biomedical Optics Express, 2015, 6, 891.	1.5	80
47	Transverse-mode selective laser operation by unicursal fast-scanning pumping. Optics Letters, 2015, 40, 3245.	1.7	12
48	Smaller Spot Formation by Vector Beam for Higher Resolution Microscopy. , 2015, , .		0
49	High-power and highly efficient amplification of a radially polarized beam using an Yb-doped double-clad fiber. Optics Letters, 2014, 39, 2857.	1.7	17
50	7-ps optical pulse generation from a 1064-nm gain-switched laser diode and its application for two-photon microscopy. Optics Express, 2014, 22, 5746.	1.7	45
51	Super-resolution imaging of lateral distribution for the blue-light emission of an InGaN single-quantum-well structure utilizing the stimulated emission depletion effect. Optics Express, 2014, 22, 22575.	1.7	0
52	Two-photon excitation STED microscopy by utilizing transmissive liquid crystal devices. Optics Express, 2014, 22, 28215.	1.7	17
53	Generation of a vector doughnut beam from an internal mirror He-Ne laser. Optics Letters, 2014, 39, 2080.	1.7	12
54	Generation of radially polarized Bessel-Gaussian beams from c-cut Nd:YVO ₄ laser. Optics Letters, 2014, 39, 1101.	1.7	35

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55	Improvement of lateral resolution and extension of depth of field in two-photon microscopy by a higher-order radially polarized beam. <i>Microscopy (Oxford, England)</i> , 2014, 63, 23-32.	0.7	28
56	Composition-controlled ternary Rhâ€“Pdâ€“Pt solid-solution alloy nanoparticles by laser irradiation of mixed solution of metallic ions. <i>Journal of Materials Research</i> , 2014, 29, 856-864.	1.2	21
57	Demonstration of subtraction imaging in confocal microscopy with vector beams. <i>Optics Letters</i> , 2014, 39, 4529.	1.7	42
58	Resolution enhancement of confocal microscopy by subtraction method with vector beams. <i>Optics Letters</i> , 2014, 39, 3118.	1.7	75
59	Enhanced Spatial Resolution in Confocal Laser Microscopy by Subtractive Imaging Using Vector Beams. , 2014, , .		0
60	Direct Manipulation of Transverse Mode of a Yb:YAG Laser by a Scanning Pump Beam. , 2014, , .		0
61	Polarization singularities in superposition of counter-propagating vector Laguerre-Gaussian beams. , 2014, , .		0
62	Twisted longitudinally polarized field in the focal region. <i>Applied Physics B: Lasers and Optics</i> , 2013, 110, 7-14.	1.1	5
63	Visualizing hippocampal neurons with in vivo two-photon microscopy using a 1030 nm picosecond pulse laser. <i>Scientific Reports</i> , 2013, 3, 1014.	1.6	117
64	Fabrication of Rh based solid-solution bimetallic alloy nanoparticles with fully-tunable composition through femtosecond laser irradiation in aqueous solution. <i>Applied Physics A: Materials Science and Processing</i> , 2013, 110, 145-152.	1.1	20
65	Resolving Atomic Ordering Differences in Group 11 Nanosized Metals and Binary Alloy Catalysts by Resonant High-Energy X-ray Diffraction and Computer Simulations. <i>Journal of Physical Chemistry C</i> , 2013, 117, 22131-22141.	1.5	25
66	Spectroscopic study of gold nanoparticle formation through high intensity laser irradiation of solution. <i>AIP Advances</i> , 2013, 3, .	0.6	38
67	Polarization coupling of vector Besselâ€“Gaussian beams. <i>Journal of Optics (United Kingdom)</i> , 2013, 15, 075710.	1.0	4
68	Polarization singularities in superposition of vector beams. <i>Optics Express</i> , 2013, 21, 8972.	1.7	93
69	Analysis of Small Focal Spot Formation by a Higher-Order Radially Polarized Laguerre-Gaussian Beam. , 2013, , .		0
70	Focusing of higher-order radially polarized Laguerreâ€“Gaussian beam. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2012, 29, 2439.	0.8	41
71	Observation of PDLCS by SHG laser scanning microscopy using a liquid crystal vector beam generator. , 2012, , .		2
72	Generation of a Purely Single Transverse Mode Vortex Beam from a He-Ne Laser Cavity with a Spot-Defect Mirror. <i>International Journal of Optics</i> , 2012, 2012, 1-6.	0.6	40

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73	Interferometry with Vortices. International Journal of Optics, 2012, 2012, 1-18.	0.6	30
74	Singular Optics. International Journal of Optics, 2012, 2012, 1-2.	0.6	2
75	Fabrication of solid-solution gold-platinum nanoparticles with controllable compositions by high-intensity laser irradiation of solution. Journal of Nanoparticle Research, 2012, 14, 1.	0.8	19
76	Synthesis of platinum-based binary and ternary alloy nanoparticles in an intense laser field. Journal of Colloid and Interface Science, 2012, 375, 78-87.	5.0	35
77	Generation of Robust Doughnut Mode Beam from Internal Mirror He-Ne Laser. , 2012, , .		1
78	Vector Bessel-Gaussian Beam Generation from a c-cut Nd:YVO4 Crystal with an Annular-Shaped Gain. , 2012, , .		0
79	Self-healing of tightly focused scalar and vector Bessel-Gauss beams at the focal plane. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2011, 28, 837.	0.8	74
80	Diffraction properties of obstructed vector Laguerre-Gaussian beam under tight focusing condition. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2011, 28, 1387.	0.8	27
81	Lateral resolution enhancement of laser scanning microscopy by a higher-order radially polarized mode beam. Optics Express, 2011, 19, 15947.	1.7	105
82	Transverse mode control by manipulating gain distribution in a Yb:YAG ceramic thin disk. Optics Letters, 2011, 36, 4137.	1.7	14
83	Synthesis of Near-Monodispersed Au-Ag Nanoalloys by High Intensity Laser Irradiation of Metal Ions in Hexane. Journal of Physical Chemistry C, 2011, 115, 21592-21598.	1.5	46
84	Femtosecond laser synthesis of bimetallic Pt-Au nanoparticles. Materials Letters, 2011, 65, 804-807.	1.3	19
85	Fabrication of silver nanoparticles by highly intense laser irradiation of aqueous solution. Applied Physics A: Materials Science and Processing, 2011, 104, 1021-1024.	1.1	59
86	Formation of highly dispersed AuAg nanoalloys by femtosecond laser irradiation of metal salts in normal hexane. , 2011, , .		0
87	Generation of an Azimuthally Polarized Laser Beam from an End-pumped Laser Cavity with a c-cut Nd:YVO4 Crystal. , 2011, , .		0
88	Resolution Enhancement in Confocal Scanning Microscopy by a Radially Polarized Beam with Phase Modulation. , 2011, , .		0
89	Dark Spot Trapping using a Double-Ring-Shaped Radially Polarized Beam. , 2011, , .		0
90	Transverse Mode Control by a Crossing Pair of Linearly Pumped Regions in a Yb:YAG Ceramic Thin Disk. , 2011, , .		0

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91	Enhanced Detection of a Longitudinal Electric Field for a Linearly Polarized Gaussian Beam. , 2011, , .		0
92	Transverse Mode Control by a Crossing Pair of Linearly Pumped Regions in a Yb:YAG Ceramic Thin Disk. , 2011, , .		0
93	Femtosecond Laser-Induced Formation of Gold-Rich Nanoalloys from the Aqueous Mixture of Gold-Silver Ions. Journal of Nanomaterials, 2010, 2010, 1-9.	1.5	19
94	Fabrication of ZnO thin films by femtosecond pulsed laser deposition. Optics and Laser Technology, 2010, 42, 1337-1339.	2.2	18
95	Characterization of alkaline earth metals ruthenate thin films. Journal of the European Ceramic Society, 2010, 30, 435-440.	2.8	2
96	Generation of Cylindrical Vector Beams of a Single Higher Order Transverse Mode. , 2010, , .		0
97	Optical trapping of micrometer-sized dielectric particles by cylindrical vector beams. Optics Express, 2010, 18, 10828.	1.7	236
98	Demonstration and selection of a single-transverse higher-order-mode beam with radial polarization. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2010, 27, 399.	0.8	13
99	Generation of hollow scalar and vector beams using a spot-defect mirror. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2010, 27, 2072.	0.8	126
100	The effect of the longitudinal electric field of a radially polarized laser beam for second harmonic generation. , 2010, , .		0
101	Fabrication of gold-platinum nanoparticles by intense, femtosecond laser irradiation of aqueous solution. , 2010, , .		0
102	TM01 mode operation of an Yb-doped double-clad fiber amplifier. , 2009, , .		0
103	Selective TM01 and TE01 mode operation of Nd:YAG laser based on cavity stability incorporating thermal effects. , 2009, , .		0
104	The Synthesis and Photocatalytic Properties of Nitrogen Doped TiO2 Films Prepared Using the AC-PLD Method. Topics in Catalysis, 2009, 52, 1592-1597.	1.3	15
105	Fabrication of platinum particles by intense, femtosecond laser pulse irradiation of aqueous solution. Applied Surface Science, 2009, 255, 9630-9633.	3.1	24
106	Amplification of a radially polarized laser beam using an Yb-doped double-clad fiber. Optics Letters, 2009, 34, 716.	1.7	6
107	Radially polarized annular beam generated through a second-harmonic-generation process. Optics Letters, 2009, 34, 3166.	1.7	17
108	Hollow vortex beams. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2009, 26, 142.	0.8	62

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109	Selective oscillation of radially and azimuthally polarized laser beam induced by thermal birefringence and lensing. Journal of the Optical Society of America B: Optical Physics, 2009, 26, 708.	0.9	36
110	Epitaxial growth of BaRuO ₃ thin films on MgO substrates by laser ablation. Journal of the Ceramic Society of Japan, 2009, 117, 426-430.	0.5	0
111	Spatial Resolution for Fluorescence Depletion Microscopy Using Axial Electric Field Generated by Focused Radially Polarized Beams. , 2009, , .		0
112	Fabrication of gold-platinum nanoparticles by intense, femtosecond laser irradiation of aqueous solution. , 2009, , .		1
113	Optical Trapping Efficiency Measured for Dielectric Particles by Using Cylindrical Vector Beams. , 2009, , .		0
114	Selective generation of radially polarized Nd:YAG laser beams of higher-order transverse mode. , 2009, , .		0
115	Fabrication of gold nanoparticles in intense optical field by femtosecond laser irradiation of aqueous solution. Journal of Materials Research, 2008, 23, 968-974.	1.2	71
116	Simultaneous generation of helical beams with linear and radial polarization by use of a segmented half-wave plate. Optics Letters, 2008, 33, 399.	1.7	41
117	Generation of radially polarized Ti:sapphire laser beam using a c-cut crystal. Optics Letters, 2008, 33, 1984.	1.7	18
118	Single higher-order transverse mode operation of a radially polarized Nd:YAG laser using an annularly reflectivity-modulated photonic crystal coupler. Optics Letters, 2008, 33, 2278.	1.7	15
119	Dark-spot formation by vector beams. Optics Letters, 2008, 33, 2326.	1.7	27
120	Focusing of radially and azimuthally polarized beams through a uniaxial crystal. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2008, 25, 469.	0.8	17
121	Observation of the longitudinal field of a focused laser beam by second-harmonic generation. Journal of the Optical Society of America B: Optical Physics, 2008, 25, 175.	0.9	30
122	Observation of Light-Induced Drift Effect of Rubidium by Using Two Diode Lasers for Pumping and Re-Pumping. Materials Transactions, 2008, 49, 2632-2635.	0.4	4
123	Fabrication of noble metal nanoparticles in intense optical field by femtosecond laser irradiation of aqueous solution. , 2008, , .		0
124	Transverse mode conversion by second harmonic generation using axially symmetric, polarized laser beams. , 2008, , .		1
125	Generation of Ti: sapphire laser beam with radial polarization. , 2008, , .		0
126	Axially symmetric, polarized laser. The Review of Laser Engineering, 2008, 36, 41-42.	0.0	0

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127	Second harmonic generation using axially symmetric, polarized beams with spatial variation of ellipticity. , 2008, , .		0
128	Generation of beams with spiral phase shift using a divided half waveplate in a laser cavity. , 2008, , .		0
129	Compact Laser with Radial Polarization Using Birefringent Laser Medium. Japanese Journal of Applied Physics, 2007, 46, 5160.	0.8	44
130	Synthesis of monodispersed DLC nanoparticles in intense optical field by femtosecond laser ablation of liquid benzene. , 2007, , .		0
131	Synthesis of monodispersed DLC nanoparticles in intense optical field by femtosecond laser ablation of liquid benzene. , 2007, , .		2
132	<title>Generation of a radially polarized Nd:YVO4 laser beam</title>. Proceedings of SPIE, 2007, , .	0.8	0
133	<title>Thin film synthesis of wurtzite boron nitride by femtosecond pulsed laser deposition</title>. Proceedings of SPIE, 2007, , .	0.8	0
134	Calculation of optical trapping forces on a dielectric sphere in the ray optics regime produced by a radially polarized laser beam. Optics Letters, 2007, 32, 1839.	1.7	162
135	Sharper focal spot formed by higher-order radially polarized laser beams. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2007, 24, 1793.	0.8	200
136	Generation of Cylindrical Vector Beams from a Nd:YAG Laser Cavity including a c-cut YVO4 Crystal. , 2007, , .		1
137	Focusing property of a double-ring-shaped radially polarized beam. Optics Letters, 2006, 31, 820.	1.7	169
138	Generation of a radially polarized laser beam by use of the birefringence of a c-cut Nd:YVO4 crystal. Optics Letters, 2006, 31, 2151.	1.7	187
139	Generation of a cylindrically symmetric, polarized laser beam with narrow linewidth and fine tunability. Optics Express, 2006, 14, 12839.	1.7	36
140	X ç-šèj"éÇâ>žæŠ~æ³•ã«ã,ã,«éf"ã"†ç;«âCE-âfã,žãf³é...âCE-ç%©è-,è†œã®è©•ã³/4j. Shinku/Journal of the Vacuum Society of Japan, 2006, 31, 1037.		
141	Velocity Control of Cesium Atomic Beam Using Two Frequency-Modulated External-Cavity Diode Lasers. Japanese Journal of Applied Physics, 2006, 45, 8910-8914.	0.8	0
142	Semiconductor laser based, injection locking maintaining broad linewidth generated by a direct current modulation of a master laser. Review of Scientific Instruments, 2006, 77, 096107.	0.6	2
143	Two Step Deceleration of Cesium Atomic Beam by Frequency Modulated Diode Lasers. Optical Review, 2005, 12, 456-459.	1.2	1
144	Generation of a radially polarized laser beam by use of a conical Brewster prism. Optics Letters, 2005, 30, 3063.	1.7	346

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145	<title>Wide spectral width of frequency-shifted-feedback semiconductor laser</title>. , 2004, , .		0
146	Thin Film Deposition of Boron Nitride by Femtosecond Laser Pulses with Different Wavelengths. Japanese Journal of Applied Physics, 2002, 41, 7506-7507.	0.8	1
147	Velocity Distribution Control of Cesium Atoms by Frequency Modulated Diode Laser. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2001, 65, 534-538.	0.2	0
148	Evidence of the Light-Induced Drift Effect in Lithium Vapor. Materials Transactions, JIM, 2000, 41, 1108-1110.	0.9	1
149	Single-Mode Operation of Broad-Area Diode Laser at 670 nm by External Cavity Configuration with a Diffraction Grating. Optical Review, 2000, 7, 573-575.	1.2	0
150	<title>Thin film synthesis with ultrafast lasers</title>. , 1998, , .		2
151	Comparison of Carbon, Aluminum, Silicon and Copper Films Deposited by High Peak Intensity Laser Ablation. Japanese Journal of Applied Physics, 1997, 36, L1328-L1330.	0.8	1
152	Enhanced Isotope Separation of Rubidium by Light-Induced Drift Using Backpumping. Materials Transactions, JIM, 1996, 37, 1789-1792.	0.9	5
153	Second-harmonic and sum-frequency generation from optically trapped KTiOPO ₄ microscopic particles by use of Nd:YAG and Ti:Al ₂ O ₃ lasers. Optics Letters, 1994, 19, 927.	1.7	23
154	Optical trapping of microscopic metal particles. Optics Letters, 1994, 19, 1807.	1.7	152
155	Cylindrical Vector Laser Beam Generated by the Use of a Photonic Crystal Mirror. Applied Physics Express, 0, 1, 022008.	1.1	44