James A Piper

List of Publications by Year
in descending order

153 papers	6,870 citations	87888 38 h-index	60623 81 g-index
154 all docs	154 docs citations	154 times ranked	5556 citing authors

#	Article	IF	Citations
1	Quantifying the Influence of Inert Shell Coating on Luminescence Brightness of Lanthanide Upconversion Nanoparticles. ACS Photonics, 2022, 9, 758-764.	6.6	13
2	Lifetime Multiplexing with Lanthanide Complexes for Luminescence <i>In Situ</i> Hybridisation. Analysis & Sensing, 2022, 2, .	2.0	2
3	Homogenization of Optical Field in Nanocrystal-Embedded Perovskite Composites. ACS Energy Letters, 2022, 7, 1657-1671.	17.4	4
4	Assessing the activity of antibodies conjugated to upconversion nanoparticles for immunolabeling. Analytica Chimica Acta, 2022, 1209, 339863.	5.4	4
5	Microdroplet enabled cultivation of single yeast cells correlates with bulk growth and reveals subpopulation phenomena. Biotechnology and Bioengineering, 2021, 118, 647-658.	3.3	16
6	Rapid, Simple, and Inexpensive Spatial Patterning of Wettability in Microfluidic Devices for Double Emulsion Generation. Analytical Chemistry, 2021, 93, 10955-10965.	6.5	18
7	Time-resolved microfluidic flow cytometer for decoding luminescence lifetimes in the microsecond region. Lab on A Chip, 2020, 20, 655-664.	6.0	5
8	Controlling the non-linear emission of upconversion nanoparticles to enhance super-resolution imaging performance. Nanoscale, 2020, 12, 20347-20355.	5.6	23
9	Light-Emitting Diode Excitation for Upconversion Microscopy: A Quantitative Assessment. Nano Letters, 2020, 20, 8487-8492.	9.1	11
10	Simultaneous super-linear excitation-emission and emission depletion allows imaging of upconversion nanoparticles with higher sub-diffraction resolution. Optics Express, 2020, 28, 24308.	3.4	13
11	Revisiting the Effect of Inert Shell on Luminescence Enhancement of Upconversion Nanoparticles. , 2020, , .		0
12	3D sub-diffraction imaging in a conventional confocal configuration by exploiting super-linear emitters. Nature Communications, 2019, 10, 3695.	12.8	51
13	Time-Gated Luminescent In Situ Hybridization (LISH): Highly Sensitive Detection of Pathogenic Staphylococcus aureus. Molecules, 2019, 24, 2083.	3.8	4
14	Lifetime-engineered NIR-II nanoparticles unlock multiplexed in vivo imaging. Nature Nanotechnology, 2018, 13, 941-946.	31.5	584
15	Amplified stimulated emission in upconversion nanoparticles for super-resolution nanoscopy. Nature, 2017, 543, 229-233.	27.8	643
16	Sensitive Time-Gated Immunoluminescence Detection of Prostate Cancer Cells Using a TEGylated Europium Ligand. Analytical Chemistry, 2016, 88, 9564-9571.	6.5	27
17	Stable Upconversion Nanohybrid Particles for Specific Prostate Cancer Cell Immunodetection. Scientific Reports, 2016, 6, 37533.	3.3	25
18	High-Precision Pinpointing of Luminescent Targets in Encoder-Assisted Scanning Microscopy Allowing High-Speed Quantitative Analysis. Analytical Chemistry, 2016, 88, 1312-1319.	6.5	3

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19	Three-dimensional controlled growth of monodisperse sub-50â€‰nm heterogeneous nanocrystals. Nature Communications, 2016, 7, 10254.	12.8	267
20	One-Step Protein Conjugation to Upconversion Nanoparticles. Analytical Chemistry, 2015, 87, 10406-10413.	6.5	54
21	Diamond Raman laser with continuously tunable output from 338 to 380Âμm. Optics Letters, 2014, 39, 4037.	3.3	63
22	Investigation of blue emission from Raman-active crystals: Its origin and impact on laser performance. Optical Materials Express, 2014, 4, 889.	3.0	12
23	On-the-fly decoding luminescence lifetimes in the microsecond region for lanthanide-encoded suspension arrays. Nature Communications, 2014, 5, 3741.	12.8	135
24	Mid-infrared diamond Raman laser with tuneable output. Proceedings of SPIE, 2014, , .	0.8	3
25	Tunable lifetime multiplexing using luminescent nanocrystals. Nature Photonics, 2014, 8, 32-36.	31.4	652
26	Practical Implementation, Characterization and Applications of a Multi-Colour Time-Gated Luminescence Microscope. Scientific Reports, 2014, 4, 6597.	3.3	51
27	Single-nanocrystal sensitivity achieved by enhanced upconversion luminescence. Nature Nanotechnology, 2013, 8, 729-734.	31.5	569
28	Upconversion luminescence with tunable lifetime in NaYF₄:Yb,Er nanocrystals: role of nanocrystal size. Nanoscale, 2013, 5, 944-952.	5.6	327
29	Orthogonal Scanning Automated Microscopy Speeds Up Time-Gated Luminescence Detection. , 2013, , .		0
30	Characterisation of Upconversion Nanoparticles for Imaging. , 2013, , .		0
31	Managing SRS competition in a miniature visible Nd:YVO_4/BaWO_4 Raman laser. Optics Express, 2012, 20, 19305.	3.4	11
32	Time-Gated Orthogonal Scanning Automated Microscopy (OSAM) for High-speed Cell Detection and Analysis. Scientific Reports, 2012, 2, 837.	3.3	25
33	Lanthanide upconversion within microstructured optical fibers: improved detection limits for sensing and the demonstration of a new tool for nanocrystal characterization. Nanoscale, 2012, 4, 7448.	5.6	18
34	Resolving Low-Expression Cell Surface Antigens by Time-Gated Orthogonal Scanning Automated Microscopy. Analytical Chemistry, 2012, 84, 9674-9678.	6.5	16
35	Developing Red-Emissive Ruthenium(II) Complex-Based Luminescent Probes for Cellular Imaging. Bioconjugate Chemistry, 2012, 23, 725-733.	3.6	64
36	Achieving Î»/10 Resolution CW STED Nanoscopy with a Ti:Sapphire Oscillator. PLoS ONE, 2012, 7, e40003.	2.5	37

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37	Efficient 1064 nm conversion to the eye-safe region using an external cavity diamond Raman laser. , 2011, , .		1
38	Mechanisms of size-dependent lifetime quenching in luminescent upconverting colloidal NaYF<inf>4</inf>:Yb, Er nanocrystals. , 2011, , .		0
39	Advances in lanthanide bioprobes and high-throughput background-free biophotonics sensing. , 2011, , .		0
40	Time-Gated Luminescence Microscopy Allowing Direct Visual Inspection of Lanthanide-Stained Microorganisms in Background-Free Condition. Analytical Chemistry, 2011, 83, 2294-2300.	6.5	120
41	Efficient conversion of a 1064 Î¼m Nd:YAG laser to the eye-safe region using a diamond Raman laser. Optics Express, 2011, 19, 23554.	3.4	58
42	Miniature wavelength-selectable Raman laser: new insights for optimizing performance. Optics Express, 2011, 19, 25623.	3.4	29
43	A continuous wave SrMoO_4 Raman laser. Optics Letters, 2011, 36, 579.	3.3	45
44	Efficient, miniature, cw yellow source based on an intracavity frequency-doubled Nd:YVO_4 self-Raman laser. Optics Letters, 2011, 36, 1428.	3.3	25
45	In reference to targeted imaging modality selection for bacterial biofilms in chronic rhinosinusitis and different biofilms, different disease? a clinical outcomes study. Laryngoscope, 2011, 121, 2043-2044.	2.0	0
46	Automated detection of rareâ€event pathogens through timeâ€gated luminescence scanning microscopy. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2011, 79A, 349-355.	1.5	22
47	Detection of <i>Staphylococcus aureus</i> with a fluorescence in situ hybridization that does not require lysostaphin. Journal of Clinical Laboratory Analysis, 2011, 25, 142-147.	2.1	22
48	Optimization of a twoâ€step permeabilization fluorescence in situ hybridization (FISH) assay for the detection of <i>Staphylococcus aureus</i>. Journal of Clinical Laboratory Analysis, 2011, 25, 359-365.	2.1	5
49	Cytometric investigation of rare-events featuring time-gated detection and high-speed stage scanning. , 2011, , .		0
50	In Silico Evaluation and Testing of Fluorescence In Situ Hybridization 16S rRNA Probes for<i>Staphylococcus aureus</i>. Laboratory Medicine, 2011, 42, 729-734.	1.2	3
51	The Simultaneous Detection and Differentiation of <i>Staphylococcus</i> Species in Blood Cultures Using Fluorescence in situ Hybridization: A Comment. Medical Principles and Practice, 2011, 20, 390-391.	2.4	0
52	330 mW CW yellow emission from miniature self-Raman laser based on direct HR-coated Nd:YVO<inf>4</inf> crystal. , 2011, , .		0
53	CW Crystalline Raman Lasers: Multi-Watt and Multi-Wavelength Operation in the Visible. , 2010, , .		0
54	Time-gated real-time bioimaging system using multicolor microsecond-lifetime silica nanoparticles. , 2010, , .		2

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55	An intracavity, frequency-doubled BaWO_4 Raman laser generating multi-watt continuous-wave, yellow emission. Optics Express, 2010, 18, 5984.	3.4	67
56	A wavelength-versatile, continuous-wave, self-Raman solid-state laser operating in the visible. Optics Express, 2010, 18, 20013.	3.4	89
57	Efficient 53 W cw laser at 559 nm by intracavity frequency summation of fundamental and first-Stokes wavelengths in a self-Raman Nd:GdVO_4 laser. Optics Letters, 2010, 35, 682.	3.3	63
58	1240 nm diamond Raman laser operating near the quantum limit. Optics Letters, 2010, 35, 3874.	3.3	112
59	Development of a Visible-Light-Sensitized Europium Complex for Time-Resolved Fluorometric Application. Analytical Chemistry, 2010, 82, 2529-2535.	6.5	40
60	Time-gated flow cytometry: an ultra-high selectivity method to recover ultra-rare-event Î¼-targets in high-background biosamples. Journal of Biomedical Optics, 2009, 14, 024023.	2.6	33
61	A continuous-wave, yellow, intracavity doubled, self-Raman laser with 2.25-W output power. , 2009, , .		0
62	Calibration beads containing luminescent lanthanide ion complexes. Journal of Biomedical Optics, 2009, 14, 024022.	2.6	16
63	Preparation and time-gated luminescence bioimaging application of ruthenium complex covalently bound silica nanoparticles. Talanta, 2009, 79, 103-108.	5.5	29
64	Luminescent Microspheres Resolved from Strong Background on an Automated Time-Gated Luminescence Microscopy Workstation. , 2009, , .		1
65	Visible-light-sensitized highly luminescent europium nanoparticles: preparation and application for time-gated luminescence bioimaging. Journal of Materials Chemistry, 2009, 19, 1258.	6.7	87
66	<i>Timeâ€Gated Luminescence Microscopy</i>. Annals of the New York Academy of Sciences, 2008, 1130, 106-116.	3.8	61
67	Directly written monolithic waveguide laser incorporating a distributed feedback waveguide-Bragg grating. Optics Letters, 2008, 33, 956.	3.3	101
68	Luminescent europium nanoparticles with a wide excitation range from UV to visible light for biolabeling and time-gated luminescence bioimaging. Chemical Communications, 2008, , 365-367.	4.1	61
69	Solid-state time-gated luminescence microscope with ultraviolet light-emitting diode excitation and electron-multiplying charge-coupled device detection. Journal of Biomedical Optics, 2008, 13, 034022.	2.6	14
70	UV LED excited time-gated luminescence flow cytometry: evaluation for rare-event particle counting. Proceedings of SPIE, 2008, , .	0.8	1
71	Calibration beads containing luminescent lanthanide ion complexes. Proceedings of SPIE, 2008, , .	0.8	1
72	Efficient continuous-wave yellow output from a self-Raman composite Nd:YVO4/ YVO4 laser. , 2008, , .		0

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73	Compact continuous-wave yellow laser based on a self-stimulating Raman Nd:YVO4 laser. , 2007, , WB19.		1
74	Direct writing of planar lightwave devices using ultrafast lasers. , 2007, , .		0
75	Solid-state Raman laser generating discretely tunable ultraviolet between 266 and 320 nm. Optics Letters, 2007, 32, 814.	3.3	20
76	All-solid-state 704 mW continuous-wave yellow source based on an intracavity, frequency-doubled crystalline Raman laser. Optics Letters, 2007, 32, 1114.	3.3	57
77	Continuous-wave, intracavity doubled, self-Raman laser operation in Nd:GdVO_4 at 586.5 nm. Optics Express, 2007, 15, 7038.	3.4	126
78	Practical timeâ€gated luminescence flow cytometry. II: Experimental evaluation using UV LED excitation. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2007, 71A, 797-808.	1.5	33
79	Practical timeâ€gated luminescence flow cytometry. I: Concepts. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2007, 71A, 783-796.	1.5	25
80	Crystalline Raman Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2007, 13, 692-704.	2.9	231
81	Design and Operation of All-Solid-State, 320 mW Continuous-Wave Yellow Laser. , 2007, , .		0
82	A novel luminescence analyser for europium chelates using solid-state excitation and a gated photomultiplier. , 2006, 6371, 129.		0
83	Stable, red laser pumped, multi-kilohertz Alexandrite laser. Optics Communications, 2006, 260, 207-210.	2.1	4
84	High intensity solid-state UV source for time-gated luminescence microscopy. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2006, 69A, 1020-1027.	1.5	43
85	Compact, high-repetition-rate 336nm source based on a frequency quadrupled, diode-pumped Nd:YVO4 laser. , 2006, , TuB23.		0
86	Solid-state Raman lasers. , 2006, , .		0
87	Ultrasensitive time-resolved nanoliter volume fluorometry based on UV LEDs and a channel photomultiplier tube. , 2005, 5699, 237.		4
88	Self-Frequency-Doubling Ytterbium Lasers. Optical Review, 2005, 12, 101-104.	2.0	19
89	BHHST: An improved lanthanide chelate for time-resolved fluorescence applications. , 2005, 5704, 93.		2
90	227-W Q-switched self-doubling Yb:YAB laser with controllable pulse length. Journal of the Optical Society of America B: Optical Physics, 2005, 22, 378.	2.1	32

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91	Heat generation in Nd doped vanadate crystals with 1.34 Î¼m laser action. Optics Express, 2005, 13, 4909.	3.4	32
92	Compact, all solid-state, high-repetition-rate 336nm source based on a frequency quadrupled, Q-switched, diode-pumped Nd:YVO4 laser. Optics Express, 2005, 13, 9465.	3.4	15
93	Discretely tunable, all-solid-state laser in the green, yellow, and red. Optics Letters, 2005, 30, 1500.	3.3	61
94	Intracavity second and third harmonic generation at 671 and 447nm from a Q-switched Nd:GdV04 laser. , 2005, , .		1
95	High Efficiency, High Power, Self-Frequency Doubled Q-switched Operation in Yb:YAB. , 2005, , .		0
96	Flash lamp-excited time-resolved fluorescence microscope suppresses autofluorescence in water concentrates to deliver an 11-fold increase in signal-to-noise ratio. Journal of Biomedical Optics, 2004, 9, 725.	2.6	43
97	Time-resolved fluorescence microscopy using an improved europium chelate BHHST for the in situ detection ofCryptosporidium andGiardia. Microscopy Research and Technique, 2004, 64, 312-322.	2.2	36
98	Efficient 1181 nm self-stimulating Raman output from transversely diode-pumped Nd3+:KGd(WO4)2 laser. Optics Communications, 2004, 232, 327-331.	2.1	35
99	Efficient frequency extension of a diode-side-pumped Nd:YAG laser by intracavity SRS in crystalline materials. Optics Communications, 2004, 242, 575-579.	2.1	10
100	High repetition rate, q-switched and intracavity frequency doubled Nd:YVO4 laser at 671nm. Optics Express, 2004, 12, 3543.	3.4	10
101	Method for determination of the volume of material ejected as molten droplets during visible nanosecond ablation. Applied Optics, 2004, 43, 6473.	2.1	19
102	Polarized operation of Yb:YAl 3 (BO 3) 4 CW and mode-locked lasers. , 2004, , .		0
103	Fabrication of photonic devices using novel laser-assisted methods. , 2004, , .		0
104	All-solid-state, multi-kilohertz, 1.5Âµm intracavity Raman laser based on Nd:YVO4 and KGd(WO4)2. , 2004, , .		1
105	All-solid-state, multi-kilohertz, 1.5 Âµm intracavity Raman laser based on Nd: YVO4 and KGd(WO4)2. , 2004, , .		0
106	Compact and efficient kinetically enhanced copper-vapor lasers of high (100-W) average power. Optics Letters, 2003, 28, 1936.	3.3	12
107	Widely tunable yellow-green lasers based on the self-frequency-doubling material Yb:YAB. Journal of the Optical Society of America B: Optical Physics, 2003, 20, 706.	2.1	49
108	Efficient diode double-end-pumped Nd:YVO4 laser operating at 1342nm. Optics Express, 2003, 11, 2411.	3.4	104

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109	Energy-transfer studies and efficient cw laser operation of a cw Er,Yb:YCOB laser at 1.55 Î¼m. , 2003, , .		4
110	Beam propagation analysis in unstable laser resonators (ULR): low to high magnification. , 2003, , .		0
111	Time-resolvable fluorescent conjugates for the detection of pathogens in environmental samples containing autofluorescent material. , 2003, 4967, 146.		2
112	Novel flashlamp-based time-resolved fluorescence microscope reduces autofluorescence for 30-fold contrast enhancement in environmental samples. , 2003, 4964, 14.		3
113	Compact diode-pumped 598-nm laser source. , 2002, 4630, 57.		2
114	Laser assisted jacket removal and writing of fiber Bragg gratings using a single laser source. Optics Express, 2002, 10, 818.	3.4	6
115	Coupled-cavity, single-frequency, tunable cw Yb:YAB yellow microchip laser. Optics Communications, 2002, 207, 315-320.	2.1	65
116	High resolution detection of fluorescently labeled microorganisms in environmental samples using time-resolved fluorescence microscopy. FEMS Microbiology Ecology, 2002, 41, 239-245.	2.7	37
117	Spectral and luminescent properties of Yb3+ ions in YCa4O(BO3)3 crystal. Chemical Physics Letters, 2002, 361, 499-503.	2.6	35
118	Coupled-Cavity, Single-Frequency Yb:YAB Yellow Laser. , 2002, , .		0
119	Widely tunable green lasers based on the self-frequency doubling material Yb:YAB. , 2002, , .		1
120	Characterizing output beams for lasers that use high-magnification unstable resonators. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2001, 18, 1634.	1.5	5
121	Plasma kinetics issues for repetition rate scaling of kinetically enhanced copper vapor lasers. , 2001, , .		5
122	1.1 W CW self-frequency-doubled diode-pumped Yb:YAl3(BO3)4 laser. Optics Communications, 2001, 195, 431-436.	2.1	146
123	Yb:YAl3(B03)4: an efficient green self-frequency-doubled laser source. , 2001, , WA3.		2
124	Time-resolved H atom density measurements in a Cu HyBrID laser. , 2001, , .		0
125	Highly efficient diode-pumped ytterbium-doped yttrium aluminum borate laser. Optics Communications, 2000, 174, 467-470.	2.1	68
126	Efficient continuous-wave self-frequency-doubling green diode-pumped Yb:YAl_3(BO_3)_4 lasers. Optics Letters, 2000, 25, 731.	3.3	55

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127	A simple, thermally-stabilised, diode end-pumped, planar Nd:YAG laser. Optics Communications, 1999, 162, 247-250.	2.1	5
128	Growth and evaluation of ytterbium-doped yttrium aluminum borate as a potential self-doubling laser crystal. Journal of the Optical Society of America B: Optical Physics, 1999, 16, 63.	2.1	149
129	Sutureless Microvascular Anastomoses by a Biodegradable Laser-Activated Solid Protein Solder. Plastic and Reconstructive Surgery, 1999, 104, 1726-1731.	1.4	30
130	Continuous wave and Q-switched diode-pumped neodymium, lutetium: yttrium aluminium borate lasers. Optics Communications, 1998, 151, 406-412.	2.1	25
131	Kinetically enhanced copper vapour lasers employing H2â€“HClâ€“Ne buffer gas mixtures. Optics Communications, 1998, 154, 160-166.	2.1	33
132	Influence of the pre-pulse plasma electron density on the performance of elemental copper vapour lasers. Optics Communications, 1998, 157, 99-104.	2.1	17
133	Pulse-stacking technique for enhanced performance of a solid-state laser pumped by a high-pulse-rate source. Applied Optics, 1998, 37, 536.	2.1	6
134	Repetition-rate scaling of a kinetically enhanced copper-vapor laser. Optics Letters, 1998, 23, 1538.	3.3	19
135	<title>Laser solder repair technique for nerve anastomosis: temperatures required for optimal tensile strength</title>. , 1998, , .		2
136	Performance enhancement of elemental copper vapor lasers by bromine and hydrogenated bromine additives. , 1997, 3092, 68.		1
137	Ground-state depletion mechanisms in pulsed barium vapor lasers. Journal of Applied Physics, 1997, 82, 2039-2048.	2.5	9
138	Limiting factors in PRF scaling of barium vapour lasers. Optics Communications, 1997, 137, 299-302.	2.1	7
139	Thermally induced strain and birefringence calculations for a Nd:YAG rod encapsulated in a solid pump light collector. Applied Optics, 1996, 35, 1409.	2.1	9
140	Encapsulated rod for efficient thermal management in diode-side-pumped Nd:YAG lasers. Applied Optics, 1996, 35, 2562.	2.1	6
141	High-speed micromachining with UV-copper vapor lasers. , 1996, , .		1
142	Investigation of the evolution of trace impurities from a newly constructed copper vapour laser. Journal Physics D: Applied Physics, 1996, 29, 315-321.	2.8	12
143	The effect of hydrogen additive on population densities in the afterglow of barium vapour lasers. Optics Communications, 1995, 120, 112-120.	2.1	13
144	Thermal modeling of solid nonfocusing pump-light collectors used for diode-pumped Nd:YAG lasers. Applied Optics, 1995, 34, 2012.	2.1	4

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145	Investigation of the effects of hydrogen and deuterium on copper vapour laser performance. Optics Communications, 1994, 110, 699-707.	2.1	38
146	Theoretical modeling of a diode-pumped Nd:YAG laser with a solid nonfocusing pump light collector. Applied Optics, 1994, 33, 2273.	2.1	15
147	Pulsed lasers in particle detection and sizing. Applied Optics, 1993, 32, 416.	2.1	22
148	Measurements of the divergence evolution of a copper-vapor laser output by using a cylindrical imaging technique. Applied Optics, 1993, 32, 2058.	2.1	19
149	High-Power Violet Sr ⁺ Recombination Lasers. Proceedings of SPIE, 1989, , .	0.8	1
150	Wavelength Extension Of Copper Vapour Lasers. Proceedings of SPIE, 1989, , .	0.8	3
151	Development Of Efficient High-Power Violet Sr ⁺ And Ultraviolet Ca ⁺ Recombination Lasers. Proceedings of SPIE, 1988, 0894, 121.	0.8	3
152	Narrow linewidth, high prf copper laser-pumped dye-laser oscillators. Applied Optics, 1984, 23, 1391.	2.1	102
153	Lifetime Multiplexing with Lanthanide Complexes for Luminescence In Situ Hybridisation. Analysis & Sensing, 0, , .	2.0	0