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	Tunable lifetime multiplexing using luminescent nanocrystals. Nature Photonics, 2014, 8, 32-36.	31.4	652
2	Amplified stimulated emission in upconversion nanoparticles for super-resolution nanoscopy. Nature, 2017, 543, 229-233.	27.8	643
3	Lifetime-engineered NIR-II nanoparticles unlock multiplexed in vivo imaging. Nature Nanotechnology, 2018, 13, 941-946.	31.5	584
4	Single-nanocrystal sensitivity achieved by enhanced upconversion luminescence. Nature Nanotechnology, 2013, 8, 729-734.	31.5	569
5	Upconversion luminescence with tunable lifetime in NaYF₄:Yb,Er nanocrystals: role of nanocrystal size. Nanoscale, 2013, 5, 944-952.	5.6	327
6	Three-dimensional controlled growth of monodisperse sub-50â€‰nm heterogeneous nanocrystals. Nature Communications, 2016, 7, 10254.	12.8	267
7	Crystalline Raman Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2007, 13, 692-704.	2.9	231
8	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
9	1.1 W CW self-frequency-doubled diode-pumped Yb:YAl3(BO3)4 laser. Optics Communications, 2001, 195, 431-436.	2.1	146
10	On-the-fly decoding luminescence lifetimes in the microsecond region for lanthanide-encoded suspension arrays. Nature Communications, 2014, 5, 3741.	12.8	135
11	Continuous-wave, intracavity doubled, self-Raman laser operation in Nd:GdVO_4 at 586.5 nm. Optics Express, 2007, 15, 7038.	3.4	126
12	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
13	1240 nm diamond Raman laser operating near the quantum limit. Optics Letters, 2010, 35, 3874.	3.3	112
14	Efficient diode double-end-pumped Nd:YVO4 laser operating at 1342nm. Optics Express, 2003, 11, 2411.	3.4	104
15	Narrow linewidth, high prf copper laser-pumped dye-laser oscillators. Applied Optics, 1984, 23, 1391.	2.1	102
16	Directly written monolithic waveguide laser incorporating a distributed feedback waveguide-Bragg grating. Optics Letters, 2008, 33, 956.	3.3	101
17	A wavelength-versatile, continuous-wave, self-Raman solid-state laser operating in the visible. Optics Express, 2010, 18, 20013.	3.4	89
18	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

#	Article	IF	Citations
19	Highly efficient diode-pumped ytterbium-doped yttrium aluminum borate laser. Optics Communications, 2000, 174, 467-470.	2.1	68
20	An intracavity, frequency-doubled BaWO_4 Raman laser generating multi-watt continuous-wave, yellow emission. Optics Express, 2010, 18, 5984.	3.4	67
21	Coupled-cavity, single-frequency, tunable cw Yb:YAB yellow microchip laser. Optics Communications, 2002, 207, 315-320.	2.1	65
22	Developing Red-Emissive Ruthenium(II) Complex-Based Luminescent Probes for Cellular Imaging. Bioconjugate Chemistry, 2012, 23, 725-733.	3.6	64
23	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
24	Diamond Raman laser with continuously tunable output from 338 to 380ÂÎ¼m. Optics Letters, 2014, 39, 4037.	3.3	63
25	Discretely tunable, all-solid-state laser in the green, yellow, and red. Optics Letters, 2005, 30, 1500.	3.3	61
26	<i>Timeâ€Gated Luminescence Microscopy</i>. Annals of the New York Academy of Sciences, 2008, 1130, 106-116.	3.8	61
27	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
28	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
29	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
30	Efficient continuous-wave self-frequency-doubling green diode-pumped Yb:YAl_3(BO_3)_4 lasers. Optics Letters, 2000, 25, 731.	3.3	55
31	One-Step Protein Conjugation to Upconversion Nanoparticles. Analytical Chemistry, 2015, 87, 10406-10413.	6.5	54
32	Practical Implementation, Characterization and Applications of a Multi-Colour Time-Gated Luminescence Microscope. Scientific Reports, 2014, 4, 6597.	3.3	51
33	3D sub-diffraction imaging in a conventional confocal configuration by exploiting super-linear emitters. Nature Communications, 2019, 10, 3695.	12.8	51
34	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
35	A continuous wave SrMoO_4 Raman laser. Optics Letters, 2011, 36, 579.	3.3	45
36	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

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37	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
38	Development of a Visible-Light-Sensitized Europium Complex for Time-Resolved Fluorometric Application. Analytical Chemistry, 2010, 82, 2529-2535.	6.5	40
39	Investigation of the effects of hydrogen and deuterium on copper vapour laser performance. Optics Communications, 1994, 110, 699-707.	2.1	38
40	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
41	Achieving Î»/10 Resolution CW STED Nanoscopy with a Ti:Sapphire Oscillator. PLoS ONE, 2012, 7, e40003.	2.5	37
42	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
43	Spectral and luminescent properties of Yb3+ ions in YCa4O(BO3)3 crystal. Chemical Physics Letters, 2002, 361, 499-503.	2.6	35
44	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
45	Kinetically enhanced copper vapour lasers employing H2â€“HClâ€“Ne buffer gas mixtures. Optics Communications, 1998, 154, 160-166.	2.1	33
46	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
47	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
48	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
49	Heat generation in Nd doped vanadate crystals with 1.34 Î¼m laser action. Optics Express, 2005, 13, 4909.	3.4	32
50	Sutureless Microvascular Anastomoses by a Biodegradable Laser-Activated Solid Protein Solder. Plastic and Reconstructive Surgery, 1999, 104, 1726-1731.	1.4	30
51	Preparation and time-gated luminescence bioimaging application of ruthenium complex covalently bound silica nanoparticles. Talanta, 2009, 79, 103-108.	5.5	29
52	Miniature wavelength-selectable Raman laser: new insights for optimizing performance. Optics Express, 2011, 19, 25623.	3.4	29
53	Sensitive Time-Gated Immunoluminescence Detection of Prostate Cancer Cells Using a TEGylated Europium Ligand. Analytical Chemistry, 2016, 88, 9564-9571.	6.5	27
54	Continuous wave and Q-switched diode-pumped neodymium, lutetium: yttrium aluminium borate lasers. Optics Communications, 1998, 151, 406-412.	2.1	25

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55	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
56	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
57	Time-Gated Orthogonal Scanning Automated Microscopy (OSAM) for High-speed Cell Detection and Analysis. Scientific Reports, 2012, 2, 837.	3.3	25
58	Stable Upconversion Nanohybrid Particles for Specific Prostate Cancer Cell Immunodetection. Scientific Reports, 2016, 6, 37533.	3.3	25
59	Controlling the non-linear emission of upconversion nanoparticles to enhance super-resolution imaging performance. Nanoscale, 2020, 12, 20347-20355.	5.6	23
60	Pulsed lasers in particle detection and sizing. Applied Optics, 1993, 32, 416.	2.1	22
61	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
62	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
63	Solid-state Raman laser generating discretely tunable ultraviolet between 266 and 320 nm. Optics Letters, 2007, 32, 814.	3.3	20
64	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
65	Repetition-rate scaling of a kinetically enhanced copper-vapor laser. Optics Letters, 1998, 23, 1538.	3.3	19
66	Method for determination of the volume of material ejected as molten droplets during visible nanosecond ablation. Applied Optics, 2004, 43, 6473.	2.1	19
67	Self-Frequency-Doubling Ytterbium Lasers. Optical Review, 2005, 12, 101-104.	2.0	19
68	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
69	Rapid, Simple, and Inexpensive Spatial Patterning of Wettability in Microfluidic Devices for Double Emulsion Generation. Analytical Chemistry, 2021, 93, 10955-10965.	6.5	18
70	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
71	Calibration beads containing luminescent lanthanide ion complexes. Journal of Biomedical Optics, 2009, 14, 024022.	2.6	16
72	Resolving Low-Expression Cell Surface Antigens by Time-Gated Orthogonal Scanning Automated Microscopy. Analytical Chemistry, 2012, 84, 9674-9678.	6.5	16

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73	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
74	Theoretical modeling of a diode-pumped Nd:YAG laser with a solid nonfocusing pump light collector. Applied Optics, 1994, 33, 2273.	2.1	15
75	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
76	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
77	The effect of hydrogen additive on population densities in the afterglow of barium vapour lasers. Optics Communications, 1995, 120, 112-120.	2.1	13
78	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
79	Quantifying the Influence of Inert Shell Coating on Luminescence Brightness of Lanthanide Upconversion Nanoparticles. ACS Photonics, 2022, 9, 758-764.	6.6	13
80	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
81	Compact and efficient kinetically enhanced copper-vapor lasers of high (100-W) average power. Optics Letters, 2003, 28, 1936.	3.3	12
82	Investigation of blue emission from Raman-active crystals: Its origin and impact on laser performance. Optical Materials Express, 2014, 4, 889.	3.0	12
83	Managing SRS competition in a miniature visible Nd:YVO_4/BaWO_4 Raman laser. Optics Express, 2012, 20, 19305.	3.4	11
84	Light-Emitting Diode Excitation for Upconversion Microscopy: A Quantitative Assessment. Nano Letters, 2020, 20, 8487-8492.	9.1	11
85	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
86	High repetition rate, q-switched and intracavity frequency doubled Nd:YVO4 laser at 671nm. Optics Express, 2004, 12, 3543.	3.4	10
87	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
88	Ground-state depletion mechanisms in pulsed barium vapor lasers. Journal of Applied Physics, 1997, 82, 2039-2048.	2.5	9
89	Limiting factors in PRF scaling of barium vapour lasers. Optics Communications, 1997, 137, 299-302.	2.1	7
90	Encapsulated rod for efficient thermal management in diode-side-pumped Nd:YAG lasers. Applied Optics, 1996, 35, 2562.	2.1	6

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91	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
92	Laser assisted jacket removal and writing of fiber Bragg gratings using a single laser source. Optics Express, 2002, 10, 818.	3.4	6
93	A simple, thermally-stabilised, diode end-pumped, planar Nd:YAG laser. Optics Communications, 1999, 162, 247-250.	2.1	5
94	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
95	Plasma kinetics issues for repetition rate scaling of kinetically enhanced copper vapor lasers. , 2001, , .		5
96	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
97	Time-resolved microfluidic flow cytometer for decoding luminescence lifetimes in the microsecond region. Lab on A Chip, 2020, 20, 655-664.	6.0	5
98	Thermal modeling of solid nonfocusing pump-light collectors used for diode-pumped Nd:YAG lasers. Applied Optics, 1995, 34, 2012.	2.1	4
99	Energy-transfer studies and efficient cw laser operation of a cw Er,Yb:YCOB laser at 1.55 Î¼m. , 2003, , .		4
100	Ultrasensitive time-resolved nanoliter volume fluorometry based on UV LEDs and a channel photomultiplier tube. , 2005, 5699, 237.		4
101	Stable, red laser pumped, multi-kilohertz Alexandrite laser. Optics Communications, 2006, 260, 207-210.	2.1	4
102	Time-Gated Luminescent In Situ Hybridization (LISH): Highly Sensitive Detection of Pathogenic Staphylococcus aureus. Molecules, 2019, 24, 2083.	3.8	4
103	Homogenization of Optical Field in Nanocrystal-Embedded Perovskite Composites. ACS Energy Letters, 2022, 7, 1657-1671.	17.4	4
104	Assessing the activity of antibodies conjugated to upconversion nanoparticles for immunolabeling. Analytica Chimica Acta, 2022, 1209, 339863.	5.4	4
105	Development Of Efficient High-Power Violet Sr ⁺ And Ultraviolet Ca ⁺ Recombination Lasers. Proceedings of SPIE, 1988, 0894, 121.	0.8	3
106	Novel flashlamp-based time-resolved fluorescence microscope reduces autofluorescence for 30-fold contrast enhancement in environmental samples. , 2003, 4964, 14.		3
107	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
108	Mid-infrared diamond Raman laser with tuneable output. Proceedings of SPIE, 2014, , .	0.8	3

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109	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
110	Wavelength Extension Of Copper Vapour Lasers. Proceedings of SPIE, 1989, , .	0.8	3
111	<title>Laser solder repair technique for nerve anastomosis: temperatures required for optimal tensile strength</title>. , 1998, , .		2
112	Yb:YAl3(B03)4: an efficient green self-frequency-doubled laser source. , 2001, , WA3.		2
113	Compact diode-pumped 598-nm laser source. , 2002, 4630, 57.		2
114	Time-resolvable fluorescent conjugates for the detection of pathogens in environmental samples containing autofluorescent material. , 2003, 4967, 146.		2
115	BHHST: An improved lanthanide chelate for time-resolved fluorescence applications. , 2005, 5704, 93.		2
116	Time-gated real-time bioimaging system using multicolor microsecond-lifetime silica nanoparticles. , 2010, , .		2
117	Lifetime Multiplexing with Lanthanide Complexes for Luminescence <i>In Situ</i> Hybridisation. Analysis & Sensing, 2022, 2, .	2.0	2
118	High-Power Violet Sr ⁺ Recombination Lasers. Proceedings of SPIE, 1989, , .	0.8	1
119	High-speed micromachining with UV-copper vapor lasers. , 1996, , .		1
120	Performance enhancement of elemental copper vapor lasers by bromine and hydrogenated bromine additives. , 1997, 3092, 68.		1
121	Compact continuous-wave yellow laser based on a self-stimulating Raman Nd:YVO4 laser. , 2007, , WB19.		1
122	UV LED excited time-gated luminescence flow cytometry: evaluation for rare-event particle counting. Proceedings of SPIE, 2008, , .	0.8	1
123	Calibration beads containing luminescent lanthanide ion complexes. Proceedings of SPIE, 2008, , .	0.8	1
124	Luminescent Microspheres Resolved from Strong Background on an Automated Time-Gated Luminescence Microscopy Workstation. , 2009, , .		1
125	Efficient 1064 nm conversion to the eye-safe region using an external cavity diamond Raman laser. , 2011, , .		1
126	Widely tunable green lasers based on the self-frequency doubling material Yb:YAB. , 2002, , .		1

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127	All-solid-state, multi-kilohertz, 1.5Âµm intracavity Raman laser based on Nd:YVO4 and KGd(WO4)2. , 2004, , .		1
128	Intracavity second and third harmonic generation at 671 and 447nm from a Q-switched Nd:GdV04 laser. , 2005, , .		1
129	Beam propagation analysis in unstable laser resonators (ULR): low to high magnification. , 2003, , .		0
130	Polarized operation of Yb:YAl 3 (BO 3) 4 CW and mode-locked lasers. , 2004, , .		0
131	Fabrication of photonic devices using novel laser-assisted methods. , 2004, , .		0
132	A novel luminescence analyser for europium chelates using solid-state excitation and a gated photomultiplier. , 2006, 6371, 129.		0
133	Compact, high-repetition-rate 336nm source based on a frequency quadrupled, diode-pumped Nd:YVO4 laser. , 2006, , TuB23.		0
134	Solid-state Raman lasers. , 2006, , .		0
135	Direct writing of planar lightwave devices using ultrafast lasers. , 2007, , .		0
136	Efficient continuous-wave yellow output from a self-Raman composite Nd:YVO4/ YVO4 laser. , 2008, , .		0
137	A continuous-wave, yellow, intracavity doubled, self-Raman laser with 2.25-W output power. , 2009, , .		0
138	CW Crystalline Raman Lasers: Multi-Watt and Multi-Wavelength Operation in the Visible. , 2010, , .		0
139	Mechanisms of size-dependent lifetime quenching in luminescent upconverting colloidal NaYF<inf>4</inf>:Yb, Er nanocrystals. , 2011, , .		0
140	Advances in lanthanide bioprobes and high-throughput background-free biophotonics sensing. , 2011, , .		0
141	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
142	Cytometric investigation of rare-events featuring time-gated detection and high-speed stage scanning. , 2011, , .		0
143	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
144	330 mW CW yellow emission from miniature self-Raman laser based on direct HR-coated Nd:YVO<inf>4</inf> crystal. , 2011, , .		0

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145	Orthogonal Scanning Automated Microscopy Speeds Up Time-Gated Luminescence Detection. , 2013, , .		0
146	Time-resolved H atom density measurements in a Cu HyBrID laser. , 2001, , .		0
147	Coupled-Cavity, Single-Frequency Yb:YAB Yellow Laser. , 2002, , .		0
148	All-solid-state, multi-kilohertz, 1.5 Âµm intracavity Raman laser based on Nd: YVO4 and KGd(WO4)2. , 2004, , .		0
149	High Efficiency, High Power, Self-Frequency Doubled Q-switched Operation in Yb:YAB. , 2005, , .		0
150	Design and Operation of All-Solid-State, 320 mW Continuous-Wave Yellow Laser. , 2007, , .		0
151	Characterisation of Upconversion Nanoparticles for Imaging. , 2013, , .		0
152	Revisiting the Effect of Inert Shell on Luminescence Enhancement of Upconversion Nanoparticles. , 2020, , .		0
153	Lifetime Multiplexing with Lanthanide Complexes for Luminescence In Situ Hybridisation. Analysis & Sensing, 0, , .	2.0	0