

Robert L Byer

List of Publications by Year in descending order

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89
papers

6,630
citations

94433

37
h-index

98798

67
g-index

89
all docs

89
docs citations

89
times ranked

3957
citing authors

#	ARTICLE	IF	CITATIONS
1	Monolithic, unidirectional single-mode Nd:YAG ring laser. <i>Optics Letters</i> , 1985, 10, 65.	3.3	599
2	A fully programmable 100-spin coherent Ising machine with all-to-all connections. <i>Science</i> , 2016, 354, 614-617.	12.6	427
3	Network of time-multiplexed optical parametric oscillators as a coherent Ising machine. <i>Nature Photonics</i> , 2014, 8, 937-942.	31.4	339
4	Dielectric laser accelerators. <i>Reviews of Modern Physics</i> , 2014, 86, 1337-1389.	45.6	286
5	93% pump depletion, 35-W continuous-wave, singly resonant optical parametric oscillator. <i>Optics Letters</i> , 1996, 21, 1336.	3.3	274
6	Octave-spanning ultrafast OPO with 26-61 μ m instantaneous bandwidth pumped by femtosecond Tm-fiber laser. <i>Optics Express</i> , 2012, 20, 7046.	3.4	270
7	Accurate second-order susceptibility measurements of visible and infrared nonlinear crystals. <i>Physical Review B</i> , 1976, 14, 1693-1706.	3.2	269
8	Quasi-Phasematched Nonlinear Interactions and Devices. <i>Journal of Nonlinear Optical Physics and Materials</i> , 1997, 06, 549-592.	1.8	227
9	Femtosecond laser ablation properties of borosilicate glass. <i>Journal of Applied Physics</i> , 2004, 96, 5316-5323.	2.5	227
10	Coherent Ising machine based on degenerate optical parametric oscillators. <i>Physical Review A</i> , 2013, 88, .	2.5	226
11	Backswitch poling in lithium niobate for high-fidelity domain patterning and efficient blue light generation. <i>Applied Physics Letters</i> , 1999, 75, 1673-1675.	3.3	215
12	Efficient, frequency-stable laser-diode-pumped Nd:YAG laser. <i>Optics Letters</i> , 1985, 10, 62.	3.3	212
13	Optical parametric oscillator frequency tuning and control. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1991, 8, 646.	2.1	170
14	Experimental investigation of performance differences between coherent Ising machines and a quantum annealer. <i>Science Advances</i> , 2019, 5, eaau0823.	10.3	169
15	Broadband degenerate OPO for mid-infrared frequency comb generation. <i>Optics Express</i> , 2011, 19, 6296.	3.4	167
16	On-chip integrated laser-driven particle accelerator. <i>Science</i> , 2020, 367, 79-83.	12.6	141
17	Thermal and fluid processes of a thin melt zone during femtosecond laser ablation of glass: the formation of rims by single laser pulses. <i>Journal Physics D: Applied Physics</i> , 2007, 40, 1447-1459.	2.8	135
18	Continuous-wave singly resonant optical parametric oscillator based on periodically poled LiNbO ₃ . <i>Optics Letters</i> , 1996, 21, 713.	3.3	133

#	ARTICLE	IF	CITATIONS
19	Advances in 2- μm Tm-doped mode-locked fiber lasers. <i>Optical Fiber Technology</i> , 2014, 20, 642-649.	2.7	132
20	Laser acceleration and deflection of 963-keV electrons with a silicon dielectric structure. <i>Optica</i> , 2015, 2, 158.	9.3	130
21	Frequency stability and offset locking of a laser-diode-pumped Nd:YAG monolithic nonplanar ring oscillator. <i>Optics Letters</i> , 1987, 12, 175.	3.3	119
22	Mid-infrared supercontinuum generation in tapered chalcogenide fiber for producing octave-spanning frequency comb around 3 μm . <i>Optics Express</i> , 2012, 20, 24218.	3.4	110
23	Coherent laser radar at 106 μm using Nd:YAG lasers. <i>Optics Letters</i> , 1987, 12, 239.	3.3	107
24	Continuous-wave operation of a room-temperature, diode-laser-pumped, 946-nm Nd:YAG laser. <i>Optics Letters</i> , 1987, 12, 809.	3.3	101
25	Efficient GaAlAs diode-laser-pumped operation of Nd:YLF at 1047 μm with intracavity doubling to 5236 nm. <i>Optics Letters</i> , 1986, 11, 204.	3.3	91
26	Coherence properties of a broadband femtosecond mid-IR optical parametric oscillator operating at degeneracy. <i>Optics Express</i> , 2012, 20, 7255.	3.4	91
27	Dielectric laser acceleration of sub-100 keV electrons with silicon dual-pillar grating structures. <i>Optics Letters</i> , 2015, 40, 4344.	3.3	91
28	Self-phase-locked divide-by-2 optical parametric oscillator as a broadband frequency comb source. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2010, 27, 876.	2.1	81
29	Demonstration of acceleration of relativistic electrons at a dielectric microstructure using femtosecond laser pulses. <i>Optics Letters</i> , 2016, 41, 2696.	3.3	79
30	All-optical quantum random bit generation from intrinsically binary phase of parametric oscillators. <i>Optics Express</i> , 2012, 20, 19322.	3.4	71
31	Continuous-wave quasi-phase-matched generation of 60 mW at 465 nm by single-pass frequency doubling of a laser diode in backswitch-poled lithium niobate. <i>Optics Letters</i> , 1999, 24, 1293.	3.3	68
32	Frequency and intensity noise in an injection-locked, solid-state laser. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1995, 12, 328.	2.1	64
33	Net Acceleration and Direct Measurement of Attosecond Electron Pulses in a Silicon Dielectric Laser Accelerator. <i>Physical Review Letters</i> , 2019, 123, 264802.	7.8	60
34	Self-phase-locked degenerate femtosecond optical parametric oscillator. <i>Optics Letters</i> , 2008, 33, 1896.	3.3	55
35	Elements of a dielectric laser accelerator. <i>Optica</i> , 2018, 5, 687.	9.3	50
36	Continuous-wave 532-nm-pumped singly resonant optical parametric oscillator based on periodically poled lithium niobate. <i>Optics Letters</i> , 1998, 23, 168.	3.3	42

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37	Potential for coherent Doppler wind velocity lidar using neodymium lasers. <i>Applied Optics</i> , 1984, 23, 2477.	2.1	38
38	On-Chip Laser-Power Delivery System for Dielectric Laser Accelerators. <i>Physical Review Applied</i> , 2018, 9, .	3.8	37
39	Phase-dependent laser acceleration of electrons with symmetrically driven silicon dual pillar gratings. <i>Optics Letters</i> , 2018, 43, 2181.	3.3	34
40	62-dB-gain multiple-pass slab geometry Nd:YAG amplifier. <i>Optics Letters</i> , 1986, 11, 216.	3.3	32
41	Cascaded half-harmonic generation of femtosecond frequency combs in the mid-infrared. <i>Optica</i> , 2016, 3, 324.	9.3	32
42	<title>Visible quasi-phase-matched harmonic generation by electric-field-poled lithium niobate</title>. , 1996, , .		31
43	Laser-Driven Electron Lensing in Silicon Microstructures. <i>Physical Review Letters</i> , 2019, 122, 104801.	7.8	31
44	Efficient half-harmonic generation of three-optical-cycle mid-IR frequency comb around 4 Åμm using OP-GaP. <i>Optics Express</i> , 2018, 26, 9963.	3.4	28
45	Phase stable net acceleration of electrons from a two-stage optical accelerator. <i>Physical Review Special Topics: Accelerators and Beams</i> , 2008, 11, .	1.8	27
46	Sub-50 fs pulses around 2070 nm from a synchronously-pumped, degenerate OPO. <i>Optics Express</i> , 2012, 20, 27589.	3.4	26
47	Femtosecond optical parametric oscillator frequency combs. <i>Journal of Optics (United Kingdom)</i> , 2015, 17, 094010.	2.2	25
48	Gallium Oxide for High-Power Optical Applications. <i>Advanced Optical Materials</i> , 2020, 8, 1901522.	7.3	25
49	Frequency stabilization of the 1064-nm Nd:YAG lasers to Doppler-broadened lines of iodine. <i>Applied Optics</i> , 1993, 32, 7382.	2.1	23
50	Submegahertz frequency-stabilized Nd:YAG oscillator. <i>Optics Letters</i> , 1982, 7, 408.	3.3	21
51	High-extinction-ratio resonant cavity polarizer for quantum-optics measurements. <i>Applied Optics</i> , 2007, 46, 3850.	2.1	19
52	A compact electron source for the dielectric laser accelerator. <i>Applied Physics Letters</i> , 2020, 116, .	3.3	18
53	Design of a subnanometer resolution beam position monitor for dielectric laser accelerators. <i>Optics Letters</i> , 2012, 37, 975.	3.3	15
54	Design of a multichannel photonic crystal dielectric laser accelerator. <i>Photonics Research</i> , 2020, 8, 1586.	7.0	14

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55	Electron beam position monitor for a dielectric microaccelerator. <i>Optics Letters</i> , 2014, 39, 4747.	3.3	13
56	Low-Energy-Spread Attosecond Bunching and Coherent Electron Acceleration in Dielectric Nanostructures. <i>Physical Review Applied</i> , 2021, 15, .	3.8	13
57	Electron Pulse Compression with Optical Beat Note. <i>Physical Review Letters</i> , 2021, 127, 164802.	7.8	13
58	Fractional-length sync-pumped degenerate optical parametric oscillator for 500-MHz 3- μ m mid-infrared frequency comb generation. <i>Optics Letters</i> , 2014, 39, 900.	3.3	12
59	Summary of the 2011 Dielectric Laser Accelerator Workshop. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2014, 734, 51-59.	1.6	12
60	Fiber-feedback optical parametric oscillator for half-harmonic generation of sub-100-fs frequency combs around 2- μ m. <i>Optics Letters</i> , 2015, 40, 4368.	3.3	11
61	Design of a tapered slot waveguide dielectric laser accelerator for sub-relativistic electrons. <i>Optics Express</i> , 2018, 26, 22801.	3.4	10
62	Transverse and longitudinal characterization of electron beams using interaction with optical near-fields. <i>Optics Letters</i> , 2016, 41, 3435.	3.3	8
63	Thermal and fluid processes of a thin melt zone during femtosecond laser ablation of glass. , 2003, 4977, 335.		7
64	Quantum noise measurements in a continuous-wave laser-diode-pumped Nd:YAG saturated amplifier. <i>Optics Letters</i> , 2005, 30, 1195.	3.3	7
65	Monolithic Nonplanar Ring Lasers: Resistance To Optical Feedback. , 1988, , .		4
66	In-situ Tapering of Chalcogenide Fiber for Mid-infrared Supercontinuum Generation. <i>Journal of Visualized Experiments</i> , 2013, , e50518.	0.3	3
67	Microchip accelerators. <i>Physics Today</i> , 2021, 74, 42-49.	0.3	3
68	Diode Pumped Solid State Lasers. <i>NATO ASI Series Series B: Physics</i> , 1993, , 99-120.	0.2	2
69	Guided-wave half-harmonic generation of frequency combs with \sim 75-fold spectral broadening. , 2015, , .		2
70	100 W, single frequency, low-noise, diffraction-limited beam from an Nd:YAG end-pumped slab MOPA for LIGO. , 2004, , PDP15.		1
71	A Degenerate Optical Parametric Oscillator Network for Coherent Computation. <i>Lecture Notes in Physics</i> , 2016, , 219-249.	0.7	1
72	Combinatorial optimization using networks of optical parametric oscillators. , 2017, , .		1

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73	Mid-Infrared Supercontinuum Generation from 2.4 μm to 4.6 μm in Tapered Chalcogenide Fiber. , 2012, , .		1
74	2.09- μm degenerate femtosecond OPO with over 60% conversion efficiency and 0.6-W output. , 2014, , .		1
75	High gradient silicon carbide immersion lens ultrafast electron sources. Journal of Applied Physics, 2022, 131, .	2.5	1
76	Sub-100 fs Fiber Feedback Synchronously Pumped Degenerate Optical Parametric Oscillator. , 2015, , .		0
77	Efficient cascaded half-harmonic generation of femtosecond frequency combs centered at 2.09 μm and 4.18 μm from a mode-locked Yb:Fiber laser. , 2015, , .		0
78	A Fabry-Perot cavity used as a high-extinction-ratio resonant polarizer with application to quantum optics measurements. , 2006, , .		0
79	Quantum Random Bit Generation Using Degenerate Optical Parametric Oscillator. , 2011, , .		0
80	Nearly 3-6 μm Spectral Comb Derived from Tm Mode-locked Laser using GaAs-based Degenerate OPO. , 2012, , .		0
81	500-MHz Mid-IR Frequency Comb Source Based on a Compact Subharmonic OPO. , 2013, , .		0
82	Coherent laser radar at 1.06 μm . , 1986, , .		0
83	Diode-pumped monolithic cw Nd:glass laser. , 1986, , .		0
84	Ultrarrow Linewidth Solid State Oscillators. , 1989, , 228-231.		0
85	Advances in Nonlinear Optical Materials and Devices. , 1992, , 379-391.		0
86	Quarter-harmonic generation of femtosecond pulses at 4.18 μm from a mode-locked Yb: fiber laser. , 2015, , .		0
87	19-nJ Five-Cycle Pulses from a 2- μm Degenerate Optical Parametric Oscillator. , 2016, , .		0
88	Femtosecond Temporal Simulton Formation in Optical Parametric Oscillators. , 2017, , .		0
89	Design of a tapered slot waveguide dielectric laser accelerator for sub-relativistic electrons. , 2019, , .		0