

Robert L Byer

List of Publications by Year in descending order

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89
papers

6,630
citations

94433

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98798

67
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89
all docs

89
docs citations

89
times ranked

3957
citing authors

#	ARTICLE	IF	CITATIONS
1	High gradient silicon carbide immersion lens ultrafast electron sources. Journal of Applied Physics, 2022, 131, .	2.5	1
2	Low-Energy-Spread Attosecond Bunching and Coherent Electron Acceleration in Dielectric Nanostructures. Physical Review Applied, 2021, 15, .	3.8	13
3	Microchip accelerators. Physics Today, 2021, 74, 42-49.	0.3	3
4	Electron Pulse Compression with Optical Beat Note. Physical Review Letters, 2021, 127, 164802.	7.8	13
5	On-chip integrated laser-driven particle accelerator. Science, 2020, 367, 79-83.	12.6	141
6	A compact electron source for the dielectric laser accelerator. Applied Physics Letters, 2020, 116, .	3.3	18
7	Gallium Oxide for High-Power Optical Applications. Advanced Optical Materials, 2020, 8, 1901522.	7.3	25
8	Design of a multichannel photonic crystal dielectric laser accelerator. Photonics Research, 2020, 8, 1586.	7.0	14
9	Experimental investigation of performance differences between coherent Ising machines and a quantum annealer. Science Advances, 2019, 5, eaau0823.	10.3	169
10	Laser-Driven Electron Lensing in Silicon Microstructures. Physical Review Letters, 2019, 122, 104801.	7.8	31
11	Net Acceleration and Direct Measurement of Attosecond Electron Pulses in a Silicon Dielectric Laser Accelerator. Physical Review Letters, 2019, 123, 264802.	7.8	60
12	Design of a tapered slot waveguide dielectric laser accelerator for sub-relativistic electrons. , 2019, , .		0
13	Design of a tapered slot waveguide dielectric laser accelerator for sub-relativistic electrons. Optics Express, 2018, 26, 22801.	3.4	10
14	On-Chip Laser-Power Delivery System for Dielectric Laser Accelerators. Physical Review Applied, 2018, 9, .	3.8	37
15	Efficient half-harmonic generation of three-optical-cycle mid-IR frequency comb around 4 μm using OP-GaP. Optics Express, 2018, 26, 9963.	3.4	28
16	Elements of a dielectric laser accelerator. Optica, 2018, 5, 687.	9.3	50
17	Phase-dependent laser acceleration of electrons with symmetrically driven silicon dual pillar gratings. Optics Letters, 2018, 43, 2181.	3.3	34
18	Combinatorial optimization using networks of optical parametric oscillators. , 2017, , .		1

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19	Femtosecond Temporal Simulton Formation in Optical Parametric Oscillators. , 2017, , .		0
20	Cascaded half-harmonic generation of femtosecond frequency combs in the mid-infrared. Optica, 2016, 3, 324.	9.3	32
21	Transverse and longitudinal characterization of electron beams using interaction with optical near-fields. Optics Letters, 2016, 41, 3435.	3.3	8
22	A fully programmable 100-spin coherent Ising machine with all-to-all connections. Science, 2016, 354, 614-617.	12.6	427
23	Demonstration of acceleration of relativistic electrons at a dielectric microstructure using femtosecond laser pulses. Optics Letters, 2016, 41, 2696.	3.3	79
24	A Degenerate Optical Parametric Oscillator Network for Coherent Computation. Lecture Notes in Physics, 2016, , 219-249.	0.7	1
25	19-nJ Five-Cycle Pulses from a 2- μ m Degenerate Optical Parametric Oscillator. , 2016, , .		0
26	Sub-100 fs Fiber Feedback Synchronously Pumped Degenerate Optical Parametric Oscillator. , 2015, , .		0
27	Efficient cascaded half-harmonic generation of femtosecond frequency combs centered at 2.09 μ m and 4.18 μ m from a mode-locked Yb:Fiber laser. , 2015, , .		0
28	Dielectric laser acceleration of sub-100 keV electrons with silicon dual-pillar grating structures. Optics Letters, 2015, 40, 4344.	3.3	91
29	Femtosecond optical parametric oscillator frequency combs. Journal of Optics (United Kingdom), 2015, 17, 094010.	2.2	25
30	Fiber-feedback optical parametric oscillator for half-harmonic generation of sub-100-fs frequency combs around 2 μ m. Optics Letters, 2015, 40, 4368.	3.3	11
31	Laser acceleration and deflection of 963 keV electrons with a silicon dielectric structure. Optica, 2015, 2, 158.	9.3	130
32	Guided-wave half-harmonic generation of frequency combs with \sim 475-fold spectral broadening. , 2015, , .		2
33	Quarter-harmonic generation of femtosecond pulses at 4.18 μ m from a mode-locked Yb: fiber laser. , 2015, , .		0
34	Fractional-length sync-pumped degenerate optical parametric oscillator for 500-MHz 3- μ m mid-infrared frequency comb generation. Optics Letters, 2014, 39, 900.	3.3	12
35	Electron beam position monitor for a dielectric microaccelerator. Optics Letters, 2014, 39, 4747.	3.3	13
36	Network of time-multiplexed optical parametric oscillators as a coherent Ising machine. Nature Photonics, 2014, 8, 937-942.	31.4	339

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37	Dielectric laser accelerators. <i>Reviews of Modern Physics</i> , 2014, 86, 1337-1389.	45.6	286
38	Advances in 2- μ m Tm-doped mode-locked fiber lasers. <i>Optical Fiber Technology</i> , 2014, 20, 642-649.	2.7	132
39	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
40	2.09- μ m degenerate femtosecond OPO with over 60% conversion efficiency and 0.6-W output. , 2014, , .		1
41	Coherent Ising machine based on degenerate optical parametric oscillators. <i>Physical Review A</i> , 2013, 88, .	2.5	226
42	In-situ&/em> Tapering of Chalcogenide Fiber for Mid-infrared Supercontinuum Generation. <i>Journal of Visualized Experiments</i> , 2013, , e50518.	0.3	3
43	500-MHz Mid-IR Frequency Comb Source Based on a Compact Subharmonic OPO. , 2013, , .		0
44	Coherence properties of a broadband femtosecond mid-IR optical parametric oscillator operating at degeneracy. <i>Optics Express</i> , 2012, 20, 7255.	3.4	91
45	All-optical quantum random bit generation from intrinsically binary phase of parametric oscillators. <i>Optics Express</i> , 2012, 20, 19322.	3.4	71
46	Design of a subnanometer resolution beam position monitor for dielectric laser accelerators. <i>Optics Letters</i> , 2012, 37, 975.	3.3	15
47	Mid-infrared supercontinuum generation in tapered chalcogenide fiber for producing octave-spanning frequency comb around 3 μ m. <i>Optics Express</i> , 2012, 20, 24218.	3.4	110
48	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
49	Sub-50 fs pulses around 2070 nm from a synchronously-pumped, degenerate OPO. <i>Optics Express</i> , 2012, 20, 27589.	3.4	26
50	Mid-Infrared Supercontinuum Generation from 2.4 μ m to 4.6 μ m in Tapered Chalcogenide Fiber. , 2012, , .		1
51	Nearly 3-6 μ m Spectral Comb Derived from Tm Mode-locked Laser using GaAs-based Degenerate OPO. , 2012, , .		0
52	Broadband degenerate OPO for mid-infrared frequency comb generation. <i>Optics Express</i> , 2011, 19, 6296.	3.4	167
53	Quantum Random Bit Generation Using Degenerate Optical Parametric Oscillator. , 2011, , .		0
54	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

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55	Self-phase-locked degenerate femtosecond optical parametric oscillator. Optics Letters, 2008, 33, 1896.	3.3	55
56	Phase stable net acceleration of electrons from a two-stage optical accelerator. Physical Review Special Topics: Accelerators and Beams, 2008, 11, .	1.8	27
57	High-extinction-ratio resonant cavity polarizer for quantum-optics measurements. Applied Optics, 2007, 46, 3850.	2.1	19
58	Thermal and fluid processes of a thin melt zone during femtosecond laser ablation of glass: the formation of rims by single laser pulses. Journal Physics D: Applied Physics, 2007, 40, 1447-1459.	2.8	135
59	A Fabry-Perot cavity used as a high-extinction-ratio resonant polarizer with application to quantum optics measurements. , 2006, , .		0
60	Quantum noise measurements in a continuous-wave laser-diode-pumped Nd:YAG saturated amplifier. Optics Letters, 2005, 30, 1195.	3.3	7
61	100 W, single frequency, low-noise, diffraction-limited beam from an Nd:YAG end-pumped slab MOPA for LIGO. , 2004, , PDP15.		1
62	Femtosecond laser ablation properties of borosilicate glass. Journal of Applied Physics, 2004, 96, 5316-5323.	2.5	227
63	Thermal and fluid processes of a thin melt zone during femtosecond laser ablation of glass. , 2003, 4977, 335.		7
64	Backswitch poling in lithium niobate for high-fidelity domain patterning and efficient blue light generation. Applied Physics Letters, 1999, 75, 1673-1675.	3.3	215
65	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. Optics Letters, 1999, 24, 1293.	3.3	68
66	Continuous-wave 532-nm-pumped singly resonant optical parametric oscillator based on periodically poled lithium niobate. Optics Letters, 1998, 23, 168.	3.3	42
67	Quasi-Phasematched Nonlinear Interactions and Devices. Journal of Nonlinear Optical Physics and Materials, 1997, 06, 549-592.	1.8	227
68	Continuous-wave singly resonant optical parametric oscillator based on periodically poled LiNbO ₃ . Optics Letters, 1996, 21, 713.	3.3	133
69	93% pump depletion, 35-W continuous-wave, singly resonant optical parametric oscillator. Optics Letters, 1996, 21, 1336.	3.3	274
70	<title>Visible quasi-phase-matched harmonic generation by electric-field-poled lithium niobate</title>. , 1996, , .		31
71	Frequency and intensity noise in an injection-locked, solid-state laser. Journal of the Optical Society of America B: Optical Physics, 1995, 12, 328.	2.1	64
72	Frequency stabilization of the 1064-nm Nd:YAG lasers to Doppler-broadened lines of iodine. Applied Optics, 1993, 32, 7382.	2.1	23

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73	Diode Pumped Solid State Lasers. NATO ASI Series Series B: Physics, 1993, , 99-120.	0.2	2
74	Advances in Nonlinear Optical Materials and Devices. , 1992, , 379-391.		0
75	Optical parametric oscillator frequency tuning and control. Journal of the Optical Society of America B: Optical Physics, 1991, 8, 646.	2.1	170
76	Ultranarrow Linewidth Solid State Oscillators. , 1989, , 228-231.		0
77	Monolithic Nonplanar Ring Lasers: Resistance To Optical Feedback. , 1988, , .		4
78	Frequency stability and offset locking of a laser-diode-pumped Nd:YAG monolithic nonplanar ring oscillator. Optics Letters, 1987, 12, 175.	3.3	119
79	Coherent laser radar at 106 $\frac{1}{4}$ m using Nd:YAG lasers. Optics Letters, 1987, 12, 239.	3.3	107
80	Continuous-wave operation of a room-temperature, diode-laser-pumped, 946-nm Nd:YAG laser. Optics Letters, 1987, 12, 809.	3.3	101
81	Efficient GaAlAs diode-laser-pumped operation of Nd:YLF at 1047 $\frac{1}{4}$ m with intracavity doubling to 5236 nm. Optics Letters, 1986, 11, 204.	3.3	91
82	62-dB-gain multiple-pass slab geometry Nd:YAG amplifier. Optics Letters, 1986, 11, 216.	3.3	32
83	Coherent laser radar at 1.06 $\frac{1}{4}$ m. , 1986, , .		0
84	Diode-pumped monolithic cw Nd:glass laser. , 1986, , .		0
85	Efficient, frequency-stable laser-diode-pumped Nd:YAG laser. Optics Letters, 1985, 10, 62.	3.3	212
86	Monolithic, unidirectional single-mode Nd:YAG ring laser. Optics Letters, 1985, 10, 65.	3.3	599
87	Potential for coherent Doppler wind velocity lidar using neodymium lasers. Applied Optics, 1984, 23, 2477.	2.1	38
88	Submegahertz frequency-stabilized Nd:YAG oscillator. Optics Letters, 1982, 7, 408.	3.3	21
89	Accurate second-order susceptibility measurements of visible and infrared nonlinear crystals. Physical Review B, 1976, 14, 1693-1706.	3.2	269