

Martin Richardson

List of Publications by Year in descending order

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113
papers

2,848
citations

136950

32
h-index

175258

52
g-index

113
all docs

113
docs citations

113
times ranked

2223
citing authors

#	ARTICLE	IF	CITATIONS
1	Spectroscopic Studies of Laser-Based Far-Ultraviolet Plasma Light Source. Applied Sciences (Switzerland), 2021, 11, 6919.	2.5	2
2	Power Scaling of CW Crystalline OPOs and Raman Lasers. Photonics, 2021, 8, 565.	2.0	3
3	Spatially resolved filament wavefront dynamics. Scientific Reports, 2020, 10, 8920.	3.3	8
4	Laser-induced modification of local refractive index in infrared glass-ceramic films. , 2019, , .		3
5	Broadband space-time wave packets propagating 70 μ m. Optics Letters, 2019, 44, 2073.	3.3	40
6	Demonstration of Broadband Space-Time Wave-Packets Propagating 70 μ m. , 2019, , .		0
7	Influence of Temperature on Nanosecond Pulse Amplification in Thulium Doped Fiber Lasers. Journal of Physics: Conference Series, 2018, 1003, 012120.	0.4	0
8	Synthesizing broadband propagation-invariant space-time wave packets using transmissive phase plates. Optics Express, 2018, 26, 13628.	3.4	46
9	Transition from linear- to nonlinear-focusing regime of laser filament plasma dynamics. Journal of Applied Physics, 2018, 124, .	2.5	22
10	700 μ J, 100 ns, 20 kHz pulses from a 1.5 m Thulium-doped fiber amplifier. , 2018, , .		0
11	Spectral irradiance of singly and doubly ionized zinc in low-intensity laser-plasma ultraviolet light sources. Journal of Applied Physics, 2017, 121, .	2.5	5
12	Free-Space Nonlinear Beam Combining for High Intensity Projection. Scientific Reports, 2017, 7, 10147.	3.3	16
13	Ultraviolet out-of-band radiation studies in laser tin plasma sources. Journal of Applied Physics, 2017, 122, .	2.5	7
14	Directly laser-written integrated photonics devices including diffractive optical elements. Optics and Lasers in Engineering, 2016, 83, 66-70.	3.8	7
15	Dramatic enhancement of supercontinuum generation in elliptically-polarized laser filaments. Scientific Reports, 2016, 6, 20363.	3.3	26
16	Principles and applications of trans-wafer processing using a 2- $\frac{1}{4}$ m thulium fiber laser. International Journal of Advanced Manufacturing Technology, 2016, 84, 2567-2578.	3.0	25
17	Angular dependence of filament-induced plasma emission from a GaAs surface. Optics Letters, 2015, 40, 4548.	3.3	1
18	Laser materials processing technologies and the future. , 2015, , .		0

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19	Material response of semiconductors irradiated with IR ultrashort laser pulses. , 2015, , .		0
20	Resonantly pumped amplification in a thulium-doped photonic crystal fiber. , 2015, , .		0
21	Resonantly pumped amplification in a Tm-doped large mode-area photonic crystal fiber. , 2015, , .		0
22	High-power spectral beam combining of linearly polarized Tm: fiber lasers. Applied Optics, 2015, 54, 757.	1.8	20
23	Comparison of different ultra-short pulsed laser sources used for semiconductor substrate processing. , 2014, , .		0
24	Comparative study of light propagation and single-mode operation in large-mode area fibers designed for 2- μ m laser applications. Optical Engineering, 2014, 54, 011006.	1.0	11
25	Thulium fiber laser and application development. Proceedings of SPIE, 2014, , .	0.8	3
26	Examination of laser-induced heating on multi-component chalcogenide glass. , 2014, , .		1
27	Measurement of thermal lensing in GaAs induced by 100 W Tm: fiber laser. Proceedings of SPIE, 2014, , .	0.8	0
28	Photonic crystal fiber pump combiner for high-peak power all-fiber thulium lasers. , 2014, , .		0
29	High peak-power mid-infrared ZnGeP ₂ optical parametric oscillator pumped by a Tm: fiber master oscillator power amplifier system. Optics Letters, 2014, 39, 1212.	3.3	62
30	Helical filaments. Applied Physics Letters, 2014, 104, .	3.3	26
31	Comparison between geometrically focused pulses versus filaments in femtosecond laser ablation of steel and titanium alloys. Applied Physics B: Lasers and Optics, 2014, 116, 485-491.	2.2	23
32	Transition from linear- to nonlinear-focusing regime in filamentation. Scientific Reports, 2014, 4, 7217.	3.3	58
33	Chirped pulse amplification in single mode Tm: fiber using a chirped Bragg grating. Applied Physics B: Lasers and Optics, 2013, 111, 299-304.	2.2	9
34	Blueshifted continuum peaks from filamentation in the anomalous dispersion regime. Physical Review A, 2013, 87, .	2.5	57
35	Nanosecond Tm: fiber MOPA System for High Peak Power Mid-IR Generation in a ZGP OPO. , 2013, , .		1
36	1- μ m, sub-500 fs chirped pulse amplification in a Tm-doped fiber system. Optics Letters, 2013, 38, 121.	3.3	52

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37	Amplification of nanosecond pulses to megawatt peak power levels in Tm ³⁺ -doped photonic crystal fiber rod. Optics Letters, 2013, 38, 691.	3.3	41
38	Chirped pulse amplification in Tm doped fiber using a chirped Bragg grating. , 2013, , .		1
39	Amplification of ns-pulses beyond 1â€‰MW-peak power in Tm ³⁺ -doped photonic crystal fiber rod. , 2013, , .		0
40	Chirped Pulse Amplification Scaling in Thulium-Doped Fiber Lasers. , 2013, , .		0
41	Backside Surface Machining of Silicon Wafers Using a Nanosecond Tm: fiber MOPA System. , 2013, , .		0
42	Q-switched thulium-doped photonic crystal fiber laser. Optics Letters, 2012, 37, 1664.	3.3	25
43	Multiple beam splitter using volumetric multiplexed Fresnel zone plates fabricated by ultrafast laser-writing. Optics Letters, 2012, 37, 3375.	3.3	9
44	Comparison of higher-order mode suppression and Q-switched laser performance in thulium-doped large mode area and photonic crystal fibers. Optics Express, 2012, 20, 24295.	3.4	18
45	Evolution of hole shape and size during short and ultrashort pulse laser deep drilling. Optics Express, 2012, 20, 27147.	3.4	35
46	Three-dimensional direct femtosecond laser writing of second-order nonlinearities in glass. Optics Letters, 2012, 37, 1029.	3.3	43
47	Spatially resolved measurement of femtosecond laser induced refractive index changes in transparent materials. Optics Letters, 2012, 37, 3003.	3.3	5
48	CW-lasing and amplification in Tm ³⁺ -doped photonic crystal fiber rod. Optics Letters, 2012, 37, 4513.	3.3	23
49	Transverse mode competition in gain-guided index antiguided fiber lasers. Journal of the Optical Society of America B: Optical Physics, 2012, 29, 191.	2.1	15
50	Q-switched Thulium doped Photonic Crystal Fiber Laser as a Source for Nonlinear Generation. , 2012, , .		0
51	CW and pulsed performance of Tm-doped photonic crystal fiber lasers. Proceedings of SPIE, 2012, , .	0.8	0
52	Hole-assisted few-mode multi-core fiber for high-density space-division multiplexing. , 2012, , .		7
53	Hole-Assisted Few-Mode Multicore Fiber for High-Density Space-Division Multiplexing. IEEE Photonics Technology Letters, 2012, 24, 1914-1917.	2.5	123
54	Improvement of the sensitivity for the measurement of copper concentrations in soil by microwave-assisted laser-induced breakdown spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2012, 73, 89-92.	2.9	55

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55	Stand-off filament-induced ablation of gallium arsenide. Applied Physics Letters, 2012, 101, .	3.3	26
56	Welding of polymers using a 2 $\hat{1}$ / ₄ m thulium fiber laser. Optics and Laser Technology, 2012, 44, 2095-2099.	4.6	276
57	Q-switched Operation of a Novel Ultra-large Mode Area Tm+3 doped Photonic Crystal Fiber. , 2012, , .		0
58	1 mJ Pulse Energies in Tm-doped Photonic Crystal Fiber. , 2012, , .		0
59	Double helical laser beams based on interfering first-order Bessel beams. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2011, 28, 1462.	1.5	18
60	Lasing in thulium-doped polarizing photonic crystal fiber. Optics Letters, 2011, 36, 3873.	3.3	50
61	Femtosecond laser induced photochemistry in materials tailored with photosensitive agents [Invited]. Optical Materials Express, 2011, 1, 866.	3.0	74
62	Effect of Replacement of <sc><sc>As</sc></sc> by <sc><sc>Ge</sc></sc> and <sc><sc>Sb</sc></sc> on the Photoâ€Response under Near Infrared Femtosecond Laser Irradiation in <sc><sc>As</sc></sc>-based Sulfide Glasses. International Journal of Applied Glass Science, 2011, 2, 308-320.	2.0	14
63	Monolithic narrow linewidth polarization-maintaining thulium fiber laser using femtosecond laser written fiber Bragg gratings. Proceedings of SPIE, 2011, , .	0.8	0
64	All-fiber single-mode PM thulium fiber lasers using femtosecond laser written fiber Bragg gratings. , 2011, , .		0
65	Tunable high power thulium fiber lasers. , 2010, , .		1
66	A compact quasi-single-cycle, phase stabilized laser system. , 2010, , .		0
67	3D Patterning at the Nanoscale of Fluorescent Emitters in Glass. Journal of Physical Chemistry C, 2010, 114, 15584-15588.	3.1	76
68	High-power widely tunable thulium fiber lasers. Applied Optics, 2010, 49, 6236.	2.1	91
69	Laser-induced breakdown spectroscopy of copper with a 2 $\hat{1}$ / ₄ m thulium fiber laser. Optics Express, 2010, 18, 7905.	3.4	73
70	Scalable side-pumped, gain-guided index-antiguided fiber laser. Journal of the Optical Society of America B: Optical Physics, 2010, 27, 2451.	2.1	34
71	Nd:YAG-CO ₂ double-pulse laser induced breakdown spectroscopy of organic films. Optics Express, 2010, 18, 259.	3.4	42
72	Femtosecond laser structuring and optical properties of a silver and zinc phosphate glass. Journal of Non-Crystalline Solids, 2010, 356, 2658-2665.	3.1	43

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73	High Power Thulium Fiber Lasers. , 2010, , .		2
74	Elemental analysis by microwave-assisted laser-induced breakdown spectroscopy: Evaluation on ceramics. Journal of Analytical Atomic Spectrometry, 2010, 25, 1316.	3.0	81
75	Tailoring of the luminescence properties of a silver and zinc phosphate glass at the nanoscale. , 2010, , .		0
76	Second-harmonic generation by direct-laser-induced-poling in a femto-photo-luminescent glass. , 2010, , .		0
77	Development of photosensitive glasses for direct laser writing. , 2010, , .		0
78	Diode-pumped very large core, gain guided, index antiguided single mode fiber laser. , 2009, , .		3
79	Beat the diffraction limit in 3D direct laser writing in photosensitive glass. Optics Express, 2009, 17, 10304.	3.4	86
80	Femtosecond laser direct written diffractive optical elements and their integration in oxide glass. , 2009, , .		5
81	Femtosecond laser induced micro-structured silver containing glass as an engineered nonlinear optical material. , 2009, , .		0
82	Progress on the Photoresponse of Chalcogenide Glasses and Films to Near-Infrared Femtosecond Laser Irradiation: A Review. IEEE Journal of Selected Topics in Quantum Electronics, 2008, 14, 1323-1334.	2.9	33
83	Femtosecond laser photo-response of Ge ₂₃ Sb ₇₅ Si ₇₀ films. Optics Express, 2008, 16, 20081.	3.4	26
84	Temperature-dependent spectroscopic properties of Tm ³⁺ in germanate, silica, and phosphate glasses: A comparative study. Journal of Applied Physics, 2008, 103, .	2.5	48
85	Single mode lasing in a gain-guided index anti-guided diode end pumped fiber. , 2008, , .		2
86	High Power Fiber Lasers and Applications to Manufacturing. AIP Conference Proceedings, 2008, , .	0.4	1
87	Fabrication and characterization of femtosecond laser direct written volume diffractive optical elements in fused silica. , 2008, , .		0
88	Plasma properties during the formation of “nanograting” structures inside fused silica. , 2008, , .		0
89	Narrow linewidth volume bragg grating stabilized thulium fiber laser. , 2008, , .		1
90	Nondestructive 3D imaging of femtosecond laser written buried structures using optical coherence microscopy. , 2008, , .		0

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91	Strong nuclear contribution to the optical Kerr effect in niobium oxide containing glasses. , 2007, , .		1
92	Broad Tunability in a Volume Bragg Grating Narrow Line Ti:Sapphire Oscillator. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	0
93	Strong nuclear contribution to the optical Kerr effect in niobium oxide containing glasses. , 2007, , .		0
94	Increase of ablation rate using burst mode femtosecond pulses. , 2007, , .		2
95	Strong nuclear contribution to the optical Kerr effect in niobium oxide containing glasses. Physical Review B, 2007, 75, .	3.2	13
96	ELUV sources for Lithography. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	1
97	Very large-core, single-mode, gain-guided, index-antiguided fiber lasers. Optics Letters, 2007, 32, 2505.	3.3	68
98	Studies on structural, electrical, and optical properties of Cu doped As ³⁺ Se ⁴⁺ Te chalcogenide glasses. Journal of Applied Physics, 2007, 101, 063520.	2.5	21
99	Increase of ablation rate using burst mode femtosecond pulses. , 2007, , .		2
100	In-situ Raman spectroscopy in femtosecond irradiated material. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	0
101	Laser-induced defects in fused silica by femtosecond IR irradiation. Physical Review B, 2006, 73, .	3.2	69
102	Laser plasma ELUV sources for Lithography – Diode pump technology offers new applications. Laser Technik Journal, 2005, 2, 68-71.	0.2	0
103	Optical properties of infrared femtosecond laser-modified fused silica and application to waveguide fabrication. Journal of the Optical Society of America B: Optical Physics, 2005, 22, 2138.	2.1	59
104	Direct femtosecond laser writing of waveguides in As ₂ S ₃ thin films. Optics Letters, 2004, 29, 748.	3.3	170
105	Femtosecond laser fabrication of tubular waveguides in poly(methyl methacrylate). Optics Letters, 2004, 29, 1840.	3.3	141
106	Ultrashort 1-kHz laser plasma hard x-ray source. Optics Letters, 2002, 27, 866.	3.3	87
107	Femtosecond laser deep hole drilling of silicate glasses in air. Applied Surface Science, 2001, 183, 151-164.	6.1	89
108	Fine surface structure of unfixed and hydrated macrophages observed by laser-plasma x-ray contact microscopy. AIP Conference Proceedings, 2000, , .	0.4	0

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109	Direct Ultrastructural Imaging of Macrophages Using a Novel X-Ray Contact Microscopy. <i>Experimental Biology and Medicine</i> , 1999, 220, 27-30.	2.4	9
110	Direct Ultrastructural Imaging of Macrophages Using a Novel X-Ray Contact Microscopy. <i>Proceedings of the Society for Experimental Biology and Medicine</i> , 1999, 220, 27-30.	1.8	6
111	Mass-limited, debris-free laser-plasma EUV source. <i>Optics Communications</i> , 1998, 145, 109-112.	2.1	37
112	Characterization and control of laser plasma flux parameters for soft-x-ray projection lithography. <i>Applied Optics</i> , 1993, 32, 6901.	2.1	27
113	Engineering Glassy Chalcogenide Materials for Integrated Optics Applications. , 0, , 383-405.		6