Cesar Jauregui Misas

List of Publications by Year
in descending order

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176 papers	7,358 citations	53794 45 h-index	54911 84 g-index
177 all docs	177 docs citations	177 times ranked	2785 citing authors

#	Article	IF	Citations
1	500â€…W rod-type 4â€‰Ã—â€‰4 multicore ultrafast fiber laser. Optics Letters, 2022, 47, 345.	3.3	15
2	High-energy Q-switched 16-core tapered rod-type fiber laser system. Optics Letters, 2022, 47, 1725.	3.3	10
3	Characterization of transverse mode instability in fiber-laser systems using a position-sensitive detector. , 2021, , .		1
4	Mitigation of transverse mode instability through a dynamic modification of the inversion in high-power fiber amplifiers. , 2021, , .		0
5	Optimizing the design of coherently combined multicore fiber amplifiers. , 2021, , .		0
6	Experimental analysis of Raman-induced transverse mode instability in a core-pumped Raman fiber amplifier. Optics Express, 2021, 29, 16175.	3.4	13
7	Transverse mode instability and thermal effects in thulium-doped fiber amplifiers under high thermal loads. Optics Express, 2021, 29, 14963.	3.4	13
8	Control and stabilization of the modal content of fiber amplifiers using traveling waves. Optics Express, 2021, 29, 34452.	3.4	1
9	Gas-plasma-based generation of broadband terahertz radiation with 640â€‰â€‰mW average power. Optics Letters, 2021, 46, 5256.	3.3	35
10	Fiber laser-driven gas plasma-based generation of THz radiation with 50-mW average power. Applied Physics B: Lasers and Optics, 2020, 126, 2.	2.2	27
11	Transverse mode instability. Advances in Optics and Photonics, 2020, 12, 429.	25.5	174
12	The sensitivity of the mode instability threshold to different types of intensity noise. , 2020, , .		1
13	Simplified design of optical elements for filled-aperture coherent beam combination. Optics Express, 2020, 28, 21035.	3.4	8
14	Impact of thermo-optical effects in coherently combined multicore fiber amplifiers. Optics Express, 2020, 28, 38093.	3.4	17
15	Talbot fiber: a poormanâ€™s approach to coherent combining. , 2020, , .		0
16	Investigation of the thermo-optical behavior of multicore fibers used in coherently combined fiber laser systems. , 2020, , .		2
17	Mitigation of transverse mode instability with travelling waves in high-power fiber amplifiers. , 2020, , .		0
18	108 W average power ultrashort pulses with GW-level peak power from a Tm-doped fiber CPA system. , 2020, , .		0

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19	Watt-class optical parametric amplification driven by a thulium-doped fiber laser in the molecular fingerprint region. , 2020, , .		1
20	Pump-Power-Noise Influence on Mode Instabilities in High-Power Fiber Laser Systems. , 2019, , .		1
21	The Impact of Fiber Core Design and Thermally-Induced Phase Shifts on the Threshold of Mode Instabilities. , 2019, , .		0
22	Ultrafast Tm-Doped Fiber Amplifier with 1 kW Average Output Power. , 2019, , .		3
23	High Performance Ultrafast Thulium-Doped Fiber Lasers. , 2019, , .		0
24	50mW Average Power Gas-Plasma THz Generation Driven by a Fiber Laser. , 2019, , .		0
25	Average-Power Scaling of Broadband THz radiation to 50 mW. , 2019, , .		0
26	Relative amplitude noise transfer function of an Yb³⁺-doped fiber amplifier chain. Optics Express, 2019, 27, 17041.	3.4	13
27	Transverse single-mode operation in a passive large pitch fiber with more than 200â€‰â€‰Î¼m mode-field diameter. Optics Letters, 2019, 44, 650.	3.3	23
28	The impact of pump-power noise on transverse mode instabilities. , 2019, , .		5
29	Single-mode propagation with 205 Âµm mode-field diameter in a passive large pitch fiber. , 2019, , .		1
30	Fiber-laser driven THz source based on air-plasma. , 2019, , .		0
31	Tm:fiber CPA driven nonlinear pulse compression stage delivering multi-GW, sub-10 fs pulses at 20 W of average power. , 2019, , .		2
32	Origin and evolution of phase-shifts in high-power fiber laser systems: detailed insights into TMI. , 2019, , .		5
33	Observation of transverse-mode instabilities in a thulium-doped fiber amplifier. , 2019, , .		2
34	Coherent Beam Combination of Ultrafast Fiber Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-9.	2.9	56
35	Modal energy transfer by thermally induced refractive index gratings in Yb-doped fibers. Light: Science and Applications, 2018, 7, 59.	16.6	46
36	Watt-scale super-octave mid-infrared intrapulse difference frequency generation. Light: Science and Applications, 2018, 7, 94.	16.6	101

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37	Thermal analysis of Yb-doped high-power fiber amplifiers with Al:P co-doped cores. Optics Express, 2018, 26, 7614.	3.4	11
38	Pump-modulation-induced beam stabilization in high-power fiber laser systems above the mode instability threshold. Optics Express, 2018, 26, 10691.	3.4	42
39	Phase-shift evolution of the thermally-induced refractive index grating in high-power fiber laser systems induced by pump-power variations. Optics Express, 2018, 26, 19489.	3.4	24
40	Towards the control of the modal energy transfer in transverse mode instabilities. , 2018, , .		3
41	Ultrafast thulium fiber laser system emitting more than 1â€‰â€‰kW of average power. Optics Letters, 2018, 43, 5853.	3.3	107
42	Ultra-large mode area fibers for high power lasers. , 2018, , .		4
43	Nonlinear pulse compression stage delivering 43-W few-cycle pulses with GW peak-power at 2-Âµm wavelength. , 2018, , .		0
44	Transverse mode instabilities in burst operation of high-power fiber laser systems. , 2018, , .		7
45	Towards sub-100 fs multi-GW pulses directly emitted from a Thulium-doped fiber CPA system. , 2017, , .		1
46	All-fiber optical parametric oscillator for bio-medical imaging applications. , 2017, , .		3
47	Controlling mode instabilities at 628 W average output power in an Yb-doped rod-type fiber amplifier by active modulation of the pump power. Proceedings of SPIE, 2017, , .	0.8	1
48	Experimental investigation of transverse mode instabilities in a double-pass Yb-doped rod-type fiber amplifier. Proceedings of SPIE, 2017, , .	0.8	9
49	High-average power 4 GW pulses with sub-8 optical cycles from a Tm-doped fiber laser driven nonlinear pulse compression stage. , 2017, , .		0
50	Optimizing the noise characteristics of high-power fiber laser systems. , 2017, , .		3
51	The impact of core co-dopants on the mode instability threshold of high-power fiber laser systems. Proceedings of SPIE, 2017, , .	0.8	1
52	Self-protecting nonlinear compression in a solid fiber for long-term stable ultrafast lasers at 2 Î¼m wavelength. Proceedings of SPIE, 2017, , .	0.8	0
53	Single mode 43 kW output power from a diode-pumped Yb-doped fiber amplifier. Optics Express, 2017, 25, 14892.	3.4	167
54	Nonlinear pulse compression to 43â€‰â€‰W GW-class few-cycle pulses at 2â€‰â€‰Î¼m wavelength. Optics Letters, 2017, 42, 4179.	3.3	47

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55	High average power nonlinear compression to 4â€‰â€‰GW, sub-50â€‰â€‰fs pulses at 2â€‰â€‰Î¼m wavelength. Optics Letters, 2017, 42, 747.	3.3	23
56	Optimizing high-power Yb-doped fiber amplifier systems in the presence of transverse mode instabilities. Optics Express, 2016, 24, 7879.	3.4	57
57	Optimizing large-pitch fibers for higher average powers. Proceedings of SPIE, 2016, , .	0.8	2
58	Thulium-doped fiber chirped-pulse amplification system with 2 GW of peak power. Optics Letters, 2016, 41, 4130.	3.3	60
59	Thermal optimization of high power fiber laser systems. , 2016, , .		0
60	Average power limit of fiber-laser systems with nearly diffraction-limited beam quality. Proceedings of SPIE, 2016, , .	0.8	17
61	Optimizing the mode instability threshold of high-power fiber laser systems. Proceedings of SPIE, 2016, , .	0.8	0
62	Four-wave mixing based light sources for real-world biomedical applications of coherent Raman microscopy. Proceedings of SPIE, 2016, , .	0.8	2
63	Self-compression to 24 MW peak power in a fused silica solid-core fiber using a high-repetition rate thulium-based fiber laser system. Proceedings of SPIE, 2016, , .	0.8	0
64	Fiberâ€based light sources for biomedical applications of coherent antiâ€Stokes Raman scattering microscopy. Laser and Photonics Reviews, 2015, 9, 435-451.	8.7	61
65	Wavelength dependence of maximal diffraction-limited output power of fiber lasers. Proceedings of SPIE, 2015, , .	0.8	2
66	Nonlinear compression of an ultrashort-pulse thulium-based fiber laser to sub-70â€‰â€‰fs in Kagome photonic crystal fiber. Optics Letters, 2015, 40, 2770.	3.3	41
67	Self-efficiency improvement and cooling in thulium-doped fibers. Proceedings of SPIE, 2015, , .	0.8	0
68	Self-compression in a solid fiber to 24â€‰â€‰MW peak power with few-cycle pulses at 2â€‰â€‰Î¼m wavelength. Optics Letters, 2015, 40, 5160.	3.3	35
69	Tm-based fiber-laser system with more than 200â€‰â€‰MW peak power. Optics Letters, 2015, 40, 9.	3.3	66
70	Sub-700fs pulses at 152 W average power from a Tm-doped fiber CPA system. Proceedings of SPIE, 2015, , .	0.8	1
71	Peak power scaling of thulium-doped ultrafast fiber laser systems. , 2015, , .		0
72	Recent progress in the understanding of mode instabilities. Proceedings of SPIE, 2015, , .	0.8	2

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73	Impact of atmospheric molecular absorption on the temporal and spatial evolution of ultra-short optical pulses. Optics Express, 2015, 23, 13776.	3.4	78
74	Impact of photodarkening on the mode instability threshold. Optics Express, 2015, 23, 15265.	3.4	135
75	Simplified modelling the mode instability threshold of high power fiber amplifiers in the presence of photodarkening. Optics Express, 2015, 23, 20203.	3.4	122
76	Coherent combination of two Tm-doped fiber amplifiers. Optics Letters, 2015, 40, 2301.	3.3	16
77	Efficiency improvement in Thulium-doped fibers via excited state pumping. Proceedings of SPIE, 2014, , .	0.8	0
78	Passive mitigation of mode instabilities. , 2014, , .		2
79	Breaking the symmetry for enhanced higher-order mode delocalization. , 2014, , .		3
80	146W continuous wave ytterbium doped fiber amplifier at 1009 nm. Proceedings of SPIE, 2014, , .	0.8	0
81	Analysis of stimulated Raman scattering in cw kW fiber oscillators. Proceedings of SPIE, 2014, , .	0.8	26
82	Smoothed spectra for enhanced dispersion-free pulse duration reduction of passively Q-switched microchip lasers. Optics Letters, 2014, 39, 505.	3.3	1
83	Designing advanced very-large-mode-area fibers for power scaling of fiber-laser systems. Optica, 2014, 1, 233.	9.3	114
84	1009â€‰â€‰nm continuous-wave ytterbium-doped fiber amplifier emitting 146â€‰â€‰W. Optics Letters, 2014, 39, 3725.	3.3	15
85	Yb-doped Rod-type Fiber Amplifier with 2 kW Average Power. , 2014, , .		0
86	Scaling the mode instability threshold with multicore fibers. Optics Letters, 2014, 39, 2680.	3.3	60
87	All-fiber Raman oscillator for the generation of radially and azimuthally polarized beams. , 2014, , .		0
88	High gain ytterbium doped Ge pedestal large pitch fiber. , 2014, , .		0
89	Performance Scaling of Ultrafast Laser Systems by Coherent Addition of Femtosecond Pulses. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 268-277.	2.9	35
90	2â€‰â€‰kW average power from a pulsed Yb-doped rod-type fiber amplifier. Optics Letters, 2014, 39, 6446.	3.3	56

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91	Triple-clad large-pitch fibers for compact high-power pulsed fiber laser systems. Optics Letters, 2014, 39, 209.	3.3	25
92	152â€‰â€‰W average power Tm-doped fiber CPA system. Optics Letters, 2014, 39, 4671.	3.3	85
93	Widely tunable parametric generation of picosecond visible and mid-infrared radiation in optical fibers. , 2013, , .		0
94	High-power fibre lasers. Nature Photonics, 2013, 7, 861-867.	31.4	924
95	Passive mitigation strategies for mode instabilities in high-power fiber laser systems. Optics Express, 2013, 21, 19375.	3.4	87
96	An all-fiber Raman laser for cylindrical vector beam generation. Laser Physics Letters, 2013, 10, 125108.	1.4	7
97	Mitigation of mode instabilities by dynamic excitation of fiber modes. Proceedings of SPIE, 2013, , .	0.8	5
98	24ÂmJ, 33ÂW Q-switched Tm-doped fiber laser with near diffraction-limited beam quality. Optics Letters, 2013, 38, 97.	3.3	74
99	Controlling mode instabilities by dynamic mode excitation with an acousto-optic deflector. Optics Express, 2013, 21, 17285.	3.4	72
100	Analysis of passively combined divided-pulse amplification as an energy-scaling concept. Optics Express, 2013, 21, 29031.	3.4	40
101	High-power thermally guiding index-antiguiding-core fibers. Optics Letters, 2013, 38, 510.	3.3	24
102	Improved Modal Reconstruction for Spatially and Spectrally Resolved Imaging $({m S}^{2})$. Journal of Lightwave Technology, 2013, 31, 1295-1299.	4.6	17
103	High power, high energy Tm-doped Q-switched large-pitch fiber laser. , 2013, , .		0
104	Temperature as a guiding mechanism for high-power very-large-mode-area active fibers. , 2013, , .		0
105	Mitigation strategies for mode instabilities in high-power fiber-laser systems. , 2013, , .		0
106	Mode instabilities in large-mode-area fiber amplifiers. , 2013, , .		1
107	On the power threshold of mode instabilities. , 2013, , .		0
108	Fiber amplifier CPA system using divided-pulse amplification for multi-mJ extraction. , 2013, , .		0

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109	Radial and azimuthal polarized all-fiber Raman oscillator. , 2013, , .		0
110	58 mJ burst containing ultra-short pulses with homogenous energy level from an Yb-doped fiber amplifier. , 2013, , .		0
111	Mode instabilities: physical origin and mitigation strategies. Proceedings of SPIE, 2013, , .	0.8	0
112	CGH-based real-time analysis of fiber Bragg gratings in few mode LMA fibers. Proceedings of SPIE, 2012, , .	0.8	2
113	Temperature-induced index gratings and their impact on mode instabilities in high-power fiber laser systems. Optics Express, 2012, 20, 440.	3.4	78
114	Fiber-based source for multiplex-CARS microscopy based on degenerate four-wave mixing. Optics Express, 2012, 20, 12004.	3.4	36
115	Widely tuneable fiber optical parametric amplifier for coherent anti-Stokes Raman scattering microscopy. Optics Express, 2012, 20, 26583.	3.4	63
116	Fiber based generation of azimuthally polarized light. Proceedings of SPIE, 2012, , .	0.8	3
117	26 mJ, 130 W Q-switched fiber-laser system with near-diffraction-limited beam quality. Optics Letters, 2012, 37, 1073.	3.3	137
118	Thermally induced waveguide changes in active fibers. Optics Express, 2012, 20, 3997.	3.4	108
119	Physical origin of mode instabilities in high-power fiber laser systems. Optics Express, 2012, 20, 12912.	3.4	200
120	58ÂmJ burst comprising ultrashort pulses with homogenous energy level from an Yb-doped fiber amplifier. Optics Letters, 2012, 37, 5169.	3.3	39
121	Dispersion-free pulse duration reduction of passively Q-switched microchip lasers. Optics Letters, 2012, 37, 4401.	3.3	13
122	Temporal dynamics of mode instabilities in high-power fiber lasers and amplifiers. Optics Express, 2012, 20, 15710.	3.4	231
123	High-power efficient generation of visible and mid-infrared radiation exploiting four-wave-mixing in optical fibers. Optics Express, 2012, 20, 24957.	3.4	31
124	High-power very large mode-area thulium-doped fiber laser. Optics Letters, 2012, 37, 4546.	3.3	46
125	High power Q-switched fiber laser system emitting 26 mJ pulses with near diffraction-limited beam quality. , 2012, , .		0
126	Fiber Optical Parametric Frequency Conversion: Alignment and Maintenance Free All-fiber Laser Concept for CARS Microscopy. , 2012, , .		0

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127	On the thermal origin of mode instabilities in high power fiber lasers. , 2012, , .		3
128	Alignment and maintenance free all-fiber laser source for CARS microscopy based on frequency conversion by four-wave-mixing. , 2012, , .		1
129	All-fiber laser source for CARS microscopy based on fiber optical parametric frequency conversion. Optics Express, 2012, 20, 4484.	3.4	98
130	26-mJ pulse energy Q-switched large-pitch fiber laser system with excellent beam quality. Proceedings of SPIE, 2012, , .	0.8	2
131	Yb-doped large-pitch fibres: effective single-mode operation based on higher-order mode delocalisation. Light: Science and Applications, 2012, 1, e8-e8.	16.6	251
132	On the Raman threshold of passive large mode area fibers. Proceedings of SPIE, 2011, , .	0.8	12
133	Fiber chirped-pulse amplification system emitting 38 GW peak power. Optics Express, 2011, 19, 255.	3.4	243
134	The impact of modal interference on the beam quality of high-power fiber amplifiers. Optics Express, 2011, 19, 3258.	3.4	202
135	Preferential gain photonic-crystal fiber for mode stabilization at high average powers. Optics Express, 2011, 19, 8656.	3.4	46
136	Non-hexagonal Large-Pitch Fibers for enhanced mode discrimination. Optics Express, 2011, 19, 12081.	3.4	29
137	Experimental observations of the threshold-like onset of mode instabilities in high power fiber amplifiers. Optics Express, 2011, 19, 13218.	3.4	541
138	Avoided crossings in photonic crystal fibers. Optics Express, 2011, 19, 13578.	3.4	56
139	Fiber based polarization filter for radially and azimuthally polarized light. Optics Express, 2011, 19, 19582.	3.4	29
140	High average and peak power femtosecond large-pitch photonic-crystal-fiber laser. Optics Letters, 2011, 36, 244.	3.3	62
141	High average power large-pitch fiber amplifier with robust single-mode operation. Optics Letters, 2011, 36, 689.	3.3	185
142	High-speed modal decomposition of mode instabilities in high-power fiber lasers. Optics Letters, 2011, 36, 4572.	3.3	151
143	Impact of modal interference on high-power fiber laser systems. Proceedings of SPIE, 2011, , .	0.8	0
144	Robust single-mode ytterbium-doped large pitch fiber emitting 294 W. , 2011, , .		0

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145	Real-time characterisation of modal content in monolithic few-mode fibre lasers. Electronics Letters, 2011, 47, 274.	1.0	11
146	Suppression of stimulated Raman scattering in high-power fiber laser systems by lumped spectral filters. , 2010, , .		0
147	Passively stabilized 215-W monolithic CW LMA-fiber laser with innovative transversal mode filter. , 2010, , .		6
148	Fiber based ultrashort pulse laser systems at ultrahigh average power levels. Proceedings of SPIE, 2010, , .	0.8	0
149	Influence of Index Depressions in Active Large Pitch Fibers. , 2010, , .		0
150	The influence of index-depressions in core-pumped Yb-doped large pitch fibers. Optics Express, 2010, 18, 26834.	3.4	85
151	Suppression of stimulated Raman scattering employing long period gratings in double-clad fiber amplifiers. Optics Letters, 2010, 35, 2982.	3.3	67
152	Side-pump combiner for all-fiber monolithic fiber lasers and amplifiers. Journal of the Optical Society of America B: Optical Physics, 2010, 27, 1011.	2.1	36
153	All-fiber side pump combiner for high-power fiber lasers and amplifiers. , 2010, , .		6
154	In situ spatially-resolved thermal and Brillouin diagnosis of high-power ytterbium-doped fibre laser by Brillouin optical time domain analysis. Electronics Letters, 2009, 45, 153.	1.0	6
155	High Repetition Rate Gigawatt Peak Power Fiber Laser Systems: Challenges, Design, and Experiment. IEEE Journal of Selected Topics in Quantum Electronics, 2009, 15, 159-169.	2.9	67
156	Femtosecond and picosecond laser drilling of metals at high repetition rates and average powers. Optics Letters, 2009, 34, 3304.	3.3	177
157	Efficient high-power generation of visible and mid-infrared light by degenerate four-wave-mixing in a large-mode-area photonic-crystal fiber. Optics Letters, 2009, 34, 3499.	3.3	99
158	Derivation of Raman treshold formulas for CW double-clad fiber amplifiers. Optics Express, 2009, 17, 8476.	3.4	59
159	Modeling the inhibition of stimulated Raman scattering in passive and active fibers by lumped spectral filters in high power fiber laser systems. Optics Express, 2009, 17, 16255.	3.4	37
160	Ultrashort pulse laser drilling of metals using a high-repetition rate high average power fiber CPA system. , 2009, , .		5
161	94 W 980 nm high brightness Yb-doped fiber laser. Optics Express, 2008, 16, 17310.	3.4	147
162	Periodic Signal Processing Using a Brillouin Gain Comb. , 2008, , .		2

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163	Fabrication of FBGs With an Arbitrary Spectrum. IEEE Sensors Journal, 2008, 8, 1287-1291.	4.7	9
164	Cavity ring-down in a photonic bandgap fiber gas cell. , 2008, , .		6
165	Delay-gain decoupling in Brillouin-assisted slow light. Optics Letters, 2007, 32, 2701.	3.3	3
166	Brillouin assisted slow-light enhancement via Fabry-Perot cavity effects. Optics Express, 2007, 15, 5126.	3.4	17
167	New Approaches to Extending the Performance of Brillouin Based Slow Light Systems. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	0
168	New raw material discrimination system based on a spatial optical spectroscopy technique. Sensors and Actuators A: Physical, 2007, 135, 605-612.	4.1	24
169	Lateral polishing of bends in plastic optical fibres applied to a multipoint liquid-level measurement sensor. Sensors and Actuators A: Physical, 2007, 137, 68-73.	4.1	93
170	Multiparameter sensor based on a chaotic fiber-ring resonator. Journal of the Optical Society of America B: Optical Physics, 2006, 23, 2024.	2.1	10
171	Fast algorithm for spectral processing with application to on-line welding quality assurance. Measurement Science and Technology, 2006, 17, 2623-2629.	2.6	31
172	Digital adaptative filters for interrogating fiber optic sensors. , 2005, 5855, 900.		0
173	Virtual long-period gratings. Optics Letters, 2005, 30, 14.	3.3	22
174	Interrogation of fibre Bragg gratings with a tilted fibre Bragg grating. Measurement Science and Technology, 2004, 15, 1596-1600.	2.6	4
175	Interrogation of interferometric sensors with a tilted fiber Bragg grating. Optics Express, 2004, 12, 5646.	3.4	6
176	Interrogation unit for fiber Bragg grating sensors that uses a slanted fiber grating. Optics Letters, 2004, 29, 676.	3.3	25