

Pavel Peterka

List of Publications by Year in descending order

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128
papers

1,433
citations

304743

22
h-index

395702

33
g-index

131
all docs

131
docs citations

131
times ranked

945
citing authors

#	ARTICLE	IF	CITATIONS
1	Theoretical modelling of S-band thulium-doped silica fibre amplifiers. <i>Optical and Quantum Electronics</i> , 2004, 36, 201-212.	3.3	113
2	Theoretical modeling of fiber laser at 810 nm based on thulium-doped silica fibers with enhanced 3H_4 level lifetime. <i>Optics Express</i> , 2011, 19, 2773.	3.4	74
3	All-fiber Ho-doped mode-locked oscillator based on a graphene saturable absorber. <i>Optics Letters</i> , 2016, 41, 2592.	3.3	73
4	Long-period fiber grating as wavelength selective element in double-clad Yb-doped fiber-ring lasers. <i>Laser Physics Letters</i> , 2009, 6, 732-736.	1.4	65
5	Visible and near infra-red up-conversion in Tm^{3+}/Yb^{3+} co-doped silica fibers under 980 nm excitation. <i>Optics Express</i> , 2008, 16, 13781.	3.4	64
6	Self-swept holmium fiber laser near 2100 nm. <i>Optics Express</i> , 2017, 25, 4120.	3.4	53
7	Self-induced laser line sweeping in double-clad Yb-doped fiber-ring lasers. <i>Laser Physics Letters</i> , 2012, 9, 445-450.	1.4	46
8	Silica Optical Fibers Doped with Nanoparticles for Fiber Lasers and Broadband Sources. <i>Current Nanoscience</i> , 2016, 12, 277-290.	1.2	44
9	Numerical Modeling of Pump Absorption in Coiled and Twisted Double-Clad Fibers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2016, 22, 55-62.	2.9	37
10	Enhanced pump absorption efficiency in coiled and twisted double-clad thulium-doped fibers. <i>Optics Express</i> , 2016, 24, 102.	3.4	35
11	Experimental demonstration of novel end-pumping method for double-clad fiber devices. <i>Optics Letters</i> , 2006, 31, 3240.	3.3	34
12	Self-swept erbium fiber laser around 1.56 μ m. <i>Opto-electronics Review</i> , 2018, 26, 29-34.	2.4	31
13	Reflectivity of Superimposed Bragg Gratings Induced by Longitudinal Mode Instabilities in Fiber Lasers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2018, 24, 1-8.	2.9	30
14	Twin-core fiber design and preparation for easy splicing. <i>IEEE Photonics Technology Letters</i> , 2000, 12, 1656-1658.	2.5	28
15	Active Optical Fibers and Components for Fiber Lasers Emitting in the 2 μ m Spectral Range. <i>Materials</i> , 2020, 13, 5177.	2.9	27
16	Thulium-doped silica-based optical fibers for cladding-pumped fiber amplifiers. <i>Optical Materials</i> , 2007, 30, 174-176.	3.6	26
17	Passively Q-switched ytterbium- and chromium-doped all-fiber laser. <i>Applied Optics</i> , 2011, 50, E20.	2.1	25
18	Reflectivity of transient Bragg reflection gratings in fiber laser with laser-wavelength self-sweeping. <i>Optics Express</i> , 2014, 22, 30024.	3.4	25

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19	Nanoparticle and Solution Doping for Efficient Holmium Fiber Lasers. IEEE Photonics Journal, 2019, 11, 1-10.	2.0	25
20	Reverse spontaneous laser line sweeping in ytterbium fiber laser. Laser Physics Letters, 2017, 14, 035102.	1.4	24
21	Mode-field adapter for tapered-fiber-bundle signal and pump combiners. Applied Optics, 2015, 54, 751.	1.8	22
22	Thulium-Doped Silica Fibers with Enhanced Fluorescence Lifetime and Their Application in Ultrafast Fiber Lasers. Fibers, 2018, 6, 66.	4.0	22
23	Fabrication and characterization of solid-core photonic crystal fiber with steering-wheel air-cladding for strong evanescent field overlap. Optics Communications, 2008, 281, 55-60.	2.1	19
24	In vivo testing of a bioresorbable phosphate-based optical fiber. Journal of Biophotonics, 2019, 12, e201800397.	2.3	19
25	Generation of high-repetition-rate pulse trains in a fiber laser through a twin-core fiber. , 2003, , .		18
26	Er/Yb Double-Clad Fiber Laser With fs-Laser Inscribed Plane-by-Plane Chirped FBG Laser Mirrors. IEEE Photonics Technology Letters, 2019, 31, 409-412.	2.5	18
27	YAG Ceramic Nanocrystals Implementation into MCVD Technology of Active Optical Fibers. Applied Sciences (Switzerland), 2018, 8, 833.	2.5	17
28	Erbium-doped twin-core fibre narrow-band filter for fibre lasers. Optical and Quantum Electronics, 2001, 33, 571-581.	3.3	15
29	Microstructure fibers for gas detection. Materials Science and Engineering C, 2006, 26, 317-321.	7.3	15
30	Coherently combined power of 20 W at 2000 nm from a pair of thulium-doped fiber lasers. Laser Physics Letters, 2013, 10, 095104.	1.4	15
31	Fused fiber components for eye-safe spectral region around $2\ \mu\text{m}$. Optical and Quantum Electronics, 2014, 46, 603-611.	3.3	15
32	Broadband thulium-doped fiber ASE source. Optics Letters, 2020, 45, 2164.	3.3	15
33	Modulational-instability β -resonator fiber laser. Optics Letters, 2001, 26, 810.	3.3	14
34	All fiber mode-locked thulium-doped fiber laser using a novel femtosecond-laser-inscribed 45° -plane-by-plane-tilted fiber grating. Laser Physics Letters, 2019, 16, 095104.	1.4	14
35	Self-induced laser line sweeping and self-pulsing in double-clad fiber lasers in Fabry-Perot and unidirectional ring cavities. Proceedings of SPIE, 2012, , .	0.8	13
36	Monolithic Tm-Doped Fiber Laser at 1951 nm With Deep-UV Femtosecond-Induced FBG Pair. IEEE Photonics Technology Letters, 2013, 25, 1623-1625.	2.5	13

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37	Energy transfer coefficients in thulium-doped silica fibers. <i>Optical Materials Express</i> , 2021, 11, 1805.	3.0	13
38	Thulium-doped fibre broadband source for spectral region near 2 micrometers. <i>Opto-electronics Review</i> , 2016, 24, .	2.4	12
39	Comparative Modeling of Infrared Fiber Lasers. <i>Photonics</i> , 2018, 5, 48.	2.0	11
40	Time-domain simulation of power transients in Raman fibre amplifiers. <i>International Journal of Numerical Modelling: Electronic Networks, Devices and Fields</i> , 2004, 17, 165-176.	1.9	10
41	Numerical analysis of pump propagation and absorption in specially tailored double-clad rare-earth doped fiber. <i>Optical and Quantum Electronics</i> , 2015, 47, 3181-3191.	3.3	10
42	Heat treatment and fiber drawing effect on the luminescence properties of RE-doped optical fibers (RE= Yb, Tm, Ho). <i>Optics Express</i> , 2022, 30, 10050.	3.4	10
43	Modelling of a pump-power-controlled gain-locking system for multi-pump wideband Raman fibre amplifiers. <i>IEE Proceedings: Optoelectronics</i> , 2004, 151, 74.	0.8	9
44	Estimation of energy transfer parameters in thulium- and ytterbium-doped silica fibers. , 2008, , .		9
45	Development of a FD-OCT for the inline process metrology in laser structuring systems. <i>Proceedings of SPIE</i> , 2011, , .	0.8	9
46	Sol-gel route to highly transparent (Ho _{0.05} Y _{0.95}) ₂ Ti ₂ O ₇ thin films for active optical components operating at 2 μm. <i>Optical Materials</i> , 2018, 78, 415-420.	3.6	9
47	Impact of shaping optical fiber preforms based on grinding and a CO ₂ laser on the inner-cladding losses of shaped double-clad fibers. <i>Optics Express</i> , 2020, 28, 13601.	3.4	9
48	Erbium and Al ₂ O ₃ nanocrystals-doped silica optical fibers. <i>Bulletin of the Polish Academy of Sciences: Technical Sciences</i> , 2014, 62, 641-646.	0.8	8
49	The determination of the refractive index profile in \hat{L} -profile optical fibres by intermodal interference investigation. <i>Optik</i> , 2004, 115, 86-88.	2.9	7
50	Er-doped twin-core fibre coupler as a saturable-absorber-based narrow-band filter for fibre lasers. <i>European Physical Journal D</i> , 1999, 49, 889-894.	0.4	6
51	202 km repeaterless transmission of 2 Å–10 GE plus 2 Å–1 GE channels over standard single mode fibre. <i>Optics Communications</i> , 2004, 235, 269-274.	2.1	6
52	Effect of pump wavelength on self-induced laser line sweeping in Yb-doped fiber laser. , 2013, , .		6
53	<title>Optimization of erbium-ytterbium fibre laser with simple double-clad structure</title> . , 2006, , .		5
54	Double-clad rare-earth-doped fiber with cross-section tailored for splicing to the pump and signal fibers: analysis of pump propagation. <i>Proceedings of SPIE</i> , 2013, , .	0.8	5

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55	Characterization of holmium fibers with various concentrations for fiber laser applications around 2.1 μm . , 2016, , .		5
56	Challenges and future trends in fiber lasers. , 2016, , .		5
57	Sol-gel route to nanocrystalline $\text{Eu}_2\text{Ti}_2\text{O}_7$ films with tailored structural and optical properties. Journal of the American Ceramic Society, 2019, 102, 6713-6723.	3.8	5
58	High-power laser testing of calcium-phosphate-based bioresorbable optical fibers. Optical Materials Express, 2021, 11, 2049.	3.0	5
59	<title>Characterization of a thulium-doped silica-based optical fibre for S-band amplification</title>. , 2006, 6180, 181.		4
60	Efficient Pump Absorption in Twisted Double Clad Thulium-Doped Fibers Drawn of CO_2 Laser Shaped Preform. , 2019, , .		4
61	Simulations of Pump Absorption in Tandem-Pumped Octagon Double-Clad Fibers. IEEE Photonics Journal, 2021, 13, 1-14.	2.0	4
62	Self-Swept Holmium-Doped Fiber Laser near 2100 nm. , 2016, , .		4
63	Self-Q-switched Regime of Fiber Lasers as a Transition from Self-Induced Laser Line Sweeping. , 2014, , .		4
64	Transmission of 2x10 GE channels over 252 km without in-line EDFA. , 0, , .		3
65	Amplifier Performance of Double-Clad Er/Yb-Doped Fiber with Cross-Section Tailored for Direct Splicing to the Pump and Signal Fibers. , 2007, , .		3
66	The influence of nanostructured optical fiber core matrix on the optical properties of EDFA. Proceedings of SPIE, 2013, , .	0.8	3
67	Reliability of aircraft multimode optical networks. Optical Engineering, 2014, 53, 096102.	1.0	3
68	Spontaneous laser-line sweeping in Ho-doped fiber laser. , 2017, , .		3
69	Evaluation of energy transfer coefficients in Tm-doped fibers for fiber lasers. , 2017, , .		3
70	Monolithic Er/Yb double-clad fibre laser with FBG inscribed using the direct-write plane-by-plane fs-laser inscription method. , 2018, , .		3
71	Experimental investigation and characterization of fabrication shaped clad optical fiber by thermally polishing optical fiber preforms with CO_2 laser. , 2019, , .		3
72	Active Optical Fibers Doped with Ceramic Nanocrystals. Advances in Electrical and Electronic Engineering, 2015, 12, .	0.3	3

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73	Spectroscopic characterization of holmium-doped optical fibers for fiber lasers. , 2019, , .		3
74	Broadly tunable laser based on novel metallic resonant leaky-mode diffraction grating. Optics Express, 2020, 28, 4340.	3.4	3
75	Title is missing!. Journal of Sol-Gel Science and Technology, 2000, 19, 293-296.	2.4	2
76	10 gigabit Ethernet long-haul transmission without in-line EDFAs. Annales Des Telecommunications/Annals of Telecommunications, 2006, 61, 478-488.	2.5	2
77	Distributed gain in a Tm-doped silica fiber - experiment and modeling. , 2007, , .		2
78	The modified interferometer for measurement of the chromatic dispersion in PCFs. , 2007, , .		2
79	Thulium-doped silica fibers with enhanced $3H_4$ level lifetime: modelling the devices for 800-820 nm band. , 2010, , .		2
80	Preparation and characterization of highly thulium- and alumina-doped optical fibers for single-frequency fiber lasers. , 2011, , .		2
81	Thulium-doped silica fibers with enhanced $3H_4$ level lifetime for fiber lasers and amplifiers. , 2012, , .		2
82	Thulium-doped optical fibers and components for fiber lasers in 2 μm spectral range. , 2014, , .		2
83	Preparation of optical fibers with non-circular cross-section for fiber lasers and amplifiers. Proceedings of SPIE, 2015, , .	0.8	2
84	Identification of zero density of states domains in band gap fibers using a single binary function. Optics Express, 2016, 24, 16212.	3.4	2
85	Measurement of refractive index profile of non-symmetric, complex silica preforms with high refractive index differences. , 2016, , .		2
86	Enhanced Pump Absorption Efficiency in Coiled and Twisted Double-Clad Fibers for Fiber Lasers. , 2019, , .		2
87	Thulium-doped optical fibers for fiber lasers. , 2017, , .		2
88	Monolithic thulium-doped fiber laser. , 2017, , .		2
89	Novel coupling element for end-pumping of double-clad fibres. , 2005, , .		2
90	Holmium-doped fibers for efficient fiber lasers at 2100 nm. , 2020, , .		2

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91	Numerical modelling of pump absorption in coiled and twisted double-clad fiber: a prospect for tandem pumped fiber laser. , 2020, , .		2
92	Three- and four-wave model of modulation instability fibre laser. Journal of Optics, 2002, 4, S135-S139.	1.5	1
93	Self-induced laser line sweeping and self-pulsing in rare-earth doped fiber lasers. , 2012, , .		1
94	Wideband and high-power light sources for in-line interferometric diagnostics of laser structuring systems. Proceedings of SPIE, 2012, , .	0.8	1
95	Monolithic thulium-doped fiber laser with UV femtosecond-laser-induced fiber-Bragg-grating pair. , 2013, , .		1
96	Transient-fiber-Bragg grating spectra in self-swept Fabry-Perot fiber lasers. , 2015, , .		1
97	Characterization of fluorescence lifetime of Tm-doped fibers with increased quantum conversion efficiency. , 2015, , .		1
98	Optimized mode-field adapter for low-loss fused fiber bundle signal and pump combiners. Proceedings of SPIE, 2015, , .	0.8	1
99	Modal-field spectra analysis of pump absorption efficiency in double-clad rare-earth doped fibers (Conference Presentation). , 2017, , .		1
100	Spectral properties of thulium doped optical fibers for fiber lasers around 2 micrometers. Proceedings of SPIE, 2017, , .	0.8	1
101	Self-sweeping of laser wavelength and associated mode instabilities in fiber lasers. , 2017, , .		1
102	Enhancement of pump absorption efficiency by bending and twisting of double clad rare earth doped fibers (Conference Presentation). , 2017, , .		1
103	Silica- and germanate-based rare earth doped glasses for fiber lasers. , 2018, , .		1
104	High-power laser tests of phosphate glass-based bioresorbable optical fibers transmission. , 2019, , .		1
105	Pump absorption in coiled and twisted double-clad hexagonal fiber: effect of launching conditions and core location. , 2018, , .		1
106	Dynamic gratings induced by mode instabilities in fiber lasers. , 2018, , .		1
107	Femtosecond laser plane-by-plane Bragg gratings for monolithic Thulium-doped fibre laser operating at 1970 nm. , 2019, , .		1
108	Influence of fibre length on intermodal interference in PCF. , 2005, , .		0

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109	<title>Microstructure fibers for the development of fiber lasers</title> . , 2006, , .		0
110	Laser performance of double-clad Er/Yb doped fiber with cross-section tailored for direct splicing to the pump and signal fibers. , 2006, , .		0
111	Influence of Si-Al-Ge-Sb Matricies on Tm ³⁺ Excitation Levels. Materials Science Forum, 2008, 587-588, 293-297.	0.3	0
112	Extension of the double-clad Yb-doped fiber laser oscillation range thanks to long-period fiber grating filters. , 2009, , .		0
113	Tomography reconstruction of geometry and refractive index profile of highly asymmetric optical fiber preforms. Proceedings of SPIE, 2010, , .	0.8	0
114	Numerical modeling of all-fiber passively Q-switched fiber lasers. , 2012, , .		0
115	Characterization of double-clad thulium-doped fiber with increased quantum conversion efficiency. , 2015, , .		0
116	Coherent sources for mid-infrared laser spectroscopy. Proceedings of SPIE, 2016, , .	0.8	0
117	Development and characterization of highly-nonlinear multicomponent glass photonic crystal fibers for mid-infrared applications. Proceedings of SPIE, 2017, , .	0.8	0
118	All-Fiber Mode-Locked Thulium Doped Fiber Laser using a Novel Femtosecond Laser Inscribed 45° Tilted Fiber Grating. , 2019, , .		0
119	Nanocrystalline Ceramic Phosphors for High-Power Lasers Operating at 2¼m. , 2019, , .		0
120	Double-clad fibers for high-power fiber lasers. EPJ Web of Conferences, 2020, 243, 02001.	0.3	0
121	Double-Clad Active MOF and Shaped Optical Fibers for Fiber Lasers and Amplifiers. , 2020, , .		0
122	Enhanced Pump Absorption Efficiency in Coiled and Twisted Double-Clad Thulium-Doped Fibers. , 2015, , .		0
123	Biomedical and sensing applications of a multi-mode biodegradable phosphate-based optical fiber. , 2018, , .		0
124	Comparative study of infrared fiber laser models. , 2018, , .		0
125	High-energy subpicosecond 2.1-um fiber laser. , 2018, , .		0
126	Monolithic fibre lasers developed using the plane-by-plane femtosecond laser inscription method. , 2019, , .		0

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127	Heat Treatment and Fiber Drawing Effect on the Fluorescence Lifetime of RE3+-doped Preforms and Fibers. , 2021, , .		0
128	The effect of thermal and mechanical processing on the fluorescence lifetime of Yb-doped silica preforms and fibers for use in nanostructured-core fiber lasers. , 2022, , .		0