

Philippe Grelu

List of Publications by Year in descending order

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153
papers

8,254
citations

47006

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165
all docs

165
docs citations

165
times ranked

2571
citing authors

#	ARTICLE	IF	CITATIONS
1	Dissipative solitons for mode-locked lasers. <i>Nature Photonics</i> , 2012, 6, 84-92.	31.4	1,362
2	Dissipative Rogue Waves Generated by Chaotic Pulse Bunching in a Mode-Locked Laser. <i>Physical Review Letters</i> , 2012, 108, 233901.	7.8	368
3	Real-Time Observation of Internal Motion within Ultrafast Dissipative Optical Soliton Molecules. <i>Physical Review Letters</i> , 2017, 118, 243901.	7.8	341
4	Phase-locked soliton pairs in a stretched-pulse fiber laser. <i>Optics Letters</i> , 2002, 27, 966.	3.3	247
5	Soliton rains in a fiber laser: An experimental study. <i>Physical Review A</i> , 2010, 81, .	2.5	236
6	Roadmap on optical rogue waves and extreme events. <i>Journal of Optics (United Kingdom)</i> , 2016, 18, 063001.	2.2	225
7	Rains of solitons in a fiber laser. <i>Optics Express</i> , 2009, 17, 11776.	3.4	214
8	Bifurcations and multiple-period soliton pulsations in a passively mode-locked fiber laser. <i>Physical Review E</i> , 2004, 70, 066612.	2.1	207
9	Optical soliton molecular complexes in a passively mode-locked fibre laser. <i>Nature Communications</i> , 2019, 10, 830.	12.8	192
10	Roadmap to ultra-short record high-energy pulses out of laser oscillators. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2008, 372, 3124-3128.	2.1	189
11	Versatile rogue waves in scalar, vector, and multidimensional nonlinear systems. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2017, 50, 463001.	2.1	170
12	Dissipative rogue waves: Extreme pulses generated by passively mode-locked lasers. <i>Physical Review E</i> , 2011, 84, 016604.	2.1	168
13	Baseband modulation instability as the origin of rogue waves. <i>Physical Review A</i> , 2015, 91, .	2.5	150
14	Multimode nonlinear fiber optics, a spatiotemporal avenue. <i>APL Photonics</i> , 2019, 4, .	5.7	142
15	Dissipative soliton resonance as a guideline for high-energy pulse laser oscillators. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2010, 27, 2336.	2.1	137
16	Passively mode-locked erbium-doped double-clad fiber laser operating at the 322nd harmonic. <i>Optics Letters</i> , 2009, 34, 2120.	3.3	136
17	Quantized separations of phase-locked soliton pairs in fiber lasers. <i>Optics Letters</i> , 2003, 28, 1757.	3.3	128
18	Rogue waves among noiselike-pulse laser emission: An experimental investigation. <i>Physical Review A</i> , 2014, 90, .	2.5	125

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19	Quantum Nondemolition Measurements using Cold Trapped Atoms. <i>Physical Review Letters</i> , 1997, 78, 634-637.	7.8	122
20	Vibrating soliton pairs in a mode-locked laser cavity. <i>Optics Letters</i> , 2006, 31, 2115.	3.3	106
21	Relative phase locking of pulses in a passively mode-locked fiber laser. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2003, 20, 863.	2.1	99
22	Soliton pairs in a fiber laser: from anomalous to normal average dispersion regime. <i>Optics Express</i> , 2003, 11, 2238.	3.4	96
23	Fiber laser mode locked through an evolutionary algorithm. <i>Optica</i> , 2015, 2, 275.	9.3	96
24	Universal soliton pattern formations in passively mode-locked fiber lasers. <i>Optics Letters</i> , 2011, 36, 1545.	3.3	95
25	Multi-gigahertz repetition-rate-selectable passive harmonic mode locking of a fiber laser. <i>Optics Express</i> , 2013, 21, 10897.	3.4	95
26	Bidirectional Soliton Rain Dynamics Induced by Casimir-Like Interactions in a Graphene Mode-Locked Fiber Laser. <i>Physical Review Letters</i> , 2018, 121, 133902.	7.8	94
27	Dissipative soliton resonance in a passively mode-locked fiber laser. <i>Optics Letters</i> , 2011, 36, 1146.	3.3	91
28	Soliton complexes in dissipative systems: Vibrating, shaking, and mixed soliton pairs. <i>Physical Review E</i> , 2007, 75, 016613.	2.1	90
29	Dissipative soliton interactions inside a fiber laser cavity. <i>Optical Fiber Technology</i> , 2005, 11, 209-228.	2.7	85
30	Vector dynamics of incoherent dissipative optical solitons. <i>Optica</i> , 2017, 4, 1239.	9.3	82
31	Dark- and bright-rogue-wave solutions for media with long-wave "short-wave resonance. <i>Physical Review E</i> , 2014, 89, 011201.	2.1	80
32	Generation of wavelength-tunable soliton molecules in a 2-1/4m ultrafast all-fiber laser based on nonlinear polarization evolution. <i>Optics Letters</i> , 2016, 41, 2254.	3.3	75
33	Observation of a nonlinear microfiber resonator. <i>Optics Letters</i> , 2008, 33, 1500.	3.3	70
34	Group interactions of dissipative solitons in a laser cavity: the case of 2+1. <i>Optics Express</i> , 2004, 12, 3184.	3.4	64
35	Light bullets and dynamic pattern formation in nonlinear dissipative systems. <i>Optics Express</i> , 2005, 13, 9352.	3.4	62
36	Generation of Bound States of Three Ultrashort Pulses With a Passively Mode-Locked High-Power Yb-Doped Double-Clad Fiber Laser. <i>IEEE Photonics Technology Letters</i> , 2004, 16, 1274-1276.	2.5	61

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37	Multisoliton states and pulse fragmentation in a passively mode-locked fibre laser. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2004, 6, S271-S278.	1.4	61
38	Optical bullets and "rockets" in nonlinear dissipative systems and their transformations and interactions. <i>Optics Express</i> , 2006, 14, 4013.	3.4	56
39	Spatiotemporal optical solitons in nonlinear dissipative media: From stationary light bullets to pulsating complexes. <i>Chaos</i> , 2007, 17, 037112.	2.5	56
40	Toward an autsetting mode-locked fiber laser cavity. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2016, 33, 825.	2.1	55
41	Peregrine Solitons Beyond the Threefold Limit and Their Two-Soliton Interactions. <i>Physical Review Letters</i> , 2018, 121, 104101.	7.8	55
42	Coexisting rogue waves within the (2+1)-component long-wave"short-wave resonance. <i>Physical Review E</i> , 2014, 90, 033203.	2.1	54
43	Dark three-sister rogue waves in normally dispersive optical fibers with random birefringence. <i>Optics Express</i> , 2014, 22, 27632.	3.4	52
44	Rains of solitons in a figure-of-eight passively mode-locked fiber laser. <i>Applied Physics B: Lasers and Optics</i> , 2014, 116, 771-775.	2.2	52
45	Real-time characterization of optical soliton molecule dynamics in an ultrafast thulium fiber laser. <i>Optics Letters</i> , 2018, 43, 4965.	3.3	51
46	Saturable plasmonic metasurfaces for laser mode locking. <i>Light: Science and Applications</i> , 2020, 9, 50.	16.6	50
47	Demonstration of a reef knot microfiber resonator. <i>Optics Express</i> , 2009, 17, 6224.	3.4	49
48	Noise-like pulses generated at high harmonics in a partially-mode-locked km-long Raman fiber laser. <i>Applied Physics B: Lasers and Optics</i> , 2012, 106, 283-287.	2.2	48
49	Dissipative rogue wave generation in multiple-pulsing mode-locked fiber laser. <i>Journal of Optics (United Kingdom)</i> , 2013, 15, 064005.	2.2	46
50	Chirped soliton solutions for the generalized nonlinear Schrödinger equation with polynomial nonlinearity and non-Kerr terms of arbitrary order. <i>Journal of Optics (United Kingdom)</i> , 2016, 18, 075504.	2.2	46
51	Chirped Peregrine solitons in a class of cubic-quintic nonlinear Schrödinger equations. <i>Physical Review E</i> , 2016, 93, 062202.	2.1	41
52	Rogue-wave bullets in a composite (2+1)D nonlinear medium. <i>Optics Express</i> , 2016, 24, 15251.	3.4	40
53	On the possibility of observing bound soliton pairs in a wave-breaking-free mode-locked fiber laser. <i>Optics Letters</i> , 2007, 32, 343.	3.3	39
54	Impact of slow gain dynamics on soliton molecules in mode-locked fiber lasers. <i>Optics Letters</i> , 2012, 37, 175.	3.3	38

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55	High-Energy Passive Mode-Locking of Fiber Lasers. <i>International Journal of Optics</i> , 2012, 2012, 1-17.	1.4	38
56	Third-harmonic generation in optical microfibers: From silica experiments to highly nonlinear glass prospects. <i>Optics Communications</i> , 2012, 285, 3493-3497.	2.1	38
57	Optical rogue waves in parametric three-wave mixing and coherent stimulated scattering. <i>Physical Review A</i> , 2015, 92, .	2.5	36
58	Watch-hand-like optical rogue waves in three-wave interactions. <i>Optics Express</i> , 2015, 23, 349.	3.4	36
59	Polarization-domain-wall complexes in fiber lasers. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2013, 30, 211.	2.1	35
60	Optical bullets and double bullet complexes in dissipative systems. <i>Physical Review E</i> , 2006, 74, 046612.	2.1	34
61	Multipole solitary wave solutions of the higher-order nonlinear Schrödinger equation with quintic non-Kerr terms. <i>Optics Communications</i> , 2013, 309, 71-79.	2.1	34
62	Fundamental Peregrine Solitons of Ultrastrong Amplitude Enhancement through Self-Steepening in Vector Nonlinear Systems. <i>Physical Review Letters</i> , 2020, 124, 113901.	7.8	34
63	Stationary and pulsating dissipative light bullets from a collective variable approach. <i>Physical Review E</i> , 2009, 79, 026609.	2.1	33
64	Manipulating dissipative soliton ensembles in passively mode-locked fiber lasers. <i>Optical Fiber Technology</i> , 2014, 20, 562-574.	2.7	33
65	Quantum-nondemolition measurements using cold trapped atoms: Comparison between theory and experiment. <i>Physical Review A</i> , 1998, 57, 2980-2995.	2.5	32
66	Stabilisation of modelocking in fibre ring laser through pulse bunching. <i>Electronics Letters</i> , 2001, 37, 745.	1.0	32
67	Theoretical study of microfiber resonator devices exploiting a phase shift. <i>Journal of Optics</i> , 2008, 10, 025303.	1.5	31
68	Dynamics of the transition from polarization disorder to antiphase polarization domains in vector fiber lasers. <i>Physical Review A</i> , 2014, 89, .	2.5	30
69	Dipole soliton solution for the homogeneous high-order nonlinear Schrödinger equation with cubic and quintic-septic non-Kerr terms. <i>Applied Mathematical Modelling</i> , 2015, 39, 1300-1307.	4.2	30
70	Nonlinear absorption and dispersion of cold Rb 87 atoms. <i>Optics Communications</i> , 1997, 137, 420-426.	2.1	27
71	DISSIPATIVE SOLITONS: PRESENT UNDERSTANDING, APPLICATIONS AND NEW DEVELOPMENTS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2009, 19, 2621-2636.	1.7	24
72	Adjustable high-repetition-rate pulse trains in a passively-mode-locked fiber laser. <i>Physical Review A</i> , 2016, 94, .	2.5	24

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73	General rogue wave solutions of the coupled Fokas–Lenells equations and non-recursive Darboux transformation. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2019, 475, 20180806.	2.1	24
74	Buildup of incoherent dissipative solitons in ultrafast fiber lasers. Physical Review Research, 2020, 2, .	3.6	24
75	Potentialities of glass air-clad micro- and nanofibers for nonlinear optics. Journal of the Optical Society of America B: Optical Physics, 2010, 27, 394.	2.1	23
76	Models for supercontinuum generation beyond the slowly-varying-envelope approximation. Physical Review A, 2014, 90, .	2.5	23
77	Optical Peregrine rogue waves of self-induced transparency in a resonant erbium-doped fiber. Optics Express, 2017, 25, 29687.	3.4	23
78	Optical spectra beyond the amplifier bandwidth limitation in dispersion-managed mode-locked fiber lasers. Optics Express, 2011, 19, 2959.	3.4	22
79	Numerical Maps for Fiber Lasers Mode Locked with Nonlinear Polarization Evolution: Comparison with Semi-Analytical Models. Fiber and Integrated Optics, 2008, 27, 320-340.	2.5	21
80	Dissipative shock waves in all-normal-dispersion mode-locked fiber lasers. Optics Letters, 2014, 39, 263.	3.3	21
81	Complementary optical rogue waves in parametric three-wave mixing. Optics Express, 2016, 24, 5886.	3.4	21
82	Pattern formation in 2-1/4m Tm Mamyshev oscillators associated with the dissipative Faraday instability. Photonics Research, 2019, 7, 1287.	7.0	20
83	Near-field characterization of glass microfibers on a low-index substrate. Applied Physics B: Lasers and Optics, 2010, 101, 291-295.	2.2	19
84	Dark spatial solitary waves in a cubic-quintic-septimal nonlinear medium. Physical Review A, 2017, 95, .	2.5	19
85	Omnipresent coexistence of rogue waves in a nonlinear two-wave interference system and its explanation by modulation instability. Physical Review Research, 2021, 3, .	3.6	14
86	Autosetting Mode-Locked Laser Using an Evolutionary Algorithm and Time-Stretch Spectral Characterization. IEEE Journal of Selected Topics in Quantum Electronics, 2020, 26, 1-8.	2.9	14
87	On-demand generation of soliton molecules through evolutionary algorithm optimization. Optics Letters, 2022, 47, 134.	3.3	14
88	Vibrating and shaking soliton pairs in dissipative systems. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 364, 413-416.	2.1	13
89	Complete intensity and phase characterisation of optical pulse trains at terahertz repetition rates. Electronics Letters, 1999, 35, 2042.	1.0	12
90	DISSIPATIVE SOLITON PULSATIONS WITH PERIODS BEYOND THE LASER CAVITY ROUND TRIP TIME. Journal of Nonlinear Optical Physics and Materials, 2005, 14, 177-194.	1.8	12

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91	Superlocalization Reveals Long-Range Synchronization of Vibrating Soliton Molecules. Physical Review Letters, 2022, 128, .	7.8	12
92	Impact of structural asymmetry on the efficiency of triple-core photonic crystal fiber for all-optical logic operation. Journal of the Optical Society of America B: Optical Physics, 2015, 32, 1920.	2.1	11
93	Generation of optical domain-wall structures from modulational instability in a bimodal fiber. Physical Review E, 1999, 60, 994-1000.	2.1	10
94	Temporal Multi-Soliton Complexes Generated by Passively Mode-Locked Lasers. Lecture Notes in Physics, 2005, , 207-239.	0.7	10
95	Subsideband Generation Associated with Period-N Pulsations in Tm Soliton Fiber Lasers. IEEE Photonics Journal, 2017, 9, 1-8.	2.0	10
96	Spatial modulation instability of coupled surface plasmon polaritons in a dielectricâ€metalâ€dielectric structure. Journal of the Optical Society of America B: Optical Physics, 2017, 34, 198.	2.1	10
97	Multistability and switching in oppositely-directed saturated coupler. Optics Communications, 2018, 416, 145-151.	2.1	8
98	General rogue wave solutions under SU(2) transformation in the vector Chenâ€Leeâ€Liu nonlinear Schrödinger equation. Physica D: Nonlinear Phenomena, 2022, 434, 133204.	2.8	8
99	Near-field control of optical bistability in a nanocavity. Physical Review B, 2009, 80, .	3.2	7
100	Effect of Temperature on Supercontinuum Generation in Water-Core Photonic Crystal Fiber. IEEE Photonics Technology Letters, 2016, 28, 1209-1212.	2.5	7
101	Cross-phase modulational instability induced by Raman scattering in highly birefringent fiber. Optics Letters, 2013, 38, 5327.	3.3	6
102	Strength and weaknesses of modeling the dynamics of mode-locked lasers by means of collective coordinates. Journal of Optics (United Kingdom), 2016, 18, 075501.	2.2	6
103	Few-cycle solitons in supercontinuum generation dynamics. European Physical Journal: Special Topics, 2016, 225, 2435-2451.	2.6	4
104	Generating ultra-short high-energy pulses using dissipative soliton resonance: Pulse compression schemes. , 2011, , .		3
105	Automatic time delay optimization between the pump and seed pulses of a broadly tunable femtosecond optical parametric amplifier. Applied Optics, 1998, 37, 2411.	2.1	2
106	Near-field control of optical bistability in a nanocavity. , 2009, , .		2
107	Impact of Raman scattering on pulse dynamics in a fiber laser with narrow gain bandwidth. Journal of Optics (United Kingdom), 2018, 20, 065502.	2.2	2
108	Optical Soliton Molecules in Fiber Lasers. , 2006, , .		1

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109	Dissipative solitons for real world optical solitons. , 2007, , .		1
110	High order harmonic passive mode-locking in double-clad fiber laser. , 2009, , .		1
111	Dissipative solitons for mode-locked fiber lasers. , 2010, , .		1
112	Dissipative Solitons, a Novel Paradigm for Mode-locked Lasers. , 2013, , .		1
113	Rogue wave statistics from a noise-like-pulse laser. , 2014, , .		1
114	An all-optical NOT logic operation based on a chloroform filled geometrically asymmetric triangular triple-core PCF. , 2015, , .		1
115	Smart lasers tame complex spatiotemporal cavity dynamics. Light: Science and Applications, 2020, 9, 188.	16.6	1
116	Transition from Polarization Disorder to Antiphase Polarization Domains in a Fiber Laser. , 2014, , .		1
117	Collective coordinate approach for the dynamics of light pulses in fiber ring lasers. , 2014, , .		1
118	Quantum non-demolition measurements using cold atoms in an optical cavity. Journal of Modern Optics, 1997, 44, 1967-1984.	1.3	0
119	phase-locked soliton pairs in a fiber ring laser. , 2002, , NLMA2.		0
120	Discrete set of separations between phase-locked soliton pairs in a passively mode-locked fiber laser. , 2003, , .		0
121	Generation of interacting pulse pairs in passively mode-locked fiber lasers. , 0, , .		0
122	Soliton pulsations in a fiber laser cavity with periods beyond the round trip time. , 0, , .		0
123	<title>Dissipative temporal solitons in a laser cavity</title>. , 2006, 6255, 36.		0
124	Stationary and Pulsating Dissipative Optical Bullets. , 2006, , .		0
125	Regions of Existence and Transformations of (3+1)-D Dissipative Optical Solitons. , 2006, , .		0
126	Highly-chirped similaritons generation from a mode-locked fiber laser. , 2007, , .		0

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127	Interactions and transformations of dissipative optical bullets. , 2007, , .		0
128	On the possibility of observing bound soliton pairs in a "wave-breaking-free" mode-locked fiber laser. , 2007, , .		0
129	Vibrating temporal soliton pairs. , 2007, , .		0
130	Bistable device based on the Kerr effect in a microfiber resonator. , 2007, , .		0
131	Sub-nanosecond nonlinear pulse shaping in microfiber resonators. , 2009, , .		0
132	Pulsating dissipative light bullets. , 2009, , .		0
133	Complexes and molecules of dissipative solitons in mode-locked lasers. , 2009, , .		0
134	Potentialities of microfibers for non linear optics. , 2010, , .		0
135	High-harmonic km-long self-pulsed Raman fiber laser. , 2011, , .		0
136	Near-field control of optical bistability in a nanocavity. , 2011, , .		0
137	Dissipative rogue waves through multi-pulse collisions in a fiber laser. , 2013, , .		0
138	Ultra-high repetition-rate-selectable passive harmonic mode locking of a fiber laser. , 2013, , .		0
139	Polarization-domain-wall complexes in fiber lasers. , 2013, , .		0
140	Dark-and-bright rogue waves in long wave-short wave resonance. , 2014, , .		0
141	Temperature tunable supercontinuum spectrum in visible region using water-core PCF. , 2016, , .		0
142	Buildup of incoherent laser pulses resolved by real-time spectral imaging. , 2018, , .		0
143	Buildup of Noise-Like Pulses in Ultrafast Fiber Lasers. , 2019, , .		0
144	Autosetting Mode-locked Laser with Genetic Algorithm Optimization and Advanced Intracavity Controls. , 2021, , .		0

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145	Slow and Fast Nonlinearities in Microfiber Resonators. , 2008, , .		0
146	Reef Knot Microfiber Resonators. , 2008, , .		0
147	Effect of Slow Gain Dynamics in Mode-Locked Fiber Lasers: Chirped Soliton Molecules. , 2012, , .		0
148	Dissipative rogue wave generation from a mode-locked fiber laser experiment. , 2012, , .		0
149	Statistical description of soliton clustering in fiber lasers with slow-gain dynamics. , 2014, , .		0
150	Influence of geometrical asymmetry on logical output of a triple core PCF. , 2016, , .		0
151	Bistability in oppositely directed coupler with negative index material channel. , 2018, , .		0
152	Optical Peregrine Rogue Waves in Self-Induced Transparent Media. , 2018, , .		0
153	Long-range synchronization of soliton molecules in fiber ring laser cavity. , 2020, , .		0