

# Valery E Lobanov

## List of Publications by Year in descending order

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134  
papers

1,998  
citations

257357

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243529

44  
g-index

135  
all docs

135  
docs citations

135  
times ranked

984  
citing authors

#	ARTICLE	IF	CITATIONS
1	Universal dynamics and deterministic switching of dissipative Kerr solitons in optical microresonators. <i>Nature Physics</i> , 2017, 13, 94-102.	6.5	331
2	Self-injection locking of a laser diode to a high-Q WGM microresonator. <i>Optics Express</i> , 2017, 25, 28167.	1.7	164
3	Frequency combs and platons in optical microresonators with normal GVD. <i>Optics Express</i> , 2015, 23, 7713.	1.7	146
4	Fundamental, Multipole, and Half-Vortex Gap Solitons in Spin-Orbit Coupled Bose-Einstein Condensates. <i>Physical Review Letters</i> , 2014, 112, 180403.	2.9	128
5	Dynamics of soliton self-injection locking in optical microresonators. <i>Nature Communications</i> , 2021, 12, 235.	5.8	86
6	Spectrum collapse, narrow linewidth, and Bogatov effect in diode lasers locked to high-Q optical microresonators. <i>Optics Express</i> , 2018, 26, 30509.	1.7	74
7	Billion Q-factor in silicon WGM resonators. <i>Optica</i> , 2018, 5, 1525.	4.8	59
8	Spectral Purification of Microwave Signals with Disciplined Dissipative Kerr Solitons. <i>Physical Review Letters</i> , 2019, 122, 013902.	2.9	58
9	Generation of platons and frequency combs in optical microresonators with normal GVD by modulated pump. <i>Europhysics Letters</i> , 2015, 112, 54008.	0.7	57
10	Stabilization of spatiotemporal solitons in Kerr media by dispersive coupling. <i>Optics Letters</i> , 2015, 40, 1045.	1.7	52
11	Stable radially symmetric and azimuthally modulated vortex solitons supported by localized gain. <i>Optics Letters</i> , 2011, 36, 85.	1.7	48
12	Harmonization of chaos into a soliton in Kerr frequency combs. <i>Optics Express</i> , 2016, 24, 27382.	1.7	48
13	Modulational instability and frequency combs in whispering-gallery-mode microresonators with backscattering. <i>Physical Review A</i> , 2020, 101, .	1.0	43
14	Dissipative Kerr solitons and Cherenkov radiation in optical microresonators with third-order dispersion. <i>Physical Review A</i> , 2017, 95, .	1.0	41
15	Optimization of Laser Stabilization via Self-Injection Locking to a Whispering-Gallery-Mode Microresonator. <i>Physical Review Applied</i> , 2020, 14, .	1.5	41
16	Generation and dynamics of solitonic pulses due to pump amplitude modulation at normal group-velocity dispersion. <i>Physical Review A</i> , 2019, 100, .	1.0	37
17	Raman-Kerr frequency combs in microresonators with normal dispersion. <i>Optics Express</i> , 2017, 25, 31148.	1.7	36
18	Solitons supported by spatially inhomogeneous nonlinear losses. <i>Optics Express</i> , 2012, 20, 2657.	1.7	35

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19	Numerical study of solitonic pulse generation in the self-injection locking regime at normal and anomalous group velocity dispersion. <i>Optics Express</i> , 2020, 28, 38892.	1.7	35
20	Dynamics of platicons due to third-order dispersion. <i>European Physical Journal D</i> , 2017, 71, 1.	0.6	32
21	Thermally induced generation of platicons in optical microresonators. <i>Optics Letters</i> , 2021, 46, 2380.	1.7	31
22	Total reflection, frequency, and velocity tuning in optical pulse collision in nonlinear dispersive media. <i>Physical Review A</i> , 2010, 82, .	1.0	28
23	Light Bullets by Synthetic Diffraction-Dispersion Matching. <i>Physical Review Letters</i> , 2010, 105, 033901.	2.9	26
24	Stable bright and vortex solitons in photonic crystal fibers with inhomogeneous defocusing nonlinearity. <i>Optics Letters</i> , 2012, 37, 1799.	1.7	26
25	Nonlinear reflection of optical beams in the media with a thermal nonlinearity. <i>Laser Physics</i> , 2009, 19, 1112-1116.	0.6	24
26	Microresonator and Laser Parameter Definition via Self-Injection Locking. <i>Physical Review Applied</i> , 2020, 14, .	1.5	24
27	Rotating vortex solitons supported by localized gain. <i>Optics Letters</i> , 2011, 36, 1936.	1.7	23
28	Vortex twins and anti-twins supported by multiring gain landscapes. <i>Optics Letters</i> , 2011, 36, 3783.	1.7	15
29	Asymmetric solitons and domain walls supported by inhomogeneous defocusing nonlinearity. <i>Optics Letters</i> , 2012, 37, 5000.	1.7	15
30	Solitons supported by singular spatial modulation of the Kerr nonlinearity. <i>Physical Review A</i> , 2012, 85, .	1.0	15
31	Self-Injection Locking of a Gain-Switched Laser Diode. <i>Physical Review Applied</i> , 2021, 15, .	1.5	14
32	Stable vortex-soliton tori with multiple nested phase singularities in dissipative media. <i>Physical Review A</i> , 2012, 85, .	1.0	13
33	Stable nonlinear amplification of solitons without gain saturation. <i>Europhysics Letters</i> , 2012, 97, 44003.	0.7	13
34	Parametric reflection upon cascade interaction of focused optical beams. <i>Quantum Electronics</i> , 2008, 38, 951-955.	0.3	12
35	Inhibition of light tunneling for multichannel excitations in longitudinally modulated waveguide arrays. <i>Physical Review A</i> , 2010, 81, .	1.0	12
36	Anderson localization of light with topological dislocations. <i>Physical Review A</i> , 2013, 88, .	1.0	12

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37	Dissipative quadratic solitons supported by a localized gain. <i>Physical Review A</i> , 2014, 90, .	1.0	11
38	General quasi-nonspreading linear three-dimensional wave packets. <i>Optics Letters</i> , 2011, 36, 2176.	1.7	10
39	Generation and properties of dissipative Kerr solitons and platicons in optical microresonators with backscattering. <i>Optics Express</i> , 2020, 28, 36544.	1.7	9
40	Repulsion and total reflection with mismatched three-wave interaction of noncollinear optical beams in quadratic media. <i>Physical Review A</i> , 2011, 84, .	1.0	8
41	Fundamental and vortex dissipative quadratic solitons supported by spatially localized gain. <i>Physical Review A</i> , 2022, 105, .	1.0	8
42	Mirror-Assisted Self-Injection Locking of a Laser to a Whispering-Gallery-Mode Microresonator. <i>Physical Review Applied</i> , 2021, 16, .	1.5	8
43	Nonlinear effects upon collisions of optical pulses: Tunneling, blocking, and trapping. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2012, 76, 305-308.	0.1	7
44	Stability analysis of numerically exact time-periodic breathers in the Lugiato-Lefever equation: Discrete vs continuum. <i>Physical Review Research</i> , 2019, 1, .	1.3	7
45	Soliton generation by counteracting gain-guiding and self-bending. <i>Optics Letters</i> , 2012, 37, 4540.	1.7	6
46	Generation of vector flat-top solitons and hybrid brightâ€“flat-top soliton complexes in optical microresonators via modulated pump. <i>Physical Review A</i> , 2021, 104, .	1.0	6
47	Anderson localization in Bragg-guiding arrays with negative defects. <i>Optics Letters</i> , 2012, 37, 4020.	1.7	5
48	Two-color flat-top solitonic pulses in $\ddot{\text{t}}(2)$ optical microresonators via second-harmonic generation. <i>Physical Review A</i> , 2020, 101, .	1.0	5
49	Tunneling of optical beams through inhomogeneity of a refractive index. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2010, 74, 1718-1720.	0.1	4
50	Topological light bullets supported by spatiotemporal gain. <i>Physical Review A</i> , 2012, 85, .	1.0	4
51	Dynamic versus Anderson wave-packet localization. <i>Physical Review A</i> , 2015, 91, .	1.0	4
52	Narrow linewidth diode laser self-injection locked to a high-Q microresonator. <i>AIP Conference Proceedings</i> , 2018, , .	0.3	4
53	Two-color flat-top solitons in microresonator-based optical parametric oscillators. <i>Physical Review A</i> , 2020, 102, .	1.0	4
54	Optical pulse velocity and frequency variations during cascade parametric interaction with a high powered reference pulse. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2009, 73, 1575-1577.	0.1	3

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55	Nonlinear diffraction and total internal reflection in optical-beam interaction in defocusing media. Journal of Russian Laser Research, 2010, 31, 1-11.	0.3	3
56	Interaction of pulsed laser beams in quadratic nonlinear media. Physics of Wave Phenomena, 2013, 21, 5-9.	0.3	3
57	Magneto-optical effects in a high-Q whispering-gallery-mode resonator with a large Verdet constant. Optics Letters, 2021, 46, 2509.	1.7	3
58	<title>Mismatched three-wave interaction of optical noncollinear beams in nonlinear media</title>. , 2006, , .		3
59	Diffraction of optical waves by nonlinearly induced cylinders. Bulletin of the Russian Academy of Sciences: Physics, 2008, 72, 1593-1596.	0.1	2
60	Influence of the microresonator nonlinearity on the self-injection locking effect. EPJ Web of Conferences, 2019, 220, 02006.	0.1	2
61	Thermal Influence on laser self-injection locking to nonlinear microresonator. , 2021, , .		2
62	Numerical modelling of WGM microresonator Kerr frequency combs in self-injection locking regime. , 2020, , .		2
63	Universal Dynamics and Controlled Switching of Dissipative Kerr Solitons in Optical Microresonators. , 2016, , .		2
64	Discrete diffraction and waveguiding of optical beams in a cascade-induced lattice. Bulletin of the Russian Academy of Sciences: Physics, 2008, 72, 718-720.	0.1	1
65	Parametric reflection phenomenon in quadratic uniaxial crystals with birefringence. Bulletin of the Russian Academy of Sciences: Physics, 2008, 72, 1597-1600.	0.1	1
66	Cascaded induced lattices in quadratic nonlinear medium. Proceedings of SPIE, 2008, , .	0.8	1
67	Controllable discrete diffraction in cascade-induced waveguides. Quantum Electronics, 2009, 39, 1050-1054.	0.3	1
68	The effect of total internal reflection of wave beams in nonlinear media. Bulletin of the Russian Academy of Sciences: Physics, 2009, 73, 1586-1589.	0.1	1
69	Spatio-temporal hybrid Anderson localization. Europhysics Letters, 2014, 108, 64002.	0.7	1
70	Self-injection locking of a laser diode to a high-Q silicon WGM microresonator. EPJ Web of Conferences, 2019, 220, 03027.	0.1	1
71	Universal dynamics and deterministic switching of dissipative Kerr solitons in optical microresonators. , 2017, , .		1
72	Two-color platons in quadratically nonlinear optical microresonators. , 2020, , .		1

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73	Hybrid Parametric Solitons in Nonlinear Photonic Crystals. Radiophysics and Quantum Electronics, 2003, 46, 366-373.	0.1	0
74	Trapping of three-colour spatial solitons with QPM multistep cascading. , 0, , .		0
75	Parametric spatial switching: new effects and applications. , 0, , .		0
76	Spatial all-optical switching with mismatched three-wave interaction. , 2006, , .		0
77	Elastic Collisions and Scattering of Optical Beams with Three-Wave Parametric Interactions. , 2007, , .		0
78	Discrete diffraction in a cascade-induced anisotropic lattice. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta, Fizika), 2008, 63, 430-432.	0.1	0
79	Nonlinear optics of extremely short pulses in photonic crystals with controlled dispersion. Bulletin of the Russian Academy of Sciences: Physics, 2008, 72, 695-697.	0.1	0
80	Compression dynamics for phase-modulated few-cycle pulses. Bulletin of the Russian Academy of Sciences: Physics, 2008, 72, 1628-1631.	0.1	0
81	Few-cycle pulses interactions in nonlinear photonic crystals with managed dispersion. , 2008, , .		0
82	Fundamental Limits for Compression Dynamics of Few-Cycle Pulses. , 2009, , .		0
83	Propagation and interaction of ultra-short pulses in quadratic crystals with controlled dispersion. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta,) Tj ETQq1 1 0.784314 rgBT /Overlock 10		0
84	The propagation of wave beams in 2D cascade-induced lattices. Bulletin of the Russian Academy of Sciences: Physics, 2009, 73, 1571-1574.	0.1	0
85	Optical pulse delay or advance and frequency tuning with mismatched three-wave interaction. , 2009, , .		0
86	Collision of optical pulses in nonlinear dispersive media: frequency tuning and velocity variation. Proceedings of SPIE, 2010, , .	0.8	0
87	Stable fundamental and vortex solitons supported by localized gain. , 2011, , .		0
88	Anderson localization of multichannel excitations in disordered two-dimensional waveguide arrays. Europhysics Letters, 2015, 109, 54001.	0.7	0
89	Kerr combs in microresonators: from chaos to solitons and from theory to experiment (Conference) Tj ETQq1 1 0.784314 rgBT /Overlock 10		0
90	Universal dynamics and deterministic switching of dissipative Kerr solitons in optical microresonators. , 2017, , .		0

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91	Nonlinear properties of high-Q optical microresonators in normal dispersion range. EPJ Web of Conferences, 2017, 161, 02025.	0.1	0
92	Bogatov effect in self-injection locked multimode diode laser: Theory and experiment. , 2018, , .		0
93	Theory of self-injection locking of a laser diode to a whispering gallery mode microresonator. , 2018, , .		0
94	Investigation of Kerr frequency combs generation methods in normal GVD regime. , 2018, , .		0
95	Fundamentals of the theory of self-injection locking of multi-frequency laser diode to high-Q optical microresonator. Journal of Physics: Conference Series, 2019, 1283, 012006.	0.3	0
96	Generation of frequency combs and dissipative solitons in integrated microresonators in self-injection locking regime. EPJ Web of Conferences, 2019, 220, 03001.	0.1	0
97	Fabrication and Characterization of High-Quality Factor Silicon WGM Microresonators. , 2019, , .		0
98	Kerr Frequency Comb Generation and Soliton Dynamics Caused by Forward-Backward Wave Interaction in WGM Microresonators. , 2019, , .		0
99	Optimization of the self-injection locking and resonator characterisation in this regime. , 2021, , .		0
100	Gain-Switched Laser Self-Injection Locked to a WGM Microresonator. , 2021, , .		0
101	Dynamics of self-injection locked multimode diode laser. , 2021, , .		0
102	Few-cycle pulse interactions in dispersion-managed quadratic photonic crystals. , 2008, , .		0
103	Injection locking of dissipative Kerr solitons. , 2018, , .		0
104	Backward-wave induced modulational instability in normal dispersion. , 2019, , .		0
105	Dissipative Kerr Solitons in a Bi-directional Optical Microresonator with Backscattering. , 2019, , .		0
106	Spectrum collapse, narrow lines, and soliton combs with multi-frequency laser diodes locked to optical microresonators. , 2019, , .		0
107	Experimental observation of above billion quality factor in silicon crystalline optical whispering gallery mode resonators. , 2019, , .		0
108	Spectrum Collapse and Kerr Frequency Comb Generation with Multi-Frequency Laser Diodes Self-Injection Locked to High-Q Optical Microresonator. , 2019, , .		0

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109	Properties of Dissipative Kerr Solitons in Optical Microresonators with Backscattering. , 2020, , .		0
110	Influence of the Gain Switching on the Self-Injection Locking of a Laser Diode. , 2021, , .		0
111	Quadratic Platons in $\tilde{\mu}(2)$ Optical Microresonators. , 2020, , .		0
112	Laser Self-Injection Locking to Nonlinear Microresonator with Thermal Effects. , 2020, , .		0
113	Generation of Two-Color Platons in $\tilde{\mu}(2)$ Microresonators. , 2020, , .		0
114	Nonlinear Self-Injection Locking: Theory and Experiment. , 2020, , .		0
115	Switching of Soliton States in an Integrated 30 GHz Soliton Microcomb Source. , 2020, , .		0
116	Modeling of solitons and platons in self-injection locking regime. , 2020, , .		0
117	Fundamental and Vortex Dissipative Quadratic Solitons Supported by Localized Gain. , 2021, , .		0
118	Current Frequency Chirping of a Laser Diode in Self-Injection Locking Regime. , 2021, , .		0
119	Modeling of Thermal Effects in the Regime of Self-Injection Locking and Frequency Comb Generation. , 2021, , .		0
120	Generation of Platons in Optical Microresonators via Thermal Effects. , 2021, , .		0
121	Optimization of a frequency comb-based calibration of a tunable laser. , 2020, , .		0
122	Gain-Switched Laser Properties at Self-injection Locking to a High-Q WGM Microresonator. , 2021, , .		0
123	Surface and bulk scattering engineering in microresonators for enhancement of laser stabilization via self-injection locking. , 2020, , .		0
124	Generation of Solitons and Platons in Optical Microresonators with Backscattering. , 2020, , .		0
125	Mid-IR DFB Laser Stabilization and Characterization with Silicon Microresonator. , 2020, , .		0
126	Operation of the Gain-Switched Laser in the Self-Injection Locking Regime to a Microcavity. , 2021, , .		0



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127	Generation of Vector Platons and Hybrid Soliton-Platon Complexes in Optical Microresonators by Modulated Pump. , 2021, , .		0
128	Stabilization of the Gain-Switched Laser via Self-Injection Locking Regime to a WGM Microresonator. , 2021, , .		0
129	Universal Approach for Accurate Measurement of Dispersive Characteristics of Optical Microresonators. , 2021, , .		0
130	Generation of Platons in Optical Microresonators Enabled by Thermal Effects. , 2021, , .		0
131	Generation of Vector Platons and Hybrid Soliton-Platon Complexes in Optical Microresonators via Modulated Pump. , 2021, , .		0
132	Whispering gallery modes excitation in microresonators of crystalline silicon at 8.6 Åµm wavelength.. , 2021, , .		0
133	Laser Self-Injection Locking and Thermal Effects Compensation for Frequency Comb Generation. , 2021, , .		0
134	Novel methods of platon generation in optical microresonators: numerical study. , 2022, , .		0