Mikhail Fedoruk

List of Publications by Year
in descending order

48	787	623734 14	501196 28
papers	citations	h-index	g-index

48	48	48	582
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Modeling of CW Yb-doped fiber lasers with highly nonlinear cavity dynamics. Optics Express, 2011, 19, 8394.	3.4	88
2	Evolution of dissipative solitons in a fiber laser oscillator in the presence of strong Raman scattering. Optics Express, 2013, 21, 20556.	3.4	81
3	Hydrodynamic 2D Turbulence and Spatial Beam Condensation in Multimode Optical Fibers. Physical Review Letters, 2019, 122, 103902.	7.8	68
4	Nonlinear pulse combining and pulse compression in multi-core fibers. Optics Letters, 2015, 40, 721.	3.3	53
5	Dissipative solitons in fiber lasers. Physics-Uspekhi, 2016, 59, 642-668.	2.2	51
6	Generation dynamics of the narrowband Yb-doped fiber laser. Optics Express, 2013, 21, 8177.	3.4	46
7	Advanced Convolutional Neural Networks for Nonlinearity Mitigation in Long-Haul WDM Transmission Systems. Journal of Lightwave Technology, 2021, 39, 2397-2406.	4.6	46
8	Numerical modeling of fiber lasers with long and ultra-long ring cavity. Optics Express, 2013, 21, 12942.	3.4	44
9	Nonlinear Fourier Transform for Analysis of Coherent Structures in Dissipative Systems. Physical Review Letters, 2019, 122, 153901.	7.8	40
10	Dual-pump Raman amplification with increased flatness using modulation instability. Optics Express, 2005, 13, 1079.	3.4	30
11	Generation and scaling of highly-chirped dissipative solitons in an Yb-doped fiber laser. Laser Physics Letters, 2012, 9, 662-668.	1.4	26
12	Power-controlled phase-matching and instability of CW propagation in multicore optical fibers with a central core. Optics Letters, 2013, 38, 4232.	3.3	26
13	Compensation of Nonlinear Impairments Using Inverse Perturbation Theory With Reduced Complexity. Journal of Lightwave Technology, 2020, 38, 1250-1257.	4.6	24
14	Exponential fourth order schemes for direct Zakharov-Shabat problem. Optics Express, 2020, 28, 20.	3.4	21
15	Numerical simulation of current experimental 100 Gbit s⁻¹DWDM communication lines. Quantum Electronics, 2015, 45, 75-77.	1.0	13
16	Nonlinear Fourier transform for analysis of optical spectral combs. Physical Review E, 2021, 103, L020202.	2.1	11
17	Numerical algorithm with fourth-order accuracy for the direct Zakharov-Shabat problem. Optics Letters, 2019, 44, 2264.	3.3	10
18	Modulation instability at propagation of narrowband 100-ns pulses in optical fibers of various types. Laser Physics, 2010, 20, 334-340.	1.2	9

#	Article	IF	Citations
19	Finding spatiotemporal light bullets in multicore and multimode fibers. Optics Express, 2020, 28, 7817.	3.4	9
20	Finite-volume algorithm for solving the time-dependent Maxwell equations on unstructured meshes. Computational Mathematics and Mathematical Physics, 2006, 46, 1219-1233.	0.8	8
21	Conservative multi-exponential scheme for solving the direct Zakharovâ€“Shabat scattering problem. Optics Letters, 2020, 45, 2082.	3.3	8
22	Explosion Phenomena in Collisionless Plasmas at Super-Alfvenic Speed. International Journal of Computational Fluid Dynamics, 1998, 10, 117-126.	1.2	7
23	Hybrid gain-flattened and reduced power excursion scheme for distributed Raman amplification. Optics Express, 2013, 21, 29140.	3.4	7
24	Study of new modulation data-transmission formats for dispersion-controlled high-bit-rate fibreoptic communication lines. Quantum Electronics, 2007, 37, 885-890.	1.0	6
25	Methods for compensation of nonlinear effects in multichannel data transfer systems based on dynamic neural networks. Quantum Electronics, 2019, 49, 1154-1157.	1.0	6
26	Raman dissipative solitons generator near 1.3 mkm: limiting factors and further perspectives. Optics Express, 2020, 28, 22179.	3.4	6
27	Raman laser based on a fiber with variable mode structure. Laser Physics, 2011, 21, 290-293.	1.2	5
28	Nonlinear Maxwellâ€™s and SchrÃ¶dinger equations for describing the volumetric interaction of femtosecond laser pulses with transparent solid dielectrics: effect of the boundary conditions. Journal of Optical Technology (A Translation of Opticheskii Zhurnal), 2017, 84, 439.	0.4	5
29	Analytical trial functions for modelling a two-dimensional Bose condensate. Quantum Electronics, 2017, 47, 484-490.	1.0	4
30	Simple geometric interpretation of signal evolution in phase-sensitive fibre optic parametric amplifier. Optics Express, 2017, 25, 223.	3.4	4
31	Mathematical simulation of the femtosecond-laser inscription of optical waveguides. Laser Physics, 2008, 18, 1268-1278.	1.2	3
32	Investigation of nonlinear effects in the transmission of a QAM signal in fibre optic communication lines using different carrier pulses. Quantum Electronics, 2017, 47, 1140-1143.	1.0	3
33	Numerically Implemented Impact of a Femtosecond Laser Pulse on Glass in the Approximation of Nonlinear Maxwell Equations. Mathematical Models and Computer Simulations, 2020, 12, 77-89.	0.5	3
34	Span Design for Reduced Noise and Nonlinear Impairments in a Dispersion-Managed Raman Amplified System. Optical and Quantum Electronics, 2004, 36, 725-732.	3.3	2
35	Simplified method for numerical modeling of fiber lasers. Optics Express, 2014, 22, 31814.	3.4	2
36	Spatiotemporal multiplexing based on hexagonal multicore optical fibres. Quantum Electronics, 2017, 47, 1150-1153.	1.0	2

#	Article	IF	Citations
37	Study of gain efficiency in quasi-distributed amplification systems. Optics Letters, 2020, 45, 499.	3.3	2
38	Statistical properties of nonlinear distortion of a polarization-multiplexed OFDM signal in long-haul fiber links. Optics Letters, 2020, 45, 5550.	3.3	2
39	Structures with vertically stacked Ge/Si quantum dots for logical operations. Semiconductors, 2012, 46, 937-942.	0.5	1
40	Simulation of low-temperature multicomponent plasmas in a target trap. Doklady Physics, 2015, 60, 49-52.	0.7	1
41	Theoretical analysis of saturable absorbtion in passively mode-locked fiber lasers. Optics Express, 2016, 24, 17486.	3.4	1
42	Compensation for nonlinear effects in an optical orthogonal frequency-division multiplexed signal using adaptive modulation. Quantum Electronics, 2016, 46, 1113-1116.	1.0	1
43	Application of combined optical signal processing methods to compensate for nonlinear effects in fibre-optic communication links. Quantum Electronics, 2018, 48, 1160-1163.	1.0	1
44	Fast sixth-order algorithm based on the generalized Cayley transform for the Zakharov-Shabat system associated with nonlinear Schrodinger equation. Journal of Computational Physics, 2022, 448, 110764.	3.8	1
45	Statistics of errors in a high-bit-rate optical communication link with reduction of the Kerr nonlinearity effect. Optoelectronics, Instrumentation and Data Processing, 2009, 45, 184-187.	0.6	0
46	Error statistics in a high-rate communication line with bit-density optimization. Laser Physics, 2010, 20, 379-382.	1.2	0
47	Comparative analysis of high-speed fiber-optic lines using amplitude- and phase-modulated signals. Optoelectronics, Instrumentation and Data Processing, 2011, 47, 203-206.	0.6	0
48	Numerical modelling of multimode fibre-optic communication lines. Quantum Electronics, 2016, 46, 76-80.	1.0	0