

W J Firth

List of Publications by Year in descending order

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91
papers

4,271
citations

117625

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106344

65
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94
all docs

94
docs citations

94
times ranked

1098
citing authors

#	ARTICLE	IF	CITATIONS
1	Optical Bullet Holes: Robust Controllable Localized States of a Nonlinear Cavity. <i>Physical Review Letters</i> , 1996, 76, 1623-1626.	7.8	424
2	Optical Solitons Carrying Orbital Angular Momentum. <i>Physical Review Letters</i> , 1997, 79, 2450-2453.	7.8	327
3	Spontaneous hexagon formation in a nonlinear optical medium with feedback mirror. <i>Physical Review Letters</i> , 1991, 66, 2597-2600.	7.8	234
4	Spatial Soliton Pixels in Semiconductor Devices. <i>Physical Review Letters</i> , 1997, 79, 2042-2045.	7.8	230
5	Hexagonal spatial patterns for a Kerr slice with a feedback mirror. <i>Physical Review A</i> , 1992, 46, 537-548.	2.5	201
6	Overview of transverse effects in nonlinear-optical systems. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1990, 7, 951.	2.1	191
7	Realization of a Semiconductor-Based Cavity Soliton Laser. <i>Physical Review Letters</i> , 2008, 100, 013907.	7.8	148
8	Transverse modulational instabilities for counterpropagating beams in Kerr media. <i>Optics Letters</i> , 1988, 13, 1096.	3.3	146
9	Spatial solitary-wave optical memory. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1990, 7, 1328.	2.1	132
10	Spontaneous Pattern Formation in an Absorptive System. <i>Europhysics Letters</i> , 1994, 26, 521-526.	2.0	106
11	All-optical delay line using semiconductor cavity solitons. <i>Applied Physics Letters</i> , 2008, 92, .	3.3	106
12	Hexagonal patterns in optical bistability. <i>Physical Review A</i> , 1992, 46, R3609-R3612.	2.5	100
13	Transverse instabilities due to counterpropagation in Kerr media. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1990, 7, 1087.	2.1	88
14	Cavity solitons in semiconductor microresonators: Existence, stability, and dynamical properties. <i>Physical Review E</i> , 2000, 62, 8726-8739.	2.1	87
15	Optomechanical self-structuring in a cold atomic gas. <i>Nature Photonics</i> , 2014, 8, 321-325.	31.4	87
16	Characterization, dynamics and stabilization of diffractive domain walls and dark ring cavity solitons in parametric oscillators. <i>Physical Review E</i> , 2001, 63, 066209.	2.1	84
17	Diffusion and diffraction in dispersive optical bistability. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1985, 2, 1005.	2.1	77
18	Local and global effects of boundaries on optical-pattern formation in Kerr media. <i>Physical Review A</i> , 1993, 48, 634-641.	2.5	69

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19	Optical Memory and Spatial Chaos. Physical Review Letters, 1988, 61, 329-332.	7.8	61
20	Switching dynamics of spatial solitary wave pixels. Journal of the Optical Society of America B: Optical Physics, 1993, 10, 1081.	2.1	59
21	Pattern formation and competition in nonlinear optical systems with two-dimensional feedback. Physical Review A, 1994, 49, 2891-2906.	2.5	57
22	Computationally determined existence and stability of transverse structures. II. Multi-peaked cavity solitons. Physical Review E, 2002, 66, 046606.	2.1	56
23	Proposed Resolution of Theory-Experiment Discrepancy in Homoclinic Snaking. Physical Review Letters, 2007, 99, 104503.	7.8	55
24	Hexagons and squares in a passive nonlinear optical system. Physical Review A, 1994, 50, 3471-3485.	2.5	53
25	Cavity-soliton laser with frequency-selective feedback. Physical Review A, 2009, 80, .	2.5	53
26	Boundary effects in large-aspect-ratio lasers. Physical Review A, 1994, 50, 4310-4317.	2.5	49
27	Carrier diffusion measurements in InSb by the angular dependence of degenerate four-wave mixing. Optics Letters, 1985, 10, 187.	3.3	48
28	Self-localized structures in vertical-cavity surface-emitting lasers with external feedback. Physical Review E, 2008, 78, 016212.	2.1	47
29	Two-dimensional solitons in a Kerr cavity. Journal of Modern Optics, 1996, 43, 1071-1077.	1.3	44
30	Observation of Period Doubling in an All-Optical Resonator Containing NH ₃ Gas. Physical Review Letters, 1983, 51, 562-565.	7.8	42
31	Vortex solitons in lasers with feedback. Optics Express, 2010, 18, 8859.	3.4	40
32	Chaos--predicting the unpredictable.. BMJ: British Medical Journal, 1991, 303, 1565-1568.	2.3	39
33	Self-propelled cavity solitons in semiconductor microcavities. Physical Review E, 2002, 66, 036607.	2.1	39
34	Pattern formation in an alkali-metal vapor with a feedback mirror. Physical Review A, 1996, 53, 2752-2764.	2.5	37
35	From one- to two-dimensional solitons in the Ginzburg-Landau model of lasers with frequency-selective feedback. Physical Review E, 2011, 84, 036213.	2.1	34
36	Quantum Threshold for Optomechanical Self-Structuring in a Bose-Einstein Condensate. Physical Review Letters, 2015, 114, 173903.	7.8	33

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37	Observation of Bifurcation to Chaos in an All-Optical Fabry-Perot Resonator. <i>Physical Review Letters</i> , 1984, 53, 258-261.	7.8	32
38	Elimination of spatiotemporal disorder by Fourier space techniques. <i>Physical Review A</i> , 1998, 58, 2577-2586.	2.5	31
39	Soliton lasers stabilized by coupling to a resonant linear system. <i>European Physical Journal D</i> , 2010, 59, 13-21.	1.3	29
40	Spontaneous optomechanical pattern formation in cold atoms. <i>Physical Review A</i> , 2012, 86, .	2.5	29
41	Kerr lens effects in a ring resonator with an aperture: mode locking and unidirectional operation. <i>Optics Letters</i> , 1993, 18, 170.	3.3	27
42	Optical bullet holes. <i>Physica Scripta</i> , 1996, T67, 12-16.	2.5	26
43	Localized traveling waves in vertical-cavity surface-emitting lasers with frequency-selective optical feedback. <i>Physical Review E</i> , 2007, 75, 056208.	2.1	26
44	Observation of Mode-Locked Spatial Laser Solitons. <i>Physical Review Letters</i> , 2017, 118, 044102.	7.8	25
45	Kinetic Theory for Transverse Optomechanical Instabilities. <i>Physical Review Letters</i> , 2014, 112, 043901.	7.8	24
46	On homoclinic snaking in optical systems. <i>Chaos</i> , 2007, 17, 037115.	2.5	23
47	Computationally determined existence and stability of transverse structures. I. Periodic optical patterns. <i>Physical Review E</i> , 2002, 66, 046605.	2.1	21
48	Drifting instabilities of cavity solitons in vertical-cavity surface-emitting lasers with frequency-selective feedback. <i>Physical Review A</i> , 2009, 80, .	2.5	21
49	Optical pattern formation with a two-level nonlinearity. <i>Physical Review A</i> , 2015, 92, .	2.5	20
50	Theory of the nonlinear Sagnac effect in a fiber-optic gyroscope. <i>Physical Review A</i> , 1985, 32, 2857-2863.	2.5	18
51	Dissipative solitons in the coupled dynamics of light and cold atoms. <i>Optics Express</i> , 2013, 21, 26144.	3.4	18
52	Two-photon light shift and autler-townes splitting in optically-pumped FIR lasers. <i>Journal of Infrared, Millimeter and Terahertz Waves</i> , 1981, 2, 207-214.	0.6	17
53	Generalized mean-field or master equation for nonlinear cavities with transverse effects. <i>Optics Letters</i> , 1996, 21, 770.	3.3	16
54	Switching spatial dissipative solitons in a VCSEL with frequency selective feedback. <i>European Physical Journal D</i> , 2010, 59, 121-131.	1.3	16

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55	Two-Dimensional Front Dynamics and Spatial Solitons in a Nonlinear Optical System. <i>Physical Review Letters</i> , 2007, 99, 153902.	7.8	15
56	Modulational instability of bright solitary waves in incoherently coupled nonlinear Schrödinger equations. <i>Physical Review E</i> , 1999, 60, 1019-1029.	2.1	14
57	Thick-medium model of transverse pattern formation in optically excited cold two-level atoms with a feedback mirror. <i>Physical Review A</i> , 2017, 96, .	2.5	13
58	Instabilities and routes to chaos in passive all-optical resonators containing a molecular gas. <i>Physical Review A</i> , 1986, 33, 2449-2460.	2.5	12
59	Collective Atomic Recoil Lasing with a Partially Coherent Pump. <i>Physical Review Letters</i> , 2007, 99, 253601.	7.8	12
60	Bistability. <i>Applied Physics B, Photophysics and Laser Chemistry</i> , 1982, 28, 131-141.	1.5	11
61	Dispersion in a cw optically pumped FIR laser. <i>Applied Physics B, Photophysics and Laser Chemistry</i> , 1982, 29, 131-134.	1.5	10
62	The U.k. Free Electron Laser Project. <i>IEEE Transactions on Nuclear Science</i> , 1983, 30, 3091-3093.	2.0	10
63	Observation of optical hysteresis in an all-optical passive ring cavity containing molecular gas. <i>Applied Physics Letters</i> , 1984, 44, 716-718.	3.3	9
64	Pattern Formation in Passive Nonlinear Optical Systems. <i>Springer Series in Synergetics</i> , 1995, , 69-96.	0.4	9
65	Solitons in semiconductor microcavities. <i>Nature Photonics</i> , 2012, 6, 204-204.	31.4	8
66	Self-organization in cold atomic gases: a synchronization perspective. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2014, 372, 20140002.	3.4	8
67	Evidence for optical bistability in millimeter gas cells. <i>Applied Physics Letters</i> , 1985, 46, 532-534.	3.3	7
68	Comment on "Stabilization, Selection, and Tracking of Unstable Patterns by Weak Spatial Perturbations". <i>Physical Review Letters</i> , 1999, 82, 2406-2406.	7.8	5
69	Diffraction-Induced Polarization Effects in Optical Pattern Formation. <i>Physical Review Letters</i> , 1999, 82, 2087-2090.	7.8	5
70	Adler Synchronization of Spatial Laser Solitons Pinned by Defects. <i>Physical Review Letters</i> , 2012, 108, 213904.	7.8	5
71	Enhancement of collective atomic recoil lasing due to pump phase modulation. <i>Physical Review A</i> , 2008, 78, .	2.5	3
72	Frequency and Phase Locking of Laser Cavity Solitons. <i>Progress in Optical Science and Photonics</i> , 2012, , 49-87.	0.5	3

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73	Measurement of Transverse Coupling Between Adjacent InSb Optical Switching Elements. Springer Proceedings in Physics, 1986, , 189-192.	0.2	3
74	Two-dimensional solitons in a Kerr cavity. Journal of Modern Optics, 1996, 43, 1071-1078.	1.3	2
75	Spatial Structures in Semiconductor Devices. Journal of Nonlinear Optical Physics and Materials, 1998, 07, 255-270.	1.8	1
76	Self-pulsing dynamics in a cavity soliton laser. Proceedings of SPIE, 2010, , .	0.8	1
77	Vortex Solitons and Azimuthons in Vertical-Cavity Surface-Emitting Lasers with Feedback. , 2014, , .		1
78	Nonlocal Coupling Resolves Cavity Soliton Theory-Experiment Discrepancy. , 2007, , .		0
79	Optomechanical self-organization in cold atomic gases. , 2013, , .		0
80	Locking of laser cavity solitons trapped by defects in VCSELs. , 2013, , .		0
81	Spontaneous opto-mechanical structures in cold atomic gases. , 2013, , .		0
82	Nonlinear Optomechanical Patterns and Dissipative Solitons. , 2014, , .		0
83	Dipole and quadrupole patterns in cold atoms via light induced interactions. , 2017, , .		0
84	Self-propelled solitons and moving patterns in a nonlinear resonator. , 2002, , .		0
85	Two-dimensional clusters of solitary structures in driven optical cavities. , 2002, , .		0
86	Instabilities and Routes to Chaos in Passive All-Optical Resonators Containing Molecular Gases. Springer Series in Synergetics, 1987, , 201-236.	0.4	0
87	Four-Wave Mixing and Dynamics. NATO ASI Series Series B: Physics, 1988, , 311-320.	0.2	0
88	Theory of Optical Bistability and Optical Memory. , 1990, , 3-20.		0
89	Transverse Modulational Instabilities in Kerr Media. , 1990, , 859-863.		0
90	A Mean-Field Model For Kerr Lens Mode-Locking. , 1996, , 499-500.		0

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91	Pattern Formation in Passive Nonlinear Optical Systems. Springer Series in Synergetics, 1998, , 69-96.	0.4	0