

T Ackemann

List of Publications by Year in descending order

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119
papers

2,647
citations

185998

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119
docs citations

119
times ranked

925
citing authors

#	ARTICLE	IF	CITATIONS
1	Interaction of Localized Structures in an Optical Pattern-Forming System. <i>Physical Review Letters</i> , 2000, 85, 748-751.	2.9	200
2	Realization of a Semiconductor-Based Cavity Soliton Laser. <i>Physical Review Letters</i> , 2008, 100, 013907.	2.9	148
3	All-optical delay line using semiconductor cavity solitons. <i>Applied Physics Letters</i> , 2008, 92, .	1.5	106
4	Characteristics of polarization switching from the low to the high frequency mode in vertical-cavity surface-emitting lasers. <i>Applied Physics Letters</i> , 2001, 78, 3574-3576.	1.5	93
5	Optomechanical self-structuring in a cold atomic gas. <i>Nature Photonics</i> , 2014, 8, 321-325.	15.6	87
6	Ultrafast spin-induced polarization oscillations with tunable lifetime in vertical-cavity surface-emitting lasers. <i>Applied Physics Letters</i> , 2011, 99, 151107.	1.5	86
7	Transition between Positive and Negative Hexagons in Optical Pattern Formation. <i>Physical Review Letters</i> , 1995, 75, 3450-3453.	2.9	79
8	Optical pattern formation in alkali metal vapors: Mechanisms, phenomena and use. <i>Applied Physics B: Lasers and Optics</i> , 2001, 72, 21-34.	1.1	75
9	Polarization dynamics in vertical-cavity surface-emitting lasers with optical feedback: experiment and model. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1999, 16, 2114.	0.9	73
10	Optical spin manipulation of electrically pumped vertical-cavity surface-emitting lasers. <i>Applied Physics Letters</i> , 2008, 92, 041118.	1.5	73
11	Non- and nearly hexagonal patterns in sodium vapor generated by single-mirror feedback. <i>Physical Review A</i> , 1994, 50, R4468-R4471.	1.0	55
12	Two-frequency emission and polarization dynamics at lasing threshold in vertical-cavity surface-emitting lasers. <i>Physical Review A</i> , 2003, 68, .	1.0	53
13	Birefringence controlled room-temperature picosecond spin dynamics close to the threshold of vertical-cavity surface-emitting laser devices. <i>Applied Physics Letters</i> , 2010, 97, .	1.5	50
14	Twelvefold Quasiperiodic Patterns in a Nonlinear Optical System with Continuous Rotational Symmetry. <i>Physical Review Letters</i> , 1999, 82, 4627-4630.	2.9	49
15	Self-localized structures in vertical-cavity surface-emitting lasers with external feedback. <i>Physical Review E</i> , 2008, 78, 016212.	0.8	47
16	Polarization Switching to the Gain Disfavored Mode in Vertical-Cavity Surface-Emitting Lasers. <i>IEEE Journal of Quantum Electronics</i> , 2004, 40, 97-104.	1.0	43
17	Light-shift-induced level crossing and resonatorless optical bistability in sodium vapor. <i>Physical Review A</i> , 1997, 56, 2321-2326.	1.0	41
18	Vortex solitons in lasers with feedback. <i>Optics Express</i> , 2010, 18, 8859.	1.7	40

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19	Low-frequency fluctuations and polarization dynamics in vertical-cavity surface-emitting lasers with isotropic feedback. <i>Physical Review A</i> , 2003, 67, .	1.0	39
20	Investigations of pattern forming mechanisms by Fourier filtering: properties of hexagons and the transition to stripes in an anisotropic system. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 1999, 1, 70-76.	1.4	37
21	Spatial mode structure of bottom-emitting broad-area vertical-cavity surface-emitting lasers. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2000, 2, 406-412.	1.4	35
22	Phase singularities via nonlinear beam propagation in sodium vapor. <i>Optics Communications</i> , 1995, 115, 339-346.	1.0	34
23	Spatial structure of broad-area vertical-cavity regenerative amplifiers. <i>Optics Letters</i> , 2000, 25, 814.	1.7	34
24	Quantum Threshold for Optomechanical Self-Structuring in a Bose-Einstein Condensate. <i>Physical Review Letters</i> , 2015, 114, 173903.	2.9	33
25	Polarized patterns in sodium vapor with single mirror feedback. <i>Physical Review A</i> , 1997, 56, R1709-R1712.	1.0	31
26	Characteristics of cavity solitons and drifting excitations in broad-area vertical-cavity surface-emitting lasers with frequency-selective feedback. <i>Physical Review A</i> , 2008, 78, .	1.0	29
27	Spontaneous optomechanical pattern formation in cold atoms. <i>Physical Review A</i> , 2012, 86, .	1.0	29
28	Description and analysis of low-frequency fluctuations in vertical-cavity surface-emitting lasers with isotropic optical feedback by a distant reflector. <i>Physical Review A</i> , 2003, 68, .	1.0	28
29	Arrest of Domain Coarsening via Antiperiodic Regimes in Delay Systems. <i>Physical Review Letters</i> , 2015, 115, 203901.	2.9	28
30	Spontaneous optical patterns in an atomic vapor: observation and simulation. <i>Physica D: Nonlinear Phenomena</i> , 1996, 96, 230-241.	1.3	27
31	Localized traveling waves in vertical-cavity surface-emitting lasers with frequency-selective optical feedback. <i>Physical Review E</i> , 2007, 75, 056208.	0.8	26
32	Drift instability and locking behavior of optical patterns. <i>Physical Review A</i> , 1997, 56, R4401-R4404.	1.0	24
33	The Gouy phase shift, the average phase lag of Fourier components of Hermiteâ€“Gaussian modes and their application to resonance conditions in optical cavities. <i>Optics Communications</i> , 2001, 189, 5-14.	1.0	24
34	Coupling of Polarization and Spatial Degrees of Freedom of Highly Divergent Emission in Broad-Area Square Vertical-Cavity Surface-Emitting Lasers. <i>Physical Review Letters</i> , 2008, 100, 213901.	2.9	24
35	Kinetic Theory for Transverse Optomechanical Instabilities. <i>Physical Review Letters</i> , 2014, 112, 043901.	2.9	24
36	Transverse patterns and length-scale selection in vertical-cavity surface-emitting lasers with a large square aperture. <i>Applied Physics B: Lasers and Optics</i> , 2005, 81, 945-953.	1.1	23

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37	Spontaneous Formation of Vector Vortex Beams in Vertical-Cavity Surface-Emitting Lasers with Feedback. <i>Physical Review Letters</i> , 2017, 119, 113902.	2.9	22
38	Polarization dynamics and low-frequency fluctuations in vertical-cavity surface-emitting lasers subjected to optical feedback. <i>Applied Physics B: Lasers and Optics</i> , 2003, 77, 739-746.	1.1	21
39	Observation of a Discrete Family of Dissipative Solitons in a Nonlinear Optical System. <i>Physical Review Letters</i> , 2005, 95, 143906.	2.9	21
40	Characteristics of bistable localized emission states in broad-area vertical-cavity surface-emitting lasers with frequency-selective feedback. <i>Physical Review A</i> , 2006, 74, .	1.0	21
41	Pattern formation in the presence of an intrinsic polarization instability. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2000, 2, 386-392.	1.4	20
42	Robust control of switching of localized structures and its dynamics in a single-mirror feedback scheme. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2002, 19, 707.	0.9	20
43	Optical pattern formation with a two-level nonlinearity. <i>Physical Review A</i> , 2015, 92, .	1.0	20
44	Winking hexagons. <i>Europhysics Letters</i> , 1997, 38, 583-588.	0.7	19
45	Observation of laser vortex solitons in a self-focusing semiconductor laser. <i>Journal of Optics (United Kingdom)</i> , 2013, 15, 044011.	1.0	19
46	Properties of feedback solitons in a single-mirror experiment. <i>IEEE Journal of Quantum Electronics</i> , 2003, 39, 227-237.	1.0	18
47	Dissipative solitons in the coupled dynamics of light and cold atoms. <i>Optics Express</i> , 2013, 21, 26144.	1.7	18
48	Eightfold quasipatterns in an optical pattern-forming system. <i>Physical Review E</i> , 2002, 66, 046220.	0.8	17
49	Spontaneous light-mediated magnetism in cold atoms. <i>Communications Physics</i> , 2018, 1, .	2.0	17
50	Subhexagons and ultrahexagons as a result of a secondary instability. <i>Physical Review A</i> , 1997, 55, 4538-4544.	1.0	16
51	Interaction between Hopf and static instabilities in a pattern-forming optical system. <i>Physical Review E</i> , 1998, 58, 1654-1661.	0.8	16
52	Stationary and drifting localized structures near a multiple bifurcation point. <i>Physical Review E</i> , 2000, 61, 4622-4625.	0.8	16
53	Optical target and spiral patterns in a single-mirror feedback scheme. <i>Applied Physics B: Lasers and Optics</i> , 2003, 76, 191-197.	1.1	16
54	Eigenmodes and symmetry selection mechanisms in circular large-aperture vertical-cavity surface-emitting lasers. <i>Physical Review E</i> , 2004, 69, 066205.	0.8	16

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55	Switching spatial dissipative solitons in a VCSEL with frequency selective feedback. <i>European Physical Journal D</i> , 2010, 59, 121-131.	0.6	16
56	Interplay of linear and nonlinear effects in the formation of optical vortices in a nonlinear resonator. <i>Physical Review A</i> , 1993, 48, R4043-R4046.	1.0	15
57	Two-Dimensional Front Dynamics and Spatial Solitons in a Nonlinear Optical System. <i>Physical Review Letters</i> , 2007, 99, 153902.	2.9	15
58	Self-lensing in sodium vapor: influence of saturation, atomic diffusion and radiation trapping. <i>Optics Communications</i> , 1998, 147, 411-428.	1.0	14
59	Polarization degrees of freedom in optical pattern forming systems: alkali metal vapour in a single-mirror arrangement. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2001, 3, S124-S132.	1.4	14
60	Characteristics of switching dynamics in a semiconductor-based cavity-soliton laser. <i>Optics Express</i> , 2007, 15, 16773.	1.7	14
61	Tunable, narrow-band light source in the 1.25 μm region based on broad-area quantum dot lasers with feedback. <i>Applied Physics B: Lasers and Optics</i> , 2007, 89, 585-588.	1.1	13
62	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, .	1.0	13
63	Magnetic phase diagram of light-mediated spin structuring in cold atoms. <i>Optica</i> , 2018, 5, 1322.	4.8	13
64	Interplay of dispersion and absorption in a new optical pattern-forming system. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 1999, 1, 166-170.	1.4	12
65	Self-organized superlattice patterns with two slightly differing wave numbers. <i>Physical Review E</i> , 2003, 67, 025203.	0.8	12
66	Transverse structures in a sodium-filled Fabry-Pérot resonator. I. Experimental results: Symmetries and the role of the incoupling conditions. <i>Chaos, Solitons and Fractals</i> , 1994, 4, 1409-1431.	2.5	11
67	Fabry-Pérot and ring cavity configurations and transverse optical patterns. <i>Journal of Modern Optics</i> , 1998, 45, 1913-1926.	0.6	11
68	Polarization patterns in alkaline vapours. <i>Quantum and Semiclassical Optics: Journal of the European Optical Society Part B</i> , 1998, 10, R23-R36.	1.0	11
69	Dissipative Solitons in Pattern-Forming Nonlinear Optical Systems: Cavity Solitons and Feedback Solitons. , 0, , 55-100.		11
70	Disorder mapping in VCSELs using frequency-selective feedback. <i>Optics Letters</i> , 2012, 37, 1079.	1.7	11
71	Direct measurement of multiple instability regions via a Fourier filtering method in an optical pattern forming system. <i>Physical Review E</i> , 2003, 68, 016209.	0.8	10
72	Control of the spatial emission structure of broad-area vertical-cavity surface-emitting lasers by feedback. <i>Journal Physics D: Applied Physics</i> , 2009, 42, 055101.	1.3	10

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73	Transverse structures in a sodium-filled Fabry-Pérot resonator. Interpretation of experimental results. <i>Chaos, Solitons and Fractals</i> , 1994, 4, 1433-1449.	2.5	9
74	TRANSITION TO SPATIOTEMPORALLY IRREGULAR STATES IN A SINGLE-MIRROR FEEDBACK SYSTEM. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2001, 11, 2789-2807.	0.7	9
75	Length scales and polarization properties of annular standing waves in circular broad-area vertical-cavity surface-emitting lasers. <i>Applied Physics B: Lasers and Optics</i> , 2009, 97, 397-403.	1.1	9
76	Patterns in Broad-Area Microcavities. <i>Physica Status Solidi (B): Basic Research</i> , 2000, 221, 133-136.	0.7	8
77	Magnetic field control over microscopic symmetry properties of an optical pattern-forming system: experiment. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2000, 2, 421-425.	1.4	8
78	Secondary bifurcations and transverse standing-wave patterns in anisotropic microcavity lasers close to the first laser threshold. <i>Physical Review A</i> , 2003, 67, .	1.0	8
79	Saturation of absorption and gain in a quantum dot diode with continuous-wave driving. <i>Applied Physics Letters</i> , 2010, 97, .	1.5	8
80	Solitons in semiconductor microcavities. <i>Nature Photonics</i> , 2012, 6, 204-204.	15.6	8
81	Self-organization in cold atomic gases: a synchronization perspective. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2014, 372, 20140002.	1.6	8
82	Inversion-symmetry breaking in spin patterns by a weak magnetic field. <i>Physical Review A</i> , 2019, 99, .	1.0	7
83	Magnetic field control over microscopic symmetry properties of an optical pattern-forming system: theory. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2000, 2, 426-431.	1.4	6
84	Nonlinear lensing mechanisms in a cloud of cold atoms. <i>European Physical Journal D</i> , 2007, 41, 337-348.	0.6	6
85	Diamond heat sinking of terahertz antennas for continuous-wave photomixing. <i>Journal of Applied Physics</i> , 2012, 112, 123109.	1.1	6
86	High density InAlAs/GaAlAs quantum dots for non-linear optics in microcavities. <i>Journal of Applied Physics</i> , 2012, 111, 043107.	1.1	6
87	Analysis of spatial emission structures in vertical-cavity surface-emitting lasers with feedback from a volume Bragg grating. <i>Physical Review A</i> , 2012, 85, .	1.0	6
88	Observing Pattern Dynamics in Nonlinear Optical Systems Using the Video-sampling Method. <i>Chaos, Solitons and Fractals</i> , 1999, 10, 675-679.	2.5	5
89	Saturation and self-lensing in self-assembled quantum dots with constant-wave driving. <i>Physical Review B</i> , 2009, 80, .	1.1	5
90	Polarization properties in the transition from below to above lasing threshold in broad-area vertical-cavity surface-emitting lasers. <i>Physical Review A</i> , 2010, 81, .	1.0	5

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91	Adler Synchronization of Spatial Laser Solitons Pinned by Defects. Physical Review Letters, 2012, 108, 213904.	2.9	5
92	Nonequilateral drifting hexagons in a strongly misaligned single-mirror system. Journal of Optics B: Quantum and Semiclassical Optics, 1999, 1, 58-63.	1.4	4
93	Temperature dependence of spontaneous switch-on and switch-off of laser cavity solitons in vertical-cavity surface-emitting lasers with frequency-selective feedback. Journal Physics D: Applied Physics, 2016, 49, 095110.	1.3	4
94	Modulational instability and beam splitting in the nonlinear light propagation in sodium vapour. Journal of Optics B: Quantum and Semiclassical Optics, 1999, 1, 90-95.	1.4	3
95	Frequency and Phase Locking of Laser Cavity Solitons. Progress in Optical Science and Photonics, 2012, , 49-87.	0.3	3
96	On the thermal dependence of the generation of terahertz radiation by photomixing. Semiconductor Science and Technology, 2014, 29, 035006.	1.0	2
97	Dynamics of optomechanical droplets in a Bose-Einstein condensate. Physical Review A, 2022, 105, .	1.0	2
98	Selection rules for transverse-mode excitation in nonlinear ring and Fabry-Perot resonators. Physical Review A, 1998, 57, 4026-4033.	1.0	1
99	Spatial solitons in a single-mirror feedback system. , 1999, , WC1.		1
100	Bistability conditions between lasing and non-lasing states for vertical-cavity surface-emitting lasers with frequency-selective optical feedback. Proceedings of SPIE, 2007, , .	0.8	1
101	Analysis of polarization states of broad-area vertical-cavity surface-emitting lasers below and above threshold. , 2009, , .		1
102	Spontaneous atomic crystallization via diffractive dephasing in optical cavities. Journal of Physics: Conference Series, 2021, 1919, 012014.	0.3	1
103	Vectorial solitons and higher-order localized states in a single-mirror feedback system. , 2004, , .		1
104	Influence of inhomogeneities on wavelength selection of flower-like patterns in wide-aperture lasers. , 2004, , .		1
105	Vortex Solitons and Azimuthons in Vertical-Cavity Surface-Emitting Lasers with Feedback. , 2014, , .		1
106	Nonlinear Optics and Saturation Behavior of Quantum Dot Samples Under Continuous Wave Driving. , 2012, , 251-295.		1
107	Ground-state coherence versus orientation: Competing mechanisms for light-induced magnetic self-organization in cold atoms. Physical Review A, 2022, 105, .	1.0	1
108	Coupling of magnetic and optomechanical structuring in cold atoms. Physical Review A, 2022, 105, .	1.0	1

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109	On the response of an oscillatory medium to defect generation. Applied Physics B: Lasers and Optics, 2005, 81, 969-973.	1.1	0
110	Competition of pattern forming instabilities due to phase front curvature in an optical system. Physical Review E, 2006, 73, 016215.	0.8	0
111	Analysis and optimization of coupling to external cavities in feedback experiments with vertical-cavity surface-emitting lasers. Optics Communications, 2008, 281, 1396-1400.	1.0	0
112	Optomechanical self-organization in cold atomic gases. , 2013, , .		0
113	Locking of laser cavity solitons trapped by defects in VCSELs. , 2013, , .		0
114	Observation of vortex soliton states in vertical-cavity surface-emitting lasers with feedback. , 2013, , .		0
115	Nonlinear Optomechanical Patterns and Dissipative Solitons. , 2014, , .		0
116	Localized Structures, Optical Bistability and Pattern Forming Instabilities in a Single-Mirror Feedback Scheme. , 2001, , .		0
117	Observation of a Discrete Family of Dissipative Solitons in the Presence of a Symmetry-breaking Bifurcation. , 2005, , .		0
118	Transverse Solitons on a Dynamical Spiral Background. , 2005, , .		0
119	Spontaneous Light-mediated Magnetism in Cold Atoms. , 2018, , .		0