Yanne K Chembo

List of Publications by Year
in descending order

94 papers	4,473 citations	117625 34 h-index	102487 66 g-index
95 all docs	95 docs citations	95 times ranked	2280 citing authors

#	Article	IF	Citations
1	Micro-combs: A novel generation of optical sources. Physics Reports, 2018, 729, 1-81.	25.6	448
2	Spatiotemporal Lugiato-Lefever formalism for Kerr-comb generation in whispering-gallery-mode resonators. Physical Review A, 2013, 87, .	2.5	361
3	Stability analysis of the spatiotemporal Lugiato-Lefever model for Kerr optical frequency combs in the anomalous and normal dispersion regimes. Physical Review A, 2014, 89, .	2.5	321
4	Modal expansion approach to optical-frequency-comb generation with monolithic whispering-gallery-mode resonators. Physical Review A, 2010, 82, .	2.5	277
5	High-Speed Photonic Reservoir Computing Using a Time-Delay-Based Architecture: Million Words per Second Classification. Physical Review X, 2017, 7, .	8.9	241
6	Nonlinear photonics with high-Q whispering-gallery-mode resonators. Advances in Optics and Photonics, 2017, 9, 828.	25.5	182
7	Photonic Nonlinear Transient Computing with Multiple-Delay Wavelength Dynamics. Physical Review Letters, 2012, 108, 244101.	7.8	162
8	Compact optoelectronic microwave oscillators using ultra-high Q whispering gallery mode disk-resonators and phase modulation. Optics Express, 2010, 18, 22358.	3.4	159
9	Spectrum and Dynamics of Optical Frequency Combs Generated with Monolithic Whispering Gallery Mode Resonators. Physical Review Letters, 2010, 104, 103902.	7.8	156
10	Azimuthal Turing Patterns, Bright and Dark Cavity Solitons in Kerr Combs Generated With Whispering-Gallery-Mode Resonators. IEEE Photonics Journal, 2013, 5, 6100409-6100409.	2.0	127
11	Kerr optical frequency combs: theory, applications and perspectives. Nanophotonics, 2016, 5, 214-230.	6.0	111
12	Optimally Coherent Kerr Combs Generated with Crystalline Whispering Gallery Mode Resonators for Ultrahigh Capacity Fiber Communications. Physical Review Letters, 2015, 114, 093902.	7.8	110
13	Optoelectronic oscillators with time-delayed feedback. Reviews of Modern Physics, 2019, 91, .	45.6	106
14	Contribution of Laser Frequency and Power Fluctuations to the Microwave Phase Noise of Optoelectronic Oscillators. Journal of Lightwave Technology, 2010, 28, 2730-2735.	4.6	85
15	Quantum dynamics of Kerr optical frequency combs below and above threshold: Spontaneous four-wave mixing, entanglement, and squeezed states of light. Physical Review A, 2016, 93, .	2.5	78
16	Optical rogue waves in whispering-gallery-mode resonators. Physical Review A, 2014, 89, .	2.5	68
17	Spatiotemporal dynamics of Kerr-Raman optical frequency combs. Physical Review A, 2015, 92, .	2.5	66
18	Cascaded Brillouin lasing in monolithic barium fluoride whispering gallery mode resonators. Applied Physics Letters, 2014, 105, .	3.3	65

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19	Barium fluoride whispering-gallery-mode disk-resonator with one billion quality-factor. Optics Letters, 2014, 39, 6009.	3.3	63
20	Phase noise performance comparison between optoelectronic oscillators based on optical delay lines and whispering gallery mode resonators. Optics Express, 2014, 22, 32158.	3.4	57
21	On the dispersion management of fluorite whispering-gallery mode resonators for Kerr optical frequency comb generation in the telecom and mid-infrared range. Optics Express, 2015, 23, 1594.	3.4	57
22	Giant thermo-optical relaxation oscillations in millimeter-size whispering gallery mode disk resonators. Optics Letters, 2015, 40, 3834.	3.3	53
23	Universal nonlinear scattering in ultra-high Q whispering gallery-mode resonators. Optics Express, 2016, 24, 14880.	3.4	53
24	Machine learning based on reservoir computing with time-delayed optoelectronic and photonic systems. Chaos, 2020, 30, 013111.	2.5	51
25	Routes to spatiotemporal chaos in Kerr optical frequency combs. Chaos, 2014, 24, 013113.	2.5	49
26	Kerr optical frequency comb generation in strontium fluoride whispering-gallery mode resonators with billion quality factor. Optics Letters, 2015, 40, 1567.	3.3	49
27	Mixed-mode oscillations in slow-fast delayed optoelectronic systems. Physical Review E, 2015, 91, 012902.	2.1	47
28	Phase-locking transition in Raman combs generated with whispering gallery mode resonators. Optics Letters, 2016, 41, 3718.	3.3	47
29	On the generation of octave-spanning optical frequency combs using monolithic whispering-gallery-mode microresonators. Optics Letters, 2010, 35, 2696.	3.3	44
30	On the Phase Noise Performance of Nonlinear Double-Loop Optoelectronic Microwave Oscillators. IEEE Journal of Quantum Electronics, 2012, 48, 1415-1423.	1.9	44
31	Time-Domain Dynamics and Stability Analysis of Optoelectronic Oscillators Based on Whispering-Gallery Mode Resonators. IEEE Journal of Selected Topics in Quantum Electronics, 2013, 19, 1-12.	2.9	44
32	Theory and applications of the Lugiato-Lefever Equation. European Physical Journal D, 2017, 71, 1.	1.3	40
33	Topological frequency combs and nested temporal solitons. Nature Physics, 2021, 17, 1169-1176.	16.7	39
34	Ultra-broadband Kerr microcomb through soliton spectral translation. Nature Communications, 2021, 12, 7275.	12.8	37
35	On the phase noise performance of microwave and millimeter-wave signals generated with versatile Kerr optical frequency combs. Optics Express, 2016, 24, 25043.	3.4	34
36	Effect of Laser Coupling and Active Stabilization on the Phase Noise Performance of Optoelectronic Microwave Oscillators Based on Whispering-Gallery-Mode Resonators. IEEE Photonics Journal, 2015, 7, 1-11.	2.0	29

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37	Analysis of Phase-Locking in Narrow-Band Optoelectronic Oscillators With Intermediate Frequency. IEEE Journal of Quantum Electronics, 2015, 51, 1-8.	1.9	28
38	Multi-Gbit/s optical phase chaos communications using a time-delayed optoelectronic oscillator with a three-wave interferometer nonlinearity. Chaos, 2017, 27, 114311.	2.5	23
39	Dependence of quality factor on surface roughness in crystalline whispering-gallery mode resonators. Optics Letters, 2018, 43, 495.	3.3	23
40	Theoretical and experimental study of slow-scale Hopf limit-cycles in laser-based wideband optoelectronic oscillators. Journal of the Optical Society of America B: Optical Physics, 2014, 31, 2310.	2.1	22
41	The Simplest Laser-Based Optoelectronic Oscillator: An Experimental and Theoretical Study. Journal of Lightwave Technology, 2016, 34, 873-878.	4.6	22
42	Wideband chaos generation using a delayed oscillator and a two-dimensional nonlinearity induced by a quadrature phase-shift-keying electro-optic modulator. Optics Letters, 2011, 36, 2833.	3.3	20
43	Microwave Photonics Systems Based on Whispering-gallery-mode Resonators. Journal of Visualized Experiments, 2013, , .	0.3	20
44	Phase Noise Performance of Optoelectronic Oscillators Based on Whispering-Gallery Mode Resonators. IEEE Journal of Quantum Electronics, 2015, 51, 1-8.	1.9	20
45	Spectro-temporal dynamics of Kerr combs with parametric seeding. Applied Optics, 2015, 54, 2407.	1.8	19
46	Breather and Pulse-Package Dynamics in Multinonlinear Electrooptical Systems With Delayed Feedback. IEEE Photonics Journal, 2016, 8, 1-8.	2.0	18
47	Existence and switching behavior of bright and dark Kerr solitons in whispering-gallery mode resonators with zero group-velocity dispersion. European Physical Journal D, 2017, 71, 1.	1.3	18
48	Low-Noise X-Band Tunable Microwave Generator Based on a Semiconductor Laser With Feedback. IEEE Photonics Technology Letters, 2018, 30, 1597-1600.	2.5	18
49	Laser-based optoelectronic generation of narrowband microwave chaos for radars and radio-communication scrambling. Optics Letters, 2017, 42, 3431.	3.3	17
50	Optimization of primary Kerr optical frequency combs for tunable microwave generation. Optics Letters, 2017, 42, 3522.	3.3	17
51	Dynamics of Optoelectronic Oscillators With Electronic and Laser Nonlinearities. IEEE Journal of Quantum Electronics, 2018, 54, 1-7.	1.9	16
52	Opto-acoustic phenomena in whispering gallery mode resonators. International Journal of Optomechatronics, 2016, 10, 32-39.	6.6	13
53	(INVITED) Monolithic total internal reflection resonators for applications in photonics. Optical Materials: X, 2019, 2, 100017.	0.8	13
54	Spontaneous generation of orbital angular momentum crystals using a monolithic Nd:YAG nonplanar ring laser. Optics Letters, 2019, 44, 203.	3.3	13

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55	Barium fluoride and lithium fluoride whispering-gallery-mode resonators for photonics applications. Optical Engineering, 2014, 53, 071821.	1.0	12
56	Dynamical complexity and computation in recurrent neural networks beyond their fixed point. Scientific Reports, 2018, 8, 3319.	3.3	12
57	Classification of IQ-Modulated Signals Based on Reservoir Computing With Narrowband Optoelectronic Oscillators. IEEE Journal of Quantum Electronics, 2021, 57, 1-8.	1.9	12
58	Ikeda-like chaos on a dynamically filtered supercontinuum light source. Physical Review A, 2016, 94, .	2.5	11
59	On the transition to secondary Kerr combs in whispering-gallery mode resonators. Optics Letters, 2019, 44, 3078.	3.3	11
60	Coexistence of bright and dark cavity solitons in microresonators with zero, normal, and anomalous group-velocity dispersion: a switching wave approach. Journal of the Optical Society of America B: Optical Physics, 2020, 37, A69.	2.1	11
61	Wide-range tunability, thermal locking, and mode-crossing effects in Kerr optical frequency combs. Optical Engineering, 2014, 53, 122602.	1.0	10
62	Dynamics of Wideband Time-Delayed Optoelectronic Oscillators With Nonlinear Filters. IEEE Journal of Quantum Electronics, 2019, 55, 1-6.	1.9	10
63	Nine-frequency-path quantum interferometry over 60 km of optical fiber. Physical Review A, 2019, 99, .	2.5	9
64	A taxonomy of optical dissipative structures in whispering-gallery mode resonators with Kerr nonlinearity. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170381.	3.4	8
65	A normal form method for the determination of oscillations characteristics near the primary Hopf bifurcation in bandpass optoelectronic oscillators: Theory and experiment. Chaos, 2019, 29, 033104.	2.5	8
66	Effect of Time Delay on the Stability of Optoelectronic Oscillators Based on Whispering-Gallery Mode Resonators. IEEE Journal of Quantum Electronics, 2016, 52, 1-7.	1.9	6
67	Effect of crystalline family and orientation on stimulated Brillouin scattering in whispering-gallery mode resonators. Optics Express, 2017, 25, 29934.	3.4	6
68	Nonlinear dynamics in an optoelectronic feedback delay oscillator with piecewise linear transfer functions from the laser diode and photodiode. Physical Review E, 2020, 102, 042217.	2.1	6
69	Nonlinear dynamics of miniature optoelectronic oscillators based on whispering-gallery mode electrooptical modulators. Optics Express, 2020, 28, 30656.	3.4	6
70	Optimization of Close-In Phase Noise for Microwaves Generated With Kerr Combs Using Brillouin-Assisted Pump Depletion. IEEE Photonics Journal, 2016, 8, 1-7.	2.0	5
71	Fluctuations and correlations in Kerr optical frequency combs with additive Gaussian noise. Chaos, 2020, 30, 083146.	2.5	5
72	Transverse Patterns and Dual-Frequency Lasing in a Low-Noise Nonplanar-Ring Orbital-Angular-Momentum Oscillator. Physical Review Applied, 2020, 13, .	3.8	5

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73	Kerr optical frequency comb generation using whispering-gallery-mode resonators in the pulsed-pump regime. Physical Review A, 2021, 103, .	2.5	4
74	Neutral Mounting of Ultrahigh Q Whispering Gallery Mode disc-Resonators for Metrological Applications. IEEE Photonics Journal, 2017, 9, 1-8.	2.0	3
75	Design of X-Cut and Z-Cut Lithium Niobate Whispering-Gallery-Mode Disk-Resonators With High Quality Factors. IEEE Photonics Journal, 2017, 9, 1-8.	2.0	3
76	Stochastic Analysis of Miniature Optoelectronic Oscillators Based on Whispering-Gallery Mode Electrooptical Modulators. IEEE Photonics Journal, 2021, 13, 1-10.	2.0	3
77	Optical Kerr frequency combs: Towards versatile spectral ranges and applications. , 2015, , .		2
78	Quantum analysis of polarization entanglement degradation induced by multiple-photon-pair generation. Physical Review A, 2021, 104, .	2.5	2
79	On the Universality of Microwave Envelope Equations for Narrowband Optoelectronic Oscillators. Journal of Lightwave Technology, 2022, 40, 6131-6138.	4.6	2
80	Estimation of the CHSH Parameter Using HOM Interference. IEEE Transactions on Quantum Engineering, 2022, 3, 1-10.	4.9	1
81	Reply to â€œComment on â€˜Modal expansion approach to optical-frequency-comb generation with monolithic whispering-gallery-mode resonatorsâ€™ â€. Physical Review A, 2011, 84, .	2.5	0
82	Optical Kerr frequency combs: Modelling and applications. , 2014, , .		0
83	Ultra-high Q lithium niobate whispering-gallery-mode resonators. , 2016, , .		0
84	On third-order nonlinear scattering in whispering gallery mode resonators. , 2016, , .		0
85	Quantum phenomena in ultra-highQwhispering gallery mode resonators and applications to quantum information systems. Proceedings of SPIE, 2016, , .	0.8	0
86	Multi-scale nonlinear effects in whispering-gallery mode resonators. , 2016, , .		0
87	Advances in microwave generation using Kerr optical frequency combs. Proceedings of SPIE, 2017, , .	0.8	0
88	Lithium niobate whispering gallery mode disk resonator with high Q factor. , 2017, , .		0
89	Nonlinear optical phenomena in whispering-gallery mode resonators and applications in aerospace and communication engineering. IEICE Proceeding Series, 2014, 1, 805-808.	0.0	0
90	Bifurcation analysis of Kerr optical frequency comb generation. IEICE Proceeding Series, 2014, 1, 779-782.	0.0	0

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91	WGM resonators as universal nonlinear scattering platforms. , 2016, , .		0
92	Perspectives on Microresonator Optical Frequency Combs. , 2017, , .		0
93	Advances in quantum optical frequency combs. , 2019, , .		0
94	Second-order Nonlinear Effects and Photon Scattering in Ultra-high-Q Crystalline WGMRs. , 2020, , 37-77.		0