Mengfan Cheng

List of Publications by Year
in descending order

106	1,775	279798	330143
papers	citations	23 h-index	37 g-index

106	106	106	895
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ultra-compact mode (de) multiplexer based on subwavelength asymmetric Y-junction. Optics Express, 2018, 26, 8162.	3.4	162
2	Ultracompact dual-mode waveguide crossing based on subwavelength multimode-interference couplers. Photonics Research, 2018, 6, 660.	7.0	93
3	Inverse design and demonstration of an ultracompact broadband dual-mode 3 dB power splitter. Optics Express, 2018, 26, 24135.	3.4	82
4	Inverse-designed single-step-etched colorless 3â€‰â€‰dB couplers based on RIE-lag-insensitive PhC-like subwavelength structures. Optics Letters, 2016, 41, 5051.	3.3	79
5	Security-Enhanced OFDM-PON Using Hybrid Chaotic System. IEEE Photonics Technology Letters, 2015, 27, 326-329.	2.5	66
6	Secure OFDM-PON System Based on Chaos and Fractional Fourier Transform Techniques. Journal of Lightwave Technology, 2014, 32, 2629-2635.	4.6	65
7	Inverse-designed ultra-compact star-crossings based on PhC-like subwavelength structures for optical intercross connect. Optics Express, 2017, 25, 18355.	3.4	47
8	Enhanced secure strategy for electro-optic chaotic systems with delayed dynamics by using fractional Fourier transformation. Optics Express, 2014, 22, 5241.	3.4	44
9	High-speed optical secure communication with an external noise source and an internal time-delayed feedback loop. Photonics Research, 2019, 7, 1306.	7.0	43
10	Analog-digital hybrid chaos-based long-haul coherent optical secure communication. Optics Letters, 2021, 46, 1506.	3.3	37
11	Inverse design of a single-step-etched ultracompact silicon polarization rotator. Optics Express, 2020, 28, 28343.	3.4	36
12	An Electrooptic Chaotic System Based on a Hybrid Feedback Loop. Journal of Lightwave Technology, 2018, 36, 4259-4266.	4.6	33
13	Enhancing the Physical Layer Security of OFDM-PONs With Hardware Fingerprint Authentication: A Machine Learning Approach. Journal of Lightwave Technology, 2020, 38, 3238-3245.	4.6	33
14	Semiconductor-laser-based hybrid chaos source and its application in secure key distribution. Optics Letters, 2019, 44, 2605.	3.3	33
15	Arbitrary Bias Point Control Technique for Optical IQ Modulator Based on Dither-Correlation Detection. Journal of Lightwave Technology, 2018, 36, 3824-3836.	4.6	32
16	Time-Delay Concealment in a Three-Dimensional Electro-Optic Chaos System. IEEE Photonics Technology Letters, 2015, 27, 1030-1033.	2.5	31
17	N â€phase logistic chaotic sequence and its application for image encryption. IET Signal Processing, 2016, 10, 1096-1104.	1.5	30
18	An Ultracompact Multimode Waveguide Crossing Based on Subwavelength Asymmetric Y-Junction. IEEE Photonics Journal, 2018, 10, 1-8.	2.0	30

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19	Wavelength division multiplexing secure communication scheme based on an optically coupled phase chaos system and PM-to-IM conversion mechanism. Nonlinear Dynamics, 2018, 94, 1949-1959.	5.2	30
20	Time delay estimation from the time series for optical chaos systems using deep learning. Optics Express, 2021, 29, 7904.	3.4	28
21	Modulation-format-free and automatic bias control for optical IQ modulators based on dither-correlation detection. Optics Express, 2017, 25, 9333.	3.4	27
22	Robust chaotic-shift-keying scheme based on electro-optical hybrid feedback system. Optics Express, 2020, 28, 10847.	3.4	27
23	Enhanced Secure Strategy for OFDM-PON System by Using Hyperchaotic System and Fractional Fourier Transformation. IEEE Photonics Journal, 2014, 6, 1-9.	2.0	24
24	A pseudorandom bit generator based on new multi-delayed Chebyshev map. Information Processing Letters, 2016, 116, 674-681.	0.6	24
25	An SNR-improved Transmitter of Delta-sigma Modulation Supported Ultra-High-Order QAM Signal for Fronthaul/WiFi Applications. Journal of Lightwave Technology, 2022, 40, 2780-2790.	4.6	23
26	Secure Strategy for OFDM-PON Using Digital Chaos Algorithm With Fixed-Point Implementation. Journal of Lightwave Technology, 2018, 36, 4826-4833.	4.6	22
27	Novel design of N-dimensional CAP filters for 10â€‰â€‰Gb/s CAP-PON system. Optics Letters, 2015, 40, 2409.	3.3	21
28	An Image Encryption Scheme Based on Hybrid Electro-Optic Chaotic Sources and Compressive Sensing. IEEE Access, 2019, 7, 156582-156591.	4.2	20
29	Optimized self-interference cancellation based on optical dual-parallel MZM for co-frequency and co-time full duplex wireless communication under nonlinear distortion and emulated multipath effect. Optics Express, 2019, 27, 37286.	3.4	20
30	High-frequency reverse-time chaos generation using an optical matched filter. Optics Letters, 2016, 41, 1157.	3.3	19
31	An Optically Coupled Electro-Optic Chaos System With Suppressed Time-Delay Signature. IEEE Photonics Journal, 2017, 9, 1-9.	2.0	19
32	A novel chaotic system with suppressed time-delay signature based on multiple electro-optic nonlinear loops. Nonlinear Dynamics, 2015, 82, 611-617.	5.2	18
33	High-speed secure key distribution using local polarization modulation driven by optical chaos in reciprocal fiber channel. Optics Letters, 2021, 46, 5910.	3.3	18
34	Electro-optic chaotic system based on the reverse-time chaos theory and a nonlinear hybrid feedback loop. Optics Express, 2016, 24, 28804.	3.4	17
35	Secure Key Distribution Strategy in OFDM-PON by Utilizing the Redundancy of Training Symbol and Digital Chaos Technique. IEEE Photonics Journal, 2018, 10, 1-8.	2.0	17
36	Amplifier-free 4Ã—96 Gb/s PAM8 transmission enabled by modified Volterra equalizer for short-reach applications using directly modulated lasers. Optics Express, 2019, 27, 17927.	3.4	17

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37	Novel dual-loop optoelectronic oscillator based on self-polarization-stabilization technique. Optics Express, 2017, 25, 21993.	3.4	16
38	Synchronized Random Bit Sequences Generation Based on Analog-Digital Hybrid Electro-Optic Chaotic Sources. Journal of Lightwave Technology, 2018, 36, 4995-5002.	4.6	16
39	Unveil the time delay signature of optical chaos systems with a convolutional neural network. Optics Express, 2020, 28, 15221.	3.4	16
40	Experimental demonstration of a 10â€‰â€‰Gb/s non-orthogonal multi-dimensional CAP-PON system based on the ISI and CCI cancellation algorithm. Optics Letters, 2016, 41, 3988.	3.3	15
41	Simultaneous Suppression of Even-Order and Third-Order Distortions in Directly Modulated Analog Photonic Links. IEEE Photonics Journal, 2017, 9, 1-12.	2.0	15
42	Chaos Synchronization Based on Hybrid Entropy Sources and Applications to Secure Communication. IEEE Photonics Technology Letters, 2021, 33, 1038-1041.	2.5	15
43	Low-complexity equalization scheme for suppressing FFE-enhanced in-band noise and ISI in 100 Gbps PAM4 optical IMDD system. Optics Letters, 2020, 45, 2555.	3.3	15
44	A new switching parameter varying optoelectronic delayed feedback model with computer simulation. Scientific Reports, 2016, 6, 22295.	3.3	14
45	Secure 100 Gb/s IMDD Transmission Over 100 km SSMF Enabled by Quantum Noise Stream Cipher and Sparse RLS-Volterra Equalizer. IEEE Access, 2020, 8, 63585-63594.	4.2	14
46	Experimental demonstration of high spectral efficient 4 Ã— 4 MIMO SCMA-OFDM/OQAM radio over multi-core fiber system. Optics Express, 2017, 25, 18431.	3.4	13
47	Single-Shot Temporal Ghost Imaging Based on Orthogonal Frequency-Division Multiplexing. IEEE Photonics Technology Letters, 2018, 30, 1555-1558.	2.5	11
48	Identify the Device Fingerprint of OFDM-PONs With a Noise-Model-Assisted CNN for Enhancing Security. IEEE Photonics Journal, 2021, 13, 1-4.	2.0	11
49	Microwave photonic RF front-end for co-frequency co-time full duplexâ€‰5G communication with integrated RF signal self-interference cancellation, optoelectronic oscillator and frequency down-conversion. Optics Express, 2019, 27, 32147.	3.4	11
50	Optical Multipath Interference Mitigation for High-Speed PAM4 IMDD Transmission System. Journal of Lightwave Technology, 2022, 40, 5490-5501.	4.6	11
51	Bidirectional long-reach PON using Kramers-Kronig-based receiver for Rayleigh Backscattering noise and SSBI interference elimination. Optics Express, 2018, 26, 19020.	3.4	9
52	Capacity expansion of chaotic secure transmission system based on coherent optical detection and space division multiplexing over multi-core fiber. Optics Letters, 2022, 47, 726.	3.3	9
53	Adaptive impulsive synchronization of uncertain delayed chaotic system with full unknown parameters via discreteâ€time drive signals. Complexity, 2016, 21, 43-51.	1.6	8
54	Stable and Compact Dual-Loop Optoelectronic Oscillator Using Self-Polarization-Stabilization Technique and Multicore Fiber. Journal of Lightwave Technology, 2018, 36, 5196-5202.	4.6	8

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55	Bistatic radar scheme based on the digital-analog hybrid chaos system. Optics Express, 2018, 26, 22491.	3.4	8
56	Simultaneous RF Self-Interference Cancellation, Local Oscillator Generation, Frequency up- and down-Conversion in an Integrated In-Band Full-Duplex 5G RF Transceiver Front-End. Journal of Lightwave Technology, 2022, 40, 511-518.	4.6	8
57	Experimental Demonstration of Simultaneously Precise Tx and Rx Skew Calibration for Coherent Optical Transceiver. Journal of Lightwave Technology, 2022, 40, 1043-1054.	4.6	8
58	A Hierarchical Modulation Enabled SNR Allocable Delta-Sigma Digital Mobile Fronthaul System. IEEE Photonics Journal, 2022, 14, 1-6.	2.0	8
59	Reproducible optical noise-like signal generation subjected by digital sequences. Optics Express, 2017, 25, 29189.	3.4	7
60	180 Gb/s PAM8 Signal Transmission in Bandwidth-Limited IMDD System Enabled by Tap Coefficient Decision Directed Volterra Equalizer. IEEE Access, 2020, 8, 19890-19899.	4.2	7
61	DSP-free remote antenna unit in a coherent radio over fiber mobile fronthaul for 5G mm-wave mobile communication. Optics Express, 2021, 29, 27481.	3.4	7
62	Experimental investigation of environmental interference mitigation and blocked LEDs using a memory-artificial neural network in 3D indoor visible light positioning systems. Optics Express, 2021, 29, 33937.	3.4	7
63	Experimental Demonstration of Delta-sigma Modulation Supported 65536-QAM OFDM Transmission for Fronthaul/WiFi Applications. , 2021, , .		7
64	Computational Temporal Ghost Imaging Using Intensity-Only Detection Over a Single Optical Fiber. IEEE Photonics Journal, 2018, 10, 1-9.	2.0	6
65	Experimental Investigation on Low-Complexity Adaptive Equalizer Including RSOP Tracking and Phase Recovery for 112ÂGb/s PDM-QPSK Transmission System. IEEE Photonics Journal, 2021, 13, 1-15.	2.0	6
66	Experimental demonstration of secure 100 Gb/s IMDD transmission over a 50â€…km SSMF using a quantum noise stream cipher and optical coarse-to-fine modulation. Optics Express, 2021, 29, 5475.	3.4	6
67	Two-dimensional coupled electro-optic delayed feedback system with varying parameters. Journal of Modern Optics, 2017, 64, 547-554.	1.3	5
68	A Robust Sparse RLS-Volterra Nonlinear Equalizer Using â„“â‚€-Regularization for 4 Ã— 150 Gbit/s IMDD-Based Optical Interconnect. IEEE Access, 2021, 9, 30881-30892.	4.2	5
69	Experimental demonstration of a broadband optoelectronic chaos system based on highly nonlinear configuration of IQ modulator. Optics Letters, 2021, 46, 4654.	3.3	5
70	Permutation Entropy for Random Binary Sequences. Entropy, 2015, 17, 8207-8216.	2.2	4
71	Asymmetric dual-SSB modulation for photonic co-frequency mm-wave signals generation and DSP-free receiver. Optics Letters, 2021, 46, 4366.	3.3	4
72	Non-orthogonal Multiple Access Based on SCMA and OFDM/OQAM Techniques in Bidirectional RoF System. , 2017, , .		4

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73	Simultaneously Precise Calibration of Frequency Response and IQ Skew for 100Gbaud Optical Transceiver. , 2021, , .		4
74	56-Gb/s/Î» C-band DSB IM/DD PAM-4 40-km SSMF transmission employing a multiplier-free MLSE equalizer. Optics Express, 2022, 30, 11275.	3.4	4
75	Simultaneously precise frequency response and IQ skew calibration in a self-homodyne coherent optical transmission system. Optics Express, 2022, 30, 20894.	3.4	4
76	Secure Spread Spectrum Communication Using Super-Orthogonal Optical Chaos Signals. IEEE Photonics Journal, 2022, 14, 1-6.	2.0	4
77	Improving the security of optoelectronic delayed feedback system by parameter modulation and system coupling. Optical Engineering, 2016, 55, 026101.	1.0	3
78	Extracting the time delay signature of coupled optical chaotic systems by mutual statistical analysis. Frontiers of Optoelectronics, 2017, 10, 378-387.	3.7	3
79	Experimental Investigation on Improved Predistortion Circuit for Directly Modulated Radio Over Fiber System. IEEE Photonics Journal, 2017, 9, 1-9.	2.0	3
80	Simple and precise characterization of differential modal group delay arising in few-mode fiber. Optics Letters, 2021, 46, 2856.	3.3	3
81	Inverse design and demonstration of ultracompact silicon polarization rotator. , 2019, , .		3
82	An Enhanced Electro-Optic Chaos Secure Communication System Immune to Time Delay Signature Extraction. IEEE Photonics Journal, 2022, 14, 1-7.	2.0	3
83	A Machine Learning Assisted Device Fingerprint Identification Technique for TDM-PON System. , 2021, , .		3
84	Fast and simple calibration of frequency response and IQ skew for a coherent optical transmitter using a low-bandwidth photodetector. Optics Letters, 2022, 47, 118.	3.3	3
85	Simple and ultrafast automatic bias control for optical IQ modulators enabled by dither vector mapping monitoring. , 2022, , .		3
86	Cyclic silicon waveguide four-mode converter for mode division multiplexing transmission. Optics Express, 2022, 30, 22986.	3.4	3
87	Broadband optical chaos generation by constructing a simple hybrid feedback loop. , 2017, , .		2
88	A Novel Chaotic Synchronization Scheme Based on Impulsive Stability Theory. Journal of Computers, 2012, 7, .	0.4	2
89	2Ã—2 PolMux-MIMO RoF System Employing Interference Cancellation Based OFDM/OQAM Technique. , 2016, , .		2
90	A Broadband and High Linearity Directly-Modulated Analog Photonic Link based on Push-Pull structure and Digital Signal Post-Compensation. , 2016, , .		2

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91	A Novel Self-Interfere Cancellation Technique Based on Operating-point-optimized Optical IQ Modulator for Co-frequency Co-time Full Duplex Wireless Communication. , 2019, , .		2
92	Machine Learning Assisted Hardware Fingerprint Identification for TDM-PON from Eye-diagram. , 2021, , .		2
93	A Ditherless Bias Control Technique for IQ Mach-Zehnder Modulator Based on Partial Derivative and Neural Network. , 2021, , .		2
94	Secure Optical Communication System Based on ASE Noise with No Need for Key Distribution. , 2018, , .		1
95	Unveil the Time Delay Signature in Delayed Chaotic Communication System via CNN. , 2020, , .		1
96	Adaptive Blind Stokes-Space Based Equalizer for RSOP in SV-DD Systems With High Chromatic Dispersion Tolerance. IEEE Photonics Journal, 2020, 12, 1-13.	2.0	1
97	Reproducible Broadband Optical Noise Generation Based on Phase Modulation to Intensity Modulation Conversion and a Nonlinear Transformation. , 2017, , .		1
98	BOMA and OFDM/OQAM modulation for a radio-over-fiber system with enhanced spectral efficiency. Optics Letters, 2018, 43, 4859.	3.3	1
99	Maximizing the security of digital chaos based OFDM-PON with a dynamical nonlinear transformation. , 2019, , .		1
100	1.25 Gb/s Correlated Random Bit Generation Over 200 km Using Electro-Optic Hybrid Chaotic Entropy Source. , 2020, , .		1
101	Improved multiplier-free Mueller-MÃ¼ller Baud-rate timing error detector for optical IM/DD system. Optics Express, 2021, 29, 44129.	3.4	1
102	Real-time In-field Automatic Bias Control and Self-calibration Module for High-baud Coherent Driver Modulator. , 2022, , .		1
103	Reconfigurable Optical Boolean Function Generator Based on Electro-Optical Nonlinear Dynamics. Physical Review Applied, 2020, 13, .	3.8	0
104	Theoretical investigations of impulsive synchronization on semiconductor laser chaotic systems. Chinese Optics Letters, 2012, 10, 101901-101904.	2.9	0
105	A Tunable Photonic Differentiator Based on Temporal Pulse Shaping System. , 2016, , .		0
106	Robust digital-controllable broadband analog optical chaos generation. , 2019, , .		0