

Zhenzhou Cheng

List of Publications by Year in descending order

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128
papers

3,350
citations

172207

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h-index

155451

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129
all docs

129
docs citations

129
times ranked

3861
citing authors

#	ARTICLE	IF	CITATIONS
1	High-responsivity graphene/silicon-heterostructure waveguide photodetectors. Nature Photonics, 2013, 7, 888-891.	15.6	731
2	Mid-infrared Suspended Membrane Waveguide and Ring Resonator on Silicon-on-Insulator. IEEE Photonics Journal, 2012, 4, 1510-1519.	1.0	151
3	High Responsivity, Broadband, and Fast Graphene/Silicon Photodetector in Photoconductor Mode. Advanced Optical Materials, 2015, 3, 1207-1214.	3.6	141
4	Design of electro-optic modulators based on graphene-on-silicon slot waveguides. Optics Letters, 2016, 41, 2501.	1.7	104
5	High-responsivity graphene-on-silicon slot waveguide photodetectors. Nanoscale, 2016, 8, 13206-13211.	2.8	98
6	Optical time-stretch imaging: Principles and applications. Applied Physics Reviews, 2016, 3, 011102.	5.5	93
7	Wideband subwavelength gratings for coupling between silicon-on-insulator waveguides and optical fibers. Optics Letters, 2012, 37, 3483.	1.7	89
8	Porous carbon nanowire array for surface-enhanced Raman spectroscopy. Nature Communications, 2020, 11, 4772.	5.8	86
9	Focusing subwavelength grating coupler for mid-infrared suspended membrane waveguide. Optics Letters, 2012, 37, 1217.	1.7	83
10	Focusing subwavelength grating coupler for mid-infrared suspended membrane germanium waveguides. Optics Letters, 2017, 42, 2094.	1.7	76
11	In-Plane Optical Absorption and Free Carrier Absorption in Graphene-on-Silicon Waveguides. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 43-48.	1.9	75
12	Experimental demonstration of polarization-insensitive air-cladding grating couplers for silicon-on-insulator waveguides. Optics Letters, 2014, 39, 2206.	1.7	73
13	Apodized focusing subwavelength grating couplers for suspended membrane waveguides. Applied Physics Letters, 2012, 101, .	1.5	65
14	Interplay of hot electrons from localized and propagating plasmons. Nature Communications, 2017, 8, 771.	5.8	64
15	Mid-Infrared Grating Couplers for Silicon-on-Sapphire Waveguides. IEEE Photonics Journal, 2012, 4, 104-113.	1.0	54
16	Broadband focusing grating couplers for suspended-membrane waveguides. Optics Letters, 2012, 37, 5181.	1.7	52
17	Polarimetric underwater image recovery via deep learning. Optics and Lasers in Engineering, 2020, 133, 106152.	2.0	51
18	On-Chip Optical Gas Sensors Based on Group-IV Materials. ACS Photonics, 2020, 7, 2923-2940.	3.2	50

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19	Learning-based denoising for polarimetric images. Optics Express, 2020, 28, 16309.	1.7	48
20	Compatibility of Silicon Mach-Zehnder Modulators for Advanced Modulation Formats. Journal of Lightwave Technology, 2013, 31, 2550-2554.	2.7	46
21	Graphene photodetector integrated on silicon nitride waveguide. Journal of Applied Physics, 2015, 117, .	1.1	46
22	Fully suspended slot waveguides for high refractive index sensitivity. Optics Letters, 2017, 42, 1245.	1.7	42
23	Mid-infrared high-Q germanium microring resonator. Optics Letters, 2018, 43, 2885.	1.7	39
24	Review of Recent Progress on Silicon Nitride-Based Photonic Integrated Circuits. IEEE Access, 2020, 8, 195436-195446.	2.6	39
25	Optical Absorption in Graphene-on-Silicon Nitride Microring Resonators. IEEE Photonics Technology Letters, 2015, 27, 1765-1767.	1.3	37
26	Temperature dependence of luminescence behavior in Er ³⁺ /Yb ³⁺ co-doped transparent phosphate glass ceramics. Optical Materials, 2009, 31, 1645-1649.	1.7	35
27	Comparison of optical parameters and luminescence between Er ³⁺ /Yb ³⁺ codoped phosphate glass ceramics and precursor glasses. Journal of Applied Physics, 2008, 104, .	1.1	34
28	Hyperuniform Disordered Network Polarizers. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 288-294.	1.9	34
29	Fully suspended slot waveguide platform. Journal of Applied Physics, 2018, 123, .	1.1	33
30	Tailorable dual-wavelength-band coupling in a transverse-electric-mode focusing subwavelength grating coupler. Optics Letters, 2018, 43, 2985.	1.7	33
31	Graphene-on-silicon hybrid plasmonic-photonic integrated circuits. Nanotechnology, 2017, 28, 245201.	1.3	29
32	All-dielectric chiral-field-enhanced Raman optical activity. Nature Communications, 2021, 12, 3062.	5.8	28
33	Mid-infrared germanium photonic crystal cavity. Optics Letters, 2017, 42, 2882.	1.7	27
34	Effects of Ce ³⁺ on the spectroscopic properties of transparent phosphate glass ceramics co-doped with Er ³⁺ /Yb ³⁺ . Optics Communications, 2009, 282, 2045-2048.	1.0	26
35	Characterization of Mid-Infrared Silicon-on-Sapphire Microring Resonators With Thermal Tuning. IEEE Photonics Journal, 2012, 4, 1095-1102.	1.0	26
36	Saturable absorption in graphene-on-waveguide devices. Applied Physics Express, 2019, 12, 032003.	1.1	23

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37	Design of Mid-infrared electro-optic modulators based on aluminum nitride waveguides. Journal of Lightwave Technology, 2016, , 1-1.	2.7	21
38	Automatic underwater polarization imaging without background region or any prior. Optics Express, 2021, 29, 31283.	1.7	21
39	High-Q germanium optical nanocavity. Photonics Research, 2018, 6, 925.	3.4	20
40	Polarimetric underwater image recovery for color image with crosstalk compensation. Optics and Lasers in Engineering, 2020, 124, 105833.	2.0	20
41	Tunable integrated variable bit-rate DPSK silicon receiver. Optics Letters, 2012, 37, 4738.	1.7	17
42	Subwavelength Engineering in Silicon Photonic Devices. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-13.	1.9	17
43	Bit-Rate-Variable DPSK Demodulation Using Silicon Microring Resonators With Electro-Optic Wavelength Tuning. IEEE Photonics Technology Letters, 2012, 24, 1221-1223.	1.3	16
44	Underwater imaging enhancement based on a polarization filter and histogram attenuation prior. Journal Physics D: Applied Physics, 2021, 54, 175102.	1.3	16
45	Progress on mid-IR graphene photonics and biochemical applications. Frontiers of Optoelectronics, 2016, 9, 259-269.	1.9	15
46	Design of waveguide-integrated graphene devices for photonic gas sensing. Nanotechnology, 2016, 27, 505206.	1.3	15
47	Waveguide-integrated graphene spatial mode filters for on-chip mode-division multiplexing. Optics Express, 2019, 27, 19188.	1.7	15
48	Recent Progress in Waveguide-Integrated Graphene Photonic Devices for Sensing and Communication Applications. Frontiers in Physics, 2020, 8, .	1.0	14
49	$\text{U}^{\text{altimg="si1.svg"}} \times \text{R-pGAN}$: Unpaired underwater-image recovery with polarimetric generative adversarial network. Optics and Lasers in Engineering, 2022, 157, 107112.	2.0	14
50	Temperature Compensation of Optical Fiber Current Sensors With a Static Bias. IEEE Sensors Journal, 2022, 22, 352-356.	2.4	13
51	Stabilization of a multiwavelength erbium-doped fiber laser using a nonlinear silicon waveguide. Applied Physics B: Lasers and Optics, 2014, 114, 367-371.	1.1	12
52	Graphene-based dual-mode modulators. Optics Express, 2020, 28, 18456.	1.7	12
53	Attention-based neural network for polarimetric image denoising. Optics Letters, 2022, 47, 2726.	1.7	12
54	Optical Nyquist filters based on silicon coupled resonator optical waveguides. Optics Communications, 2014, 329, 23-27.	1.0	11

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55	Enhancement of self-phase modulation induced spectral broadening in silicon suspended membrane waveguides. <i>Journal of Optics (United Kingdom)</i> , 2016, 18, 055503.	1.0	11
56	Pseudo-polarimetric Method for Dense Haze Removal. <i>IEEE Photonics Journal</i> , 2019, 11, 1-11.	1.0	11
57	Surface-enhanced Raman spectroscopy chips based on two-dimensional materials beyond graphene. <i>Journal of Semiconductors</i> , 2021, 42, 051001.	2.0	11
58	Polarization differential imaging in turbid water via Mueller matrix and illumination modulation. <i>Optics Communications</i> , 2021, 499, 127274.	1.0	11
59	Optimal ellipsometric parameter measurement strategies based on four intensity measurements in presence of additive Gaussian and Poisson noise. <i>Optics Express</i> , 2018, 26, 34529.	1.7	11
60	Ultra-thin mid-infrared silicon grating coupler. <i>Optics Letters</i> , 2022, 47, 1226.	1.7	11
61	OSNR Monitoring for NRZ-PSK Signals Using Silicon Waveguide Two-Photon Absorption. <i>IEEE Photonics Journal</i> , 2011, 3, 968-974.	1.0	10
62	Demodulation of 20 Gbaud/s differential quadrature phase-shift keying signals using wavelength-tunable silicon microring resonators. <i>Optics Letters</i> , 2012, 37, 3462.	1.7	10
63	Amplitude and Phase Modulation of UWB Monocycle Pulses on a Silicon Photonic Chip. <i>IEEE Photonics Technology Letters</i> , 2016, 28, 248-251.	1.3	10
64	Design of a Dual-Mode Graphene-on-Microring Resonator for Optical Gas Sensing. <i>IEEE Access</i> , 2021, 9, 56479-56485.	2.6	10
65	Compact high power broadband Er ³⁺ /Yb ³⁺ -codoped superfluorescent fiber source. <i>Applied Physics Letters</i> , 2008, 93, 091108.	1.5	9
66	Spectral hole burning in silicon waveguides with a graphene layer on top. <i>Optics Letters</i> , 2013, 38, 1930.	1.7	9
67	Increase of the grating coupler bandwidth with a graphene overlay. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	9
68	Wavelength tunable L Band polarization-locked vector soliton fiber laser based on SWCNT-SA and CFBG. <i>Optics Communications</i> , 2018, 412, 55-59.	1.0	9
69	Giant Optical Activity in an All-Dielectric Spiral Nanoflower. <i>Small</i> , 2018, 14, e1800485.	5.2	9
70	Forward stimulated Brillouin scattering in silicon microring resonators. <i>Applied Physics Letters</i> , 2017, 111, .	1.5	9
71	Contrast optimization in broadband passive polarimetric imaging based on color camera. <i>Optics Express</i> , 2019, 27, 2444.	1.7	9
72	Underwater Imaging by Suppressing the Backscattered Light Based on Mueller Matrix. <i>IEEE Photonics Journal</i> , 2021, 13, 1-6.	1.0	8

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73	Grating couplers beyond silicon TPA wavelengths based on MPW. Journal Physics D: Applied Physics, 2022, 55, 015109.	1.3	8
74	Design and applications of silicon waveguide grating couplers. Proceedings of SPIE, 2012, , .	0.8	7
75	Progress on Waveguide-Integrated Graphene Optoelectronics. Advances in Condensed Matter Physics, 2018, 2018, 1-9.	0.4	7
76	Design of on-chip polarizers based on graphene-on-silicon nanowires. Applied Physics Express, 2019, 12, 072001.	1.1	7
77	An Ultracompact OSNR Monitor Based on an Integrated Silicon Microdisk Resonator. IEEE Photonics Journal, 2012, 4, 1365-1371.	1.0	6
78	Theoretical study of upconversion luminescence efficiency of Yb ³⁺ -Tm ³⁺ co-doped NaGdF ₄ nanoparticles. Optics Communications, 2021, 483, 126663.	1.0	6
79	Ultra-compact spot size converter based on digital metamaterials. Optics Communications, 2022, 508, 127865.	1.0	6
80	Numerical investigation of gain characteristics of Er ³⁺ /Yb ³⁺ co-doped fiber amplifiers. Optical and Quantum Electronics, 2008, 40, 1021-1031.	1.5	5
81	Patterned graphene on SiN waveguides for mode locking of fiber lasers. Japanese Journal of Applied Physics, 2018, 57, 102701.	0.8	5
82	Solution processable transition metal dichalcogenides-based hybrids for photodetection. Nano Materials Science, 2019, 1, 288-298.	3.9	5
83	NaYF ₄ :Yb/Tm@SiO ₂ -Dox/Cur-CS/OSA nanoparticles with pH and photon responses. Nanotechnology, 2021, 32, 255703.	1.3	5
84	Temperature compensation of optical alternating magnetic field sensor via a novel method for on-line measuring. Optics Express, 2020, 28, 13682.	1.7	5
85	UWB monocycle pulse generation based on colourless silicon photonic integrated circuit. Electronics Letters, 2013, 49, 1291-1293.	0.5	4
86	Design of a Graphene-Based Waveguide-Integrated Multimode Phase Modulator. IEEE Photonics Journal, 2021, 13, 1-6.	1.0	4
87	Optical Absorption and Thermal Nonlinearities in Graphene-on-Silicon Nitride Microring Resonators. , 2015, , .		4
88	Design of a Graphene-Enabled Dual-Mode Kerr Frequency Comb. IEEE Journal of Selected Topics in Quantum Electronics, 2022, 28, 1-7.	1.9	4
89	Characterization method of a mid-infrared graphene-on-silicon microring with a monochromatic laser. Journal of the Optical Society of America B: Optical Physics, 2020, 37, 1683.	0.9	3
90	Deep Learning-Assisted Enhanced Fano Resonances in Symmetry-Breaking SOI Metasurface. IEEE Photonics Journal, 2022, 14, 1-7.	1.0	3

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91	Is Ge an Excellent Material for Mid-IR Kerr Frequency Combs Around 3- μ m Wavelengths?. Journal of Lightwave Technology, 2022, 40, 2097-2103.	2.7	3
92	Mode-locked fiber laser using graphene on silicon waveguide. , 2013, , .		2
93	In-plane saturable absorption of graphene on silicon waveguides. , 2013, , .		2
94	Graphene absorption enhancement using silicon slot waveguides. , 2015, , .		2
95	Graphene on Silicon-on-Sapphire Waveguide Photodetectors. , 2015, , .		2
96	Fully suspended mid-infrared racetrack resonator with subwavelength grating cladding. , 2017, , .		2
97	Joint Noise Reduction for Contrast Enhancement in Stokes Polarimetric Imaging. IEEE Photonics Journal, 2019, 11, 1-10.	1.0	2
98	Dual-Mode GVD Tailoring in a Convex Waveguide. IEEE Photonics Journal, 2020, 12, 1-6.	1.0	2
99	Theoretical study of a water sensor based on a single upconversion microrod. Journal Physics D: Applied Physics, 2021, 54, 165103.	1.3	2
100	Relaxation Dynamics of Optically Generated Carriers in Graphene-on-Silicon Nitride Waveguide Devices. , 2015, , .		2
101	Photoresponse of Graphene-on-Silicon Nitride Microring Resonator. , 2016, , .		2
102	Temperature Compensation of Optical Current Sensor Based on BP Neural Network. , 2021, , .		2
103	Mid-infrared micro-ring resonator on silicon-on-sapphire characterized by thermal tuning. , 2011, , .		1
104	100 GHz passive mode-locked laser based on nonlinear silicon microring resonator. , 2013, , .		1
105	Polarization dependent loss of graphene-on-silicon waveguides. , 2013, , .		1
106	Performance of silicon coupled resonator waveguides for integrated Nyquist filter. , 2013, , .		1
107	Increasing the grating coupler bandwidth with a high numerical-aperture fiber. , 2014, , .		1
108	In-situ host-transition-induced upconversion luminescence modulation of ZrW ₂ O ₇ (OH) ₂ ·2H ₂ O:Yb ³⁺ /Er ³⁺ nanocrystals. Optical Materials, 2021, 118, 111218.	1.7	1

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109	Control of transient states for upconversion emission color adjustment. Journal of Luminescence, 2021, 236, 118144.	1.5	1
110	In-Plane Mid-Infrared Optical Absorption of Graphene on Silicon-on-Sapphire Waveguides. , 2014, , .		1
111	Contribution of electrostriction and radiation pressure to Kerr-like nonlinearities in silicon pedestal waveguides. , 2017, , .		1
112	Electric-field-assisted resonance scanning spectroscopy based on a graphene-on-silicon dual-mode microring. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 3435.	0.9	1
113	Fully suspended nanophotonic waveguide resonators with high quality factor and tailorable operational bandwidth. , 2017, , .		1
114	Mid-Infrared Germanium Photonics. , 2019, , .		1
115	Mid-infrared suspended membrane waveguides on silicon-on-insulator. , 2012, , .		0
116	Monolithic suspended membrane ring resonator for mid-infrared applications. , 2012, , .		0
117	Apodized focusing subwavelength gratings for simultaneous coupling of TE and TM modes. , 2013, , .		0
118	Silicon waveguide dispersion changes induced by graphene overlay. , 2014, , .		0
119	Scalable Optical Multicasting and Receiver for Networks- on-Chip. , 2014, , .		0
120	Optical Activity: Giant Optical Activity in an All-Dielectric Spiral Nanoflower (Small 31/2018). Small, 2018, 14, 1870142.	5.2	0
121	Subwavelength Silicon Photonics. Topics in Applied Physics, 2021, , 285-321.	0.4	0
122	Focusing Subwavelength Grating Couplers. , 2013, , .		0
123	Enhanced self-phase modulation in silicon suspended membrane waveguides. , 2015, , .		0
124	Mid-infrared germanium photonic integrated circuits for on-chip biochemical sensing. , 2018, , .		0
125	Mid-infrared subwavelength grating coupler. , 2021, , .		0
126	Temperature-controlled Upconversion Luminescence of Yb ³⁺ /Er ³⁺ Co-doped ZrV ₂ O ₇ Crystals. , 2021, , .		0

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127	Corrections to "Deep Learning-Assisted Enhanced Fano Resonances in Symmetry-Breaking SOI Metasurface" [Feb 22 Art. no. 5702107]. IEEE Photonics Journal, 2022, 14, 1-6.	1.0	0
128	In-Situ Study of Dynamics of Refractive Index Changes in Silicon Devices Induced by UV-light Irradiation. IEEE Photonics Journal, 2022, 14, 1-5.	1.0	0