

Anna C Peacock

List of Publications by Year in descending order

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173
papers

4,697
citations

94381

37
h-index

106281

65
g-index

177
all docs

177
docs citations

177
times ranked

3275
citing authors

#	ARTICLE	IF	CITATIONS
1	Exact Self-Similar Solutions of the Generalized Nonlinear Schrödinger Equation with Distributed Coefficients. <i>Physical Review Letters</i> , 2003, 90, 113902.	2.9	476
2	Self-similar propagation of parabolic pulses in normal-dispersion fiber amplifiers. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2002, 19, 461.	0.9	255
3	Self-similar propagation of high-power parabolic pulses in optical fiber amplifiers. <i>Optics Letters</i> , 2000, 25, 1753.	1.7	222
4	High-speed detection at two micrometres with monolithic silicon photodiodes. <i>Nature Photonics</i> , 2015, 9, 393-396.	15.6	192
5	Exact solutions of the generalized nonlinear Schrödinger equation with distributed coefficients. <i>Physical Review E</i> , 2005, 71, 056619.	0.8	160
6	Roadmap on all-optical processing. <i>Journal of Optics (United Kingdom)</i> , 2019, 21, 063001.	1.0	128
7	Zinc Selenide Optical Fibers. <i>Advanced Materials</i> , 2011, 23, 1647-1651.	11.1	108
8	Integration of gigahertz-bandwidth semiconductor devices inside microstructured optical fibres. <i>Nature Photonics</i> , 2012, 6, 174-179.	15.6	107
9	Silicon-Based Photonic Integration Beyond the Telecommunication Wavelength Range. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2014, 20, 394-404.	1.9	106
10	Surface-Enhanced Raman Scattering Using Microstructured Optical Fiber Substrates. <i>Advanced Functional Materials</i> , 2007, 17, 2024-2030.	7.8	97
11	Extreme electronic bandgap modification in laser-crystallized silicon optical fibres. <i>Nature Materials</i> , 2014, 13, 1122-1127.	13.3	94
12	Laser recrystallization and inscription of compositional microstructures in crystalline SiGe-core fibres. <i>Nature Communications</i> , 2016, 7, 13265.	5.8	91
13	Silver Nanoparticle Impregnated Polycarbonate Substrates for Surface Enhanced Raman Spectroscopy. <i>Advanced Functional Materials</i> , 2008, 18, 1265-1271.	7.8	89
14	CO ₂ Laser-Induced Directional Recrystallization to Produce Single Crystal Silicon-Core Optical Fibers with Low Loss. <i>Advanced Optical Materials</i> , 2016, 4, 1004-1008.	3.6	87
15	Germanium Mid-Infrared Photonic Devices. <i>Journal of Lightwave Technology</i> , 2017, 35, 624-630.	2.7	76
16	Low loss silicon fibers for photonics applications. <i>Applied Physics Letters</i> , 2010, 96, 041105.	1.5	75
17	Mid-infrared all-optical modulation in low-loss germanium-on-silicon waveguides. <i>Optics Letters</i> , 2015, 40, 268.	1.7	74
18	Semiconductor optical fibres: progress and opportunities. <i>Laser and Photonics Reviews</i> , 2014, 8, 53-72.	4.4	72

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19	Nonlinear transmission properties of hydrogenated amorphous silicon core optical fibers. Optics Express, 2010, 18, 16826.	1.7	65
20	Silicon-based heterogeneous photonic integrated circuits for the mid-infrared. Optical Materials Express, 2013, 3, 1523.	1.6	65
21	Perspective: Molten core optical fiber fabrication—A route to new materials and applications. APL Photonics, 2018, 3, 120903.	3.0	64
22	Recent advances in supercontinuum generation in specialty optical fibers [Invited]. Journal of the Optical Society of America B: Optical Physics, 2021, 38, F90.	0.9	59
23	Confined High-Pressure Chemical Deposition of Hydrogenated Amorphous Silicon. Journal of the American Chemical Society, 2012, 134, 19-22.	6.6	56
24	Ultrafast optical control using the Kerr nonlinearity in hydrogenated amorphous silicon microcylindrical resonators. Scientific Reports, 2013, 3, 2885.	1.6	54
25	Harmonic generation in a two-dimensional nonlinear quasi-crystal. Optics Letters, 2005, 30, 424.	1.7	53
26	Ion Implantation in Silicon for Trimming the Operating Wavelength of Ring Resonators. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-7.	1.9	53
27	Solitary pulse propagation in high gain optical fiber amplifiers with normal group velocity dispersion. Optics Communications, 2002, 206, 171-177.	1.0	52
28	All-optical modulation using two-photon absorption in silicon core optical fibers. Optics Express, 2011, 19, 19078.	1.7	51
29	Tapered polysilicon core fibers for nonlinear photonics. Optics Letters, 2016, 41, 1360.	1.7	51
30	Guided modes in channel waveguides with a negative index of refraction. Optics Express, 2003, 11, 2502.	1.7	48
31	Optical detection and modulation at 2-25 μm in silicon. Optics Express, 2014, 22, 10825.	1.7	48
32	Tapered silicon core fibers with nano-spikes for optical coupling via spliced silica fibers. Optics Express, 2017, 25, 24157.	1.7	44
33	Soliton propagation in tapered silicon core fibers. Optics Letters, 2010, 35, 3697.	1.7	43
34	Enhanced all-optical modulation in a graphene-coated fibre with low insertion loss. Scientific Reports, 2016, 6, 23512.	1.6	43
35	Four-wave mixing and octave-spanning supercontinuum generation in a small core hydrogenated amorphous silicon fiber pumped in the mid-infrared. Optics Letters, 2014, 39, 5721.	1.7	42
36	Mid-infrared transmission properties of amorphous germanium optical fibers. Applied Physics Letters, 2010, 97, .	1.5	40

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37	Silicon optical fibres – past, present, and future. <i>Advances in Physics: X</i> , 2016, 1, 114-127.	1.5	38
38	Material properties of tapered crystalline silicon core fibers. <i>Optical Materials Express</i> , 2017, 7, 2055.	1.6	38
39	Nonlinear transmission properties of hydrogenated amorphous silicon core fibers towards the mid-infrared regime. <i>Optics Express</i> , 2013, 21, 13075.	1.7	37
40	Tapered silicon optical fibers. <i>Optics Express</i> , 2010, 18, 7596.	1.7	36
41	Low-loss silicon core fibre platform for mid-infrared nonlinear photonics. <i>Light: Science and Applications</i> , 2019, 8, 105.	7.7	36
42	Large mode area silicon microstructured fiber with robust dual mode guidance. <i>Optics Express</i> , 2009, 17, 18076.	1.7	35
43	Wavelength Conversion and Supercontinuum Generation in Silicon Optical Fibers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2018, 24, 1-9.	1.9	35
44	Crystalline Silicon Optical Fibers with Low Optical Loss. <i>ACS Photonics</i> , 2016, 3, 378-384.	3.2	34
45	Kerr nonlinear switching in a hybrid silica-silicon microspherical resonator. <i>Optics Express</i> , 2015, 23, 17263.	1.7	32
46	Ultrafast wavelength conversion via cross-phase modulation in hydrogenated amorphous silicon optical fibers. <i>Optics Express</i> , 2012, 20, 26110.	1.7	31
47	Semiconductor optical fibres for infrared applications: A review. <i>Semiconductor Science and Technology</i> , 2016, 31, 103004.	1.0	30
48	Post-fabrication phase trimming of Mach-Zehnder interferometers by laser annealing of germanium implanted waveguides. <i>Photonics Research</i> , 2017, 5, 578.	3.4	29
49	Nonlinear pulse dynamics in multimode silicon core optical fibers. <i>Optics Letters</i> , 2012, 37, 3351.	1.7	28
50	Two-photon absorption and all-optical modulation in germanium-on-silicon waveguides for the mid-infrared. <i>Optics Letters</i> , 2015, 40, 2213.	1.7	27
51	High-Pressure Chemical Deposition for Void-Free Filling of Extreme Aspect Ratio Templates. <i>Advanced Materials</i> , 2010, 22, 4605-4611.	11.1	26
52	Locally Erasable Couplers for Optical Device Testing in Silicon on Insulator. <i>Journal of Lightwave Technology</i> , 2014, 32, 2248-2253.	2.7	26
53	Parabolic pulse generation in tapered silicon fibers. <i>Optics Letters</i> , 2010, 35, 1780.	1.7	25
54	Graphene-Based Fiber Polarizer With PVB-Enhanced Light Interaction. <i>Journal of Lightwave Technology</i> , 2016, 34, 3563-3567.	2.7	25

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55	A review of materials engineering in silicon-based optical fibres. <i>Semiconductor Science and Technology</i> , 2018, 33, 023001.	1.0	25
56	Ultra-smooth lithium niobate photonic micro-structures by surface tension reshaping. <i>Optics Express</i> , 2010, 18, 11508.	1.7	24
57	Integrated hollow-core fibers for nonlinear optofluidic applications. <i>Optics Express</i> , 2013, 21, 28751.	1.7	24
58	Numerical study of parabolic pulse generation in microstructured fibre Raman amplifiers. <i>Optics Communications</i> , 2003, 218, 167-172.	1.0	23
59	Highly efficient surface enhanced Raman scattering using microstructured optical fibers with enhanced plasmonic interactions. <i>Applied Physics Letters</i> , 2008, 92, .	1.5	23
60	Nonlinear optical properties of polycrystalline silicon core fibers from telecom wavelengths into the mid-infrared spectral region. <i>Optical Materials Express</i> , 2019, 9, 1271.	1.6	23
61	High index contrast semiconductor ARROW and hybrid ARROW fibers. <i>Optics Express</i> , 2011, 19, 10979.	1.7	22
62	Polycrystalline silicon optical fibers with atomically smooth surfaces. <i>Optics Letters</i> , 2011, 36, 2480.	1.7	22
63	Four-Wave Mixing-Based Wavelength Conversion and Parametric Amplification in Submicron Silicon Core Fibers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2021, 27, 1-11.	1.9	22
64	Conformal Coating by High Pressure Chemical Deposition for Patterned Microwires of II–VI Semiconductors. <i>Advanced Functional Materials</i> , 2013, 23, 1647-1654.	7.8	21
65	All-fibre heterogeneously-integrated frequency comb generation using silicon core fibre. <i>Nature Communications</i> , 2022, 13, .	5.8	21
66	Net optical parametric gain in a submicron silicon core fiber pumped in the telecom band. <i>APL Photonics</i> , 2019, 4, .	3.0	20
67	Ultra-smooth microcylindrical resonators fabricated from the silicon optical fiber platform. <i>Applied Physics Letters</i> , 2011, 99, 031117.	1.5	19
68	Crystalline GaSb-core optical fibers with room-temperature photoluminescence. <i>Optical Materials Express</i> , 2018, 8, 1435.	1.6	17
69	Tunable continuous wave emission via phase-matched second harmonic generation in a ZnSe microcylindrical resonator. <i>Scientific Reports</i> , 2015, 5, 11798.	1.6	16
70	Fiber-integrated phase-change reconfigurable optical attenuator. <i>APL Photonics</i> , 2019, 4, .	3.0	16
71	Continuous-wave Raman amplification in silicon core fibers pumped in the telecom band. <i>APL Photonics</i> , 2021, 6, .	3.0	16
72	Guiding properties of large mode area silicon microstructured fibers: a route to effective single mode operation. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2011, 28, 1529.	0.9	15

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73	Wide-Band-Gap Metal-Free Perovskite for Third-Order Nonlinear Optics. ACS Photonics, 2021, 8, 2450-2458.	3.2	15
74	Highly nonlinear yttrium-aluminosilicate optical fiber with a high intrinsic stimulated Brillouin scattering threshold. Optics Letters, 2017, 42, 4849.	1.7	14
75	Hot-wire chemical vapor deposition low-loss hydrogenated amorphous silicon waveguides for silicon photonic devices. Photonics Research, 2019, 7, 193.	3.4	14
76	Selective Semiconductor Filling of Microstructured Optical Fibers. Journal of Lightwave Technology, 2011, 29, 2005-2008.	2.7	13
77	Yb-fiber amplifier pumped idler-resonant PPLN optical parametric oscillator producing 90 femtosecond pulses with high beam quality. Applied Physics B: Lasers and Optics, 2014, 117, 987-993.	1.1	13
78	The cancellation of nonlinear and dispersive phase components on the fundamental optical fiber soliton: a pedagogical note. Optics Communications, 2001, 193, 253-259.	1.0	12
79	Oxyfluoride Core Silica-Based Optical Fiber With Intrinsically Low Nonlinearities for High Energy Laser Applications. Journal of Lightwave Technology, 2018, 36, 284-291.	2.7	12
80	Optical-resonance-enhanced nonlinearities in a MoS ₂ -coated single-mode fiber. Optics Letters, 2018, 43, 3100.	1.7	12
81	Kruglov et al. Reply. Physical Review Letters, 2004, 92, .	2.9	11
82	Mid-IR soliton compression in silicon optical fibers and fiber tapers. Optics Letters, 2012, 37, 818.	1.7	10
83	Fiber Integrated Wavelength Converter Based on a Silicon Core Fiber With a Nano-Spike Coupler. IEEE Photonics Technology Letters, 2019, 31, 1561-1564.	1.3	10
84	Laser crystallized low-loss polycrystalline silicon waveguides. Optics Express, 2019, 27, 4462.	1.7	10
85	A review of nonlinear applications in silicon optical fibers from telecom wavelengths into the mid-infrared spectral region. Optics Communications, 2020, 463, 125437.	1.0	10
86	Raman enhanced four-wave mixing in silicon core fibers. Optics Letters, 2022, 47, 1626.	1.7	10
87	Generation and interaction of parabolic pulses in high gain fiber amplifiers and oscillators. , 0, , .		9
88	Thermal nonlinearity in silicon microcylindrical resonators. Applied Physics Letters, 2012, 100, 181101.	1.5	9
89	A Tuneable Multi-Core to Single Mode Fiber Coupler. IEEE Photonics Technology Letters, 2017, 29, 591-594.	1.3	9
90	Ion Implantation of Germanium Into Silicon for Critical Coupling Control of Racetrack Resonators. Journal of Lightwave Technology, 2020, 38, 1865-1873.	2.7	9

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91	The time is right for multiphoton entangled states. Science, 2016, 351, 1152-1153.	6.0	8
92	Laser-Driven Phase Segregation and Tailoring of Compositionally Graded Microstructures in Siâ€“Ge Nanoscale Thin Films. ACS Applied Materials & Interfaces, 2020, 12, 9457-9467.	4.0	8
93	Silicon erasable waveguides and directional couplers by germanium ion implantation for configurable photonic circuits. Optics Express, 2020, 28, 17630.	1.7	8
94	Second-harmonic generation in hexagonally-poled lithium niobate slab waveguides. Electronics Letters, 2003, 39, 75.	0.5	7
95	Analysis of Coupling Losses for All-Fiber Integration of Subwavelength Core Hybrid Optical Fibers. IEEE Photonics Journal, 2018, 10, 1-12.	1.0	7
96	Laser Thermal Processing of Group IV Semiconductors for Integrated Photonic Systems. Advanced Photonics Research, 2021, 2, 2000159.	1.7	7
97	Spontaneous Waveguide Raman Spectroscopy of Self-Assembled Monolayers in Silica Micropores. Langmuir, 2011, 27, 630-636.	1.6	6
98	Nonlinear properties of laser-processed polycrystalline silicon waveguides for integrated photonics. Optics Express, 2020, 28, 29192.	1.7	6
99	Mid-infrared photonics devices in SOI. Proceedings of SPIE, 2013, , .	0.8	5
100	Programmable long-period grating in a liquid core optical fiber. Optics Letters, 2016, 41, 4763.	1.7	5
101	Non-isothermal phase-field simulations of laser-written in-plane SiGe heterostructures for photonic applications. Communications Physics, 2021, 4, .	2.0	4
102	Photonic micro-structures produced by selective etching of laser-crystallized amorphous silicon. Optical Materials Express, 2019, 9, 2573.	1.6	4
103	Octave-spanning supercontinuum generation in a dispersion managed tapered crystalline silicon core fiber. , 2018, , .		3
104	Surface Enhanced Raman Scattering using Metal Modified Microstructured Optical Fibre Substrates. , 2006, , .		2
105	Surface enhanced Raman scattering using metal modified microstructured optical fiber substrates. , 2006, , .		2
106	Time and spectrally resolved enhanced fluorescence using silver nanoparticle impregnated polycarbonate substrates. Applied Physics Letters, 2008, 93, .	1.5	2
107	Mid-IR heterogeneous silicon photonics. Proceedings of SPIE, 2013, , .	0.8	2
108	Integration of Optical Fiber and Optoelectronic Devices. , 2013, , .		2

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109	Hydrogenated Amorphous Germanium Optical Fiber. , 2015, , .		2
110	Towards High Speed and Low Power Silicon Photonic Data Links. , 2018, , .		2
111	Germanium ion implantation for trimming the coupling efficiency of silicon racetrack resonators. , 2019, , .		2
112	Ge Ion Implanted Photonic Devices and Annealing for Emerging Applications. Micromachines, 2022, 13, 291.	1.4	2
113	Loss measurements of microstructured optical fibres with metal-nanoparticle inclusions. Electronics Letters, 2008, 44, 795.	0.5	1
114	Silver nanoparticle impregnated polycarbonate substrates for plasmonic applications. , 2009, , .		1
115	Effect of Core Size on Nonlinear Transmission in Silicon Optical Fibers. , 2012, , .		1
116	Whispering gallery modes in semiconductor optical fibres and optical bottle microresonators. , 2013, , .		1
117	Laser crystallisation of semiconductor core optical fibres. , 2013, , .		1
118	Erasable diffractive grating couplers in silicon on insulator for wafer scale testing. , 2014, , .		1
119	Kerr nonlinear switching in a core-shell microspherical resonator fabricated from the silicon fiber platform. , 2015, , .		1
120	Templated growth of II-VI semiconductor optical fiber devices and steps towards infrared fiber lasers. Proceedings of SPIE, 2015, , .	0.8	1
121	Group IV compounds for integrated photonic applications. , 2016, , .		1
122	Semiconductor optical fibers for nonlinear applications. , 2016, , .		1
123	Silicon and germanium mid-infrared photonics. Proceedings of SPIE, 2016, , .	0.8	1
124	Laser-induced ferroelectric domain engineering in LiNbO ₃ crystals using an amorphous silicon overlayer. Journal of Optics (United Kingdom), 2017, 19, 084010.	1.0	1
125	Nonlinear Optics in Semiconductor Optical Fibers. , 2018, , .		1
126	Advancing silicon photonics by germanium ion implantation into silicon. , 2018, , .		1

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127	Hot-wire CVD hydrogenated amorphous silicon for multi-layer photonic applications. , 2020, , .		1
128	Laser crystallization of silicon on lithium niobate. , 2014, , .		1
129	Laser Annealing of Low Temperature Deposited Silicon Waveguides. , 2017, , .		1
130	Demonstration of Kerr Nonlinearity in Silicon Microcylindrical Resonators. , 2012, , .		1
131	Functionalized optical fibers for non-linear optics. , 2016, , .		1
132	A multi-core fiber to single-mode fiber side-polished coupler. , 2016, , .		1
133	Germanium implanted photonic devices for post-fabrication trimming and programmable circuits. , 2018, , .		1
134	Parabolic similariton pulses in high gain fiber amplifiers with arbitrary longitudinal gain profiles. , 2001, , .		0
135	The parabolic pulse-solitary wave transition in optical fiber amplifiers. , 0, , .		0
136	Analytical solutions of the nonlinear Schrodinger equation with gain [optical solitons]. , 0, , .		0
137	Surface-Enhanced Raman Spectroscopy using silver impregnated polycarbonate substrates. , 2007, , .		0
138	Design Considerations for the Manufacture of Temperature-Stable Periodically-Poled Nonlinear Crystals. , 2007, , .		0
139	Highly efficient SERS inside microstructured optical fibres via optical mode engineering. , 2007, , .		0
140	Flat-top temperature tuning response in periodically-poled nonlinear crystals. , 2007, , .		0
141	Wavelength-dependent loss measurements in polysilicon modified optical fibres. , 2009, , .		0
142	Simultaneous tapering and crystallisation of silicon core optical fibres. , 2009, , .		0
143	Integration of Semiconductors, Molecules, and Metals into Microstructured Optical Fibers. , 2010, , .		0
144	Low Loss Amorphous Silicon Microstructured Optical Fiber with Large Mode Area Behavior. , 2010, , .		0

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145	Nonlinear absorption and self-phase modulation in silicon optical fibres. , 2011, , .		0
146	Taper designs for semiconductor filled fibres. , 2011, , .		0
147	Experimental observation of whispering gallery modes in novel silicon microcylindrical resonators. , 2011, , .		0
148	ARROW guiding silicon photonic crystal fibres. , 2011, , .		0
149	Characterization of Thermal Induced Nonlinear Effects in Silicon Microcylindrical Resonators. , 2012, , .		0
150	Nonlinear optics in tapered silicon fibres. Proceedings of SPIE, 2012, , .	0.8	0
151	Tapered liquid-core all-fibre devices for low-threshold Raman generation. , 2013, , .		0
152	Group IV platforms for the mid-infrared. Proceedings of SPIE, 2013, , .	0.8	0
153	Long-wavelength silicon photonic integrated circuits. , 2014, , .		0
154	Group IV mid-IR photonics. , 2015, , .		0
155	Germanium-on-silicon platforms for nonlinear photonics in the mid-infrared. , 2015, , .		0
156	Group IV mid-infrared photonics. , 2015, , .		0
157	All-optical Modulation in Germanium-on-silicon Waveguides in the Mid-infrared. , 2015, , .		0
158	Silicon photonics: some remaining challenges. Proceedings of SPIE, 2016, , .	0.8	0
159	Phase trimming of Mach-Zehnder interferometers by laser annealing of germanium implanted waveguides. , 2017, , .		0
160	Fiberized Silicon Devices for All-Optical Signal Processing. , 2018, , .		0
161	Stimulated Raman Scattering in a Tapered Submicron Silicon Core Fiber. , 2021, , .		0
162	Parametric frequency comb generation using silicon core fiber. , 2021, , .		0

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163	Ultra-smooth lithium niobate single crystal photonic micro-structures. , 2009, , .		0
164	Nonlinearities in Silicon Optical Fibers. , 2011, , .		0
165	Hydrogenated Amorphous Silicon Microcylindrical Resonators for Ultrafast Modulation. , 2014, , .		0
166	In-fiber all-optical modulation based on an enhanced light-matter interaction with graphene. , 2016, , .		0
167	Interfacing Telecom Fibers and Silicon Core Fibers with Nano-Spikes for In-Fiber Silicon Devices. , 2018, , .		0
168	Future of Semiconductor-core Optical Fibers. , 2018, , .		0
169	Laser processed semiconductors for integrated photonic devices -INVITED. EPJ Web of Conferences, 2020, 238, 01001.	0.1	0
170	Laser-Written Silicon-Germanium Alloy Microstructures with Tunable Compositionally Graded Profiles. , 2020, , .		0
171	Raman Enhanced Four-Wave Mixing in Silicon Core Fibers. , 2021, , .		0
172	Enhanced All-optical Modulation in MoS2-coated Side-polished Fibres. , 2021, , .		0
173	Silicon core fibers for integrated nonlinear systems. , 2020, , .		0