

Christopher G Poulton

List of Publications by Year in descending order

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98
papers

3,045
citations

201674

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155660

55
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98
all docs

98
docs citations

98
times ranked

2400
citing authors

#	ARTICLE	IF	CITATIONS
1	Historical perspective and basic principles. Semiconductors and Semimetals, 2022, , 1-25.	0.7	0
2	Theoretical formalisms for stimulated Brillouin scattering. Semiconductors and Semimetals, 2022, , 27-91.	0.7	0
3	Shortcuts to adiabaticity in waveguide couplers—theory and implementation. Advances in Physics: X, 2021, 6, .	4.1	14
4	Picosecond acoustic dynamics in stimulated Brillouin scattering. Optics Letters, 2021, 46, 2972.	3.3	4
5	Numerical simulation of noise in pulsed Brillouin scattering. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 2343.	2.1	6
6	Noise and pulse dynamics in backward stimulated Brillouin scattering. Optics Express, 2021, 29, 3132.	3.4	5
7	Noise in Brillouin Based Information Storage. Optics Express, 2021, 29, 39486-39497.	3.4	0
8	Acoustic diamond resonators with ultrasmall mode volumes. Physical Review Research, 2020, 2, .	3.6	8
9	Brillouin integrated photonics. Nature Photonics, 2019, 13, 664-677.	31.4	244
10	Finite Element Analysis of Stimulated Brillouin Scattering in Integrated Photonic Waveguides. Journal of Lightwave Technology, 2019, 37, 3791-3804.	4.6	20
11	Cross talk-free coherent multi-wavelength Brillouin interaction. APL Photonics, 2019, 4, .	5.7	15
12	On-chip multi-stage optical delay based on cascaded Brillouin light storage. Optics Letters, 2018, 43, 4321.	3.3	5
13	Metamaterials for opto-acoustic interactions. AIP Conference Proceedings, 2017, , .	0.4	0
14	Stimulated brillouin scattering in plasmonic waveguides: Trade-offs and prospects. , 2017, , .		0
15	Stimulated Brillouin scattering in integrated ring resonators. Journal of the Optical Society of America B: Optical Physics, 2017, 34, 937.	2.1	13
16	Lasing in ring resonators by stimulated Brillouin scattering in the presence of nonlinear loss. Optics Express, 2017, 25, 23619.	3.4	11
17	Phase-locking in cascaded stimulated Brillouin scattering. New Journal of Physics, 2016, 18, 025003.	2.9	1
18	Total absorption of visible light in ultrathin weakly absorbing semiconductor gratings. Optica, 2016, 3, 556.	9.3	42

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19	End-fire coupling efficiencies of surface plasmons for silver, gold, and plasmonic nitride compounds. Journal of the Optical Society of America B: Optical Physics, 2016, 33, 1044.	2.1	9
20	Stimulated Brillouin scattering in silicon/chalcogenide slot waveguides. Optics Express, 2016, 24, 4786.	3.4	33
21	EMUstack: An open source route to insightful electromagnetic computation via the Bloch mode scattering matrix method. Computer Physics Communications, 2016, 202, 276-286.	7.5	17
22	Effective impedance modeling of metamaterial structures. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2016, 33, 361.	1.5	5
23	Boundaries of practicability for integrated Stimulated Brillouin scattering devices. , 2016, , .		0
24	Perfect absorption in uniform and nanostructured media. , 2015, , .		0
25	Power limits and a figure of merit for stimulated Brillouin scattering in the presence of third and fifth order loss. Optics Express, 2015, 23, 26628.	3.4	15
26	Efficient butt-coupling of surface plasmons on a silver-air interface. , 2015, , .		0
27	Efficient end-fire coupling of surface plasmons in a metal waveguide. Journal of the Optical Society of America B: Optical Physics, 2015, 32, 412.	2.1	15
28	Harnessing On-Chip SBS. Optics and Photonics News, 2015, 26, 34.	0.5	5
29	Perfect Absorption in Ultra-thin Uniform and Nanostructured Media. , 2015, , .		0
30	A Semi-Analytic Approach to Optimizing the Absorption of Dielectric Nanostructures. , 2014, , .		0
31	Mode-based analysis of silicon nanohole arrays for photovoltaic applications. Optics Express, 2014, 22, A1343.	3.4	30
32	Germanium as a material for stimulated Brillouin scattering in the mid-infrared. Optics Express, 2014, 22, 30735.	3.4	36
33	Formal selection rules for Brillouin scattering in integrated waveguides and structured fibers. Optics Express, 2014, 22, 32489.	3.4	28
34	Mode conversion using stimulated Brillouin scattering in nanophotonic silicon waveguides. Optics Express, 2014, 22, 29270.	3.4	15
35	On-chip stimulated Brillouin Scattering for microwave signal processing and generation. Laser and Photonics Reviews, 2014, 8, 653-666.	8.7	92
36	Optimizing Photovoltaic Charge Generation of Nanowire Arrays: A Simple Semi-Analytic Approach. ACS Photonics, 2014, 1, 683-689.	6.6	30

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37	Phase-locking and Pulse Generation in Multi-Frequency Brillouin Oscillator via Four Wave Mixing. Scientific Reports, 2014, 4, 5032.	3.3	38
38	Phase-Locking in Multi-Frequency Brillouin Oscillator via Four-Wave Mixing. , 2014, , .		0
39	Absorption Enhancement Using Dielectric Gratings for Thin Film Solar Cells. , 2014, , .		0
40	On-chip stimulated Brillouin scattering and its applications. , 2013, , .		1
41	Positional disorder in nanowire array photovoltaics. , 2013, , .		0
42	Observation of Brillouin dynamic grating in a photonic chip. Optics Letters, 2013, 38, 305.	3.3	39
43	Brillouin dynamic grating on a photonic chip. , 2013, , .		0
44	Semi-analytic impedance modeling of three-dimensional photonic and metamaterial structures. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2013, 30, 2034.	1.5	5
45	Inducing and harnessing stimulated Brillouin scattering in photonic integrated circuits. Advances in Optics and Photonics, 2013, 5, 536.	25.5	253
46	On-chip high sensitivity laser frequency sensing with Brillouin mutually-modulated cross-gain modulation. Optics Express, 2013, 21, 8605.	3.4	13
47	Absorption enhancing proximity effects in aperiodic nanowire arrays. Optics Express, 2013, 21, A964.	3.4	17
48	Photoinduced axial quantization in chalcogenide microfiber resonators. Journal of the Optical Society of America B: Optical Physics, 2013, 30, 3249.	2.1	14
49	Acoustic confinement and stimulated Brillouin scattering in integrated optical waveguides. Journal of the Optical Society of America B: Optical Physics, 2013, 30, 2657.	2.1	72
50	On-chip high sensitivity laser frequency sensing with Brillouin mutually-modulated cross-gain modulation. , 2013, , .		0
51	Photonic chip based tunable and dynamically reconfigurable microwave photonic filter using stimulated Brillouin scattering. , 2012, , .		5
52	Photonic-chip-based tunable slow and fast light via stimulated Brillouin scattering. Optics Letters, 2012, 37, 969.	3.3	112
53	Photonic chip based tunable and reconfigurable narrowband microwave photonic filter using stimulated Brillouin scattering. Optics Express, 2012, 20, 18836.	3.4	126
54	Design for broadband on-chip isolator using stimulated Brillouin scattering in dispersion-engineered chalcogenide waveguides. Optics Express, 2012, 20, 21235.	3.4	116

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55	First-principles method for high-Q photonic crystal cavity mode calculations. Optics Express, 2012, 20, 22763.	3.4	1
56	Nanowire array photovoltaics: Radial disorder versus design for optimal efficiency. Applied Physics Letters, 2012, 101, .	3.3	39
57	Modal formulation for diffraction by absorbing photonic crystal slabs. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2012, 29, 817.	1.5	46
58	Photonic chip based tunable slow and fast light via stimulated Brillouin scattering. , 2012, , .		0
59	On-chip, Tunable, Narrow-Bandpass Microwave Photonic Filter Using Stimulated Brillouin Scattering (SBS). , 2012, , .		0
60	Double-heterostructure cavities: From theory to design. Physical Review A, 2012, 86, .	2.5	1
61	Disorder in Silicon Nanowire Arrays for Photovoltaic Applications.. , 2012, , .		0
62	On-chip slow and fast light using stimulated Brillouin scattering. , 2012, , .		1
63	Photonic chip based tunable slow and fast light via stimulated Brillouin scattering. , 2012, , .		0
64	Modeling waveguides in photonic woodpiles using the fictitious source superposition method. Journal of the Optical Society of America B: Optical Physics, 2011, 28, 746.	2.1	0
65	Modal analysis of enhanced absorption in silicon nanowire arrays. Optics Express, 2011, 19, A1067.	3.4	126
66	On-chip stimulated Brillouin scattering. Optics Express, 2011, 19, 8285.	3.4	306
67	Cavity enhanced stimulated Brillouin scattering in an optical chip for multiorder Stokes generation. Optics Letters, 2011, 36, 3687.	3.3	37
68	On-chip stimulated Brillouin scattering. , 2011, , .		0
69	Semianalytical formulations for the surface modes of photonic woodpiles. Physical Review A, 2011, 84, .	2.5	1
70	On-chip cascaded stimulated Brillouin scattering. , 2011, , .		0
71	Semi-analytical formulations for the surface modes of photonic woodpiles. , 2011, , .		1
72	Paired modes of heterostructure cavities in photonic crystal waveguides with split band edges. Optics Express, 2010, 18, 25693.	3.4	7

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73	Multipole method for modeling linear defects in photonic woodpiles. Journal of the Optical Society of America B: Optical Physics, 2010, 27, 246.	2.1	7
74	An Expanded k-Space Evanescent Coupling Technique for Characterizing Photonic Crystal Waveguides. , 2009, , .		0
75	Semi-analytical models for resonant states near photonic crystal band edges. , 2009, , .		0
76	An improved method for calculating resonances of multiple dielectric disks arbitrarily positioned in the plane. Optics Express, 2009, 17, 13178.	3.4	12
77	Modes of Shallow Photonic Crystal Waveguides: Semi-Analytic Treatment. Optics Express, 2009, 17, 19629.	3.4	5
78	Characterizing photonic crystal waveguides with an expanded k-space evanescent coupling technique. Optics Express, 2008, 16, 13800.	3.4	31
79	Nonreciprocal Transmission and Low-Threshold Bistability in Strongly Modulated Asymmetric Nonlinear WBCs. , 2007, , .		0
80	Numerical study of guided modes in arrays of metallic nanowires. Optics Letters, 2007, 32, 1647.	3.3	45
81	Bound soliton pairs in photonic crystal fiber. Optics Express, 2007, 15, 1653.	3.4	37
82	Nonlinear silicon-on-insulator waveguides for all-optical signal processing. Optics Express, 2007, 15, 5976.	3.4	366
83	Models for guidance in kagome-structured hollow-core photonic crystal fibres. Optics Express, 2007, 15, 12680.	3.4	117
84	Temporal Dynamics of the Alpha Factor in Semiconductor Optical Amplifiers. Journal of Lightwave Technology, 2007, 25, 891-900.	4.6	63
85	Ideal Bend Contour Trajectories for Single-Mode Operation of Low-Loss Overmoded Waveguides. IEEE Photonics Technology Letters, 2007, 19, 819-821.	2.5	21
86	Radiation Modes and Roughness Loss in High Index-Contrast Waveguides. IEEE Journal of Selected Topics in Quantum Electronics, 2006, 12, 1306-1321.	2.9	95
87	Nonlinear FDTD Analysis and Experiment of FWM in InGaAsP-InP Optical Microresonator. , 2006, , .		0
88	FDTD-Modelling of Dispersive Nonlinear Ring Resonators: Accuracy Studies and Experiments. IEEE Journal of Quantum Electronics, 2006, 42, 1215-1223.	1.9	13
89	Nonlinear FDTD analysis and experimental verification of four-wave mixing in InGaAsP-InP racetrack microresonators. IEEE Photonics Technology Letters, 2006, 18, 361-363.	2.5	18
90	Non-reciprocal transmission and Schmitt trigger operation in strongly modulated asymmetric WBCs. Optics Express, 2006, 14, 12782.	3.4	19

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91	A simple and rigorous verification technique for nonlinear ftd algorithms by optical parametric four-wave mixing. Microwave and Optical Technology Letters, 2006, 48, 88-91.	1.4	21
92	Photonic band structure calculations using nonlinear eigenvalue techniques. Journal of Computational Physics, 2005, 204, 65-81.	3.8	39
93	Optimization of nonlinear dispersive APML ABC for the FDTD analysis of optical solitons. IEEE Journal of Quantum Electronics, 2005, 41, 448-454.	1.9	13
94	Low switching threshold using nonlinearities in stopband-tapered waveguide Bragg gratings. IEEE Journal of Quantum Electronics, 2005, 41, 1303-1308.	1.9	5
95	Scattering from sidewall deformations in photonic crystals. Journal of the Optical Society of America B: Optical Physics, 2005, 22, 1211.	2.1	2
96	Conical propagation of electromagnetic waves through an array of cylindrical inclusions. Physica B: Condensed Matter, 2003, 338, 149-152.	2.7	2
97	Dynamic corrections to the Lorentz-Lorenz formula. Physica A: Statistical Mechanics and Its Applications, 1997, 241, 179-182.	2.6	3
98	Analytical results for a class of sums involving Bessel functions and square arrays. Journal of Mathematical Physics, 1996, 37, 2043-2052.	1.1	16