

Jean-Charles Beugnot

List of Publications by Year in descending order

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92
papers

1,611
citations

361413

20
h-index

302126

39
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93
all docs

93
docs citations

93
times ranked

1060
citing authors

#	ARTICLE	IF	CITATIONS
1	High Spatial and Spectral Resolution Long-Range Sensing Using Brillouin Echoes. <i>Journal of Lightwave Technology</i> , 2010, 28, 2993-3003.	4.6	216
2	Brillouin light scattering from surface acoustic waves in a subwavelength-diameter optical fibre. <i>Nature Communications</i> , 2014, 5, 5242.	12.8	142
3	Distributed Brillouin sensing with sub-meter spatial resolution: modeling and processing. <i>Optics Express</i> , 2011, 19, 7381.	3.4	141
4	Complete experimental characterization of stimulated Brillouin scattering in photonic crystal fiber. <i>Optics Express</i> , 2007, 15, 15517.	3.4	85
5	Simultaneous guidance of slow photons and slow acoustic phonons in silicon phoxonic crystal slabs. <i>Optics Express</i> , 2011, 19, 9690.	3.4	83
6	Guided acoustic wave Brillouin scattering in photonic crystal fibers. <i>Optics Letters</i> , 2007, 32, 17.	3.3	82
7	Modeling light-sound interaction in nanoscale cavities and waveguides. <i>Nanophotonics</i> , 2014, 3, 413-440.	6.0	82
8	Electrostriction and guidance of acoustic phonons in optical fibers. <i>Physical Review B</i> , 2012, 86, .	3.2	65
9	Cascaded Brillouin lasing in monolithic barium fluoride whispering gallery mode resonators. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	65
10	Brillouin spectroscopy of optical microfibers and nanofibers. <i>Optica</i> , 2017, 4, 1232.	9.3	59
11	Analysis of optomechanical coupling in two-dimensional square lattice phoxonic crystal slab cavities. <i>Physical Review B</i> , 2013, 88, .	3.2	48
12	Laser-Induced Thermocapillary Convective Flows: A New Approach for Noncontact Actuation at Microscale at the Fluid/Gas Interface. <i>IEEE/ASME Transactions on Mechatronics</i> , 2017, 22, 693-704.	5.8	35
13	Generation of phonons from electrostriction in small-core optical waveguides. <i>AIP Advances</i> , 2013, 3, .	1.3	33
14	Reduction and control of stimulated Brillouin scattering in polymer-coated chalcogenide optical microwires. <i>Optics Letters</i> , 2014, 39, 482.	3.3	33
15	Analytical modeling of the gas-filling dynamics in photonic crystal fibers. <i>Applied Optics</i> , 2010, 49, 4604.	2.1	26
16	Frequency-selective excitation of guided acoustic modes in a photonic crystal fiber. <i>Optics Express</i> , 2011, 19, 7689.	3.4	25
17	Supercontinuum generation by stimulated Raman-Kerr scattering in a liquid-core optical fiber. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2017, 34, 1677.	2.1	24
18	Large Brillouin gain in Germanium-doped core optical fibers up to a 98% mol doping level. <i>Optics Letters</i> , 2018, 43, 4005.	3.3	23

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19	Supercontinuum Generation From 1.35 to 1.7 μm by Nanosecond Pumping Near the Second Zero-Dispersion Wavelength of a Microstructured Fiber. IEEE Photonics Technology Letters, 2008, 20, 842-844.	2.5	21
20	Photonic crystal fiber mapping using Brillouin echoes distributed sensing. Optics Express, 2010, 18, 20136.	3.4	21
21	Lagrangian description of Brillouin scattering and electrostriction in nanoscale optical waveguides. New Journal of Physics, 2015, 17, 125003.	2.9	21
22	Closed-Loop Particle Motion Control Using Laser-Induced Thermocapillary Convective Flows at the Fluid/Gas Interface at Micrometric Scale. IEEE/ASME Transactions on Mechatronics, 2018, 23, 1543-1554.	5.8	18
23	Temperature coefficient of the high-frequency guided acoustic mode in a photonic crystal fiber. Applied Optics, 2011, 50, 6543.	2.1	17
24	Comparative analysis of stimulated Brillouin scattering at 2 μm in various infrared glass-based optical fibers. Journal of the Optical Society of America B: Optical Physics, 2020, 37, 3792.	2.1	17
25	Optimized configuration for high resolution distributed sensing using Brillouin echoes. , 2009, , .		14
26	Supercontinuum generation by nanosecond dual-pumping near the two zero-dispersion wavelengths of a photonic crystal fiber. Optics Communications, 2011, 284, 467-470.	2.1	14
27	Towards athermal Brillouin strain sensing based on heavily germania-doped core optical fibers. APL Photonics, 2019, 4, .	5.7	14
28	Stimulated Raman-Kerr scattering in an integrated nonlinear optofluidic fiber arrangement. Optics Letters, 2014, 39, 5407.	3.3	13
29	SBS Mitigation in a Microstructured Optical Fiber by Periodically Varying the Core Diameter. IEEE Photonics Technology Letters, 2012, 24, 667-669.	2.5	12
30	Nonlinear elasticity of silica nanofiber. APL Photonics, 2019, 4, .	5.7	12
31	Surface Brillouin scattering in photonic crystal fibers. Optics Letters, 2016, 41, 3269.	3.3	11
32	Local activation of surface and hybrid acoustic waves in optical microwires. Optics Letters, 2018, 43, 1487.	3.3	10
33	Demonstration of the evanescent Kerr effect in optical nanofibers. Optics Express, 2019, 27, 29460.	3.4	10
34	Distributed Brillouin Fiber Sensor With Enhanced Sensitivity Based on Anti-Stokes Single-Sideband Suppressed-Carrier Modulation. IEEE Photonics Technology Letters, 2013, 25, 94-96.	2.5	8
35	Strong coupling between phonons and optical beating in backward Brillouin scattering. Physical Review A, 2016, 94, .	2.5	8
36	2- μm Brillouin laser based on infrared nonlinear glass fibers. Applied Optics, 2019, 58, 6365.	1.8	8

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37	Study of a progressive failure in soil using BEDS. Proceedings of SPIE, 2009, , .	0.8	7
38	General analytical model for distributed Brillouin sensors with sub-meter spatial resolution. , 2009, , .		7
39	Honeycomb Photonic Crystal Waveguides in a Suspended Silicon Slab. IEEE Photonics Technology Letters, 2012, 24, 2056-2059.	2.5	7
40	Multimode Brillouin spectrum in a long tapered birefringent photonic crystal fiber. Optics Letters, 2015, 40, 4281.	3.3	7
41	Large evanescently-induced Brillouin scattering at the surrounding of a nanofibre. Nature Communications, 2022, 13, 1432.	12.8	6
42	Spontaneous Brillouin Scattering Spectrum and Coherent Brillouin Gain in Optical Fibers. Applied Sciences (Switzerland), 2018, 8, 907.	2.5	5
43	Recent progress towards centimetric spatial resolution in distributed fibre sensing. Proceedings of SPIE, 2010, , .	0.8	4
44	Design of waveguides in silicon photonic crystal slabs. , 2010, , .		4
45	Tunable stimulated Brillouin scattering in hybrid polymer-chalcogenide tapered fibers. , 2014, , .		4
46	Generation of coherent acoustic beams in solids by mixing of counterpropagating, detuned optical beams [Invited]. Applied Optics, 2018, 57, C77.	1.8	4
47	Fiber Optical Parametric Amplifier Based on a Novel LiNbO ₃ Synchronized double Phase Modulator. , 2007, , .		3
48	Experimental verification of the effect of slow light on molecular absorption. , 2009, , .		3
49	Microscopic imaging along tapered optical fibers by right-angle Rayleigh light scattering in linear and nonlinear regime. Optics Express, 2021, 29, 39159.	3.4	3
50	Extended blue side of flat supercontinuum generation in PCFs with a CW Yb fiber laser. , 2008, , .		2
51	Suspended-core fibres as optical gas sensing cells: study and implementation. , 2009, , .		2
52	Optical sampling technique applied to high resolution distributed fibre sensors. , 2009, , .		2
53	Optimized conditions for gas light interaction in photonic crystal fibres. Proceedings of SPIE, 2010, , .	0.8	2
54	Advanced Brillouin-based distributed optical fibre sensors with sub-meter scale spatial resolution. , 2010, , .		2

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55	Experimental observation of surface acoustic wave Brillouin scattering in a small-core photonic crystal fiber. , 2016, , .		2
56	1D manipulation of a micrometer size particle actuated via thermocapillary convective flows. , 2017, , .		2
57	Special Issue on Brillouin Scattering and Optomechanics. Applied Sciences (Switzerland), 2019, 9, 3745.	2.5	2
58	Suppression of SBS in a photonic crystal fiber with periodically-varied core diameter. , 2011, , .		2
59	Stimulated Brillouin scattering in hybrid chalcogenide-PMMA microwires. , 2013, , .		2
60	Micronewton nanofiber force sensor using Brillouin scattering. Optics Express, 2022, 30, 815.	3.4	2
61	Role of microstructure on guided acoustic wave Brillouin scattering in photonic crystal fibers. Proceedings of SPIE, 2009, , .	0.8	1
62	Effect of inhomogeneities on backward and forward Brillouin scattering in photonic crystal fibers. Proceedings of SPIE, 2010, , .	0.8	1
63	Experimental observation of Brillouin linewidth broadening and decay time in photonic crystal fiber. , 2010, , .		1
64	Experimental demonstration of waveguiding in honeycomb and square-lattice silicon photonic crystal membranes. Proceedings of SPIE, 2012, , .	0.8	1
65	Observation of surface acoustic wave Brillouin scattering in optical microfibers. , 2013, , .		1
66	Shaping Brillouin Light in Specialty Optical Fibers. , 2017, , 461-476.		1
67	Mapping the Uniformity of Optical Microwires Using Phase-Correlation Brillouin Distributed Measurements. , 2015, , .		1
68	Temperature and strain Brillouin sensing coefficients of heavily doped Germanium-core optical fibers. , 2018, , .		1
69	Observation of brillouin linewidth broadening and decay time in photonic crystal fiber. , 2010, , .		0
70	Numerical investigation of electrostrictive forces in submicron phoxonic waveguide. Proceedings of SPIE, 2012, , .	0.8	0
71	Opto-acoustic coupling and Brillouin phenomena in microstructure optical fibers. , 2012, , .		0
72	All-optical generation of surface acoustic waves in a silica optical microwire. Proceedings of SPIE, 2014, , .	0.8	0

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73	Brillouin light scattering from surface acoustic waves in photonic microwires. , 2014, , .		0
74	Subwavelength-diameter optical fibers for Brillouin scattering. , 2015, , .		0
75	Multimode Brillouin scattering in a long tapered birefringent photonic crystal fiber. , 2015, , .		0
76	Enhanced structural sensitivity of hybrid-mode acoustic phonons in axially-varying photonic crystal fiber. Optics Express, 2015, 23, 23329.	3.4	0
77	Highly sensitive measurement of submicron waveguides based on Brillouin scattering. , 2017, , .		0
78	Supercontinuum generation in an optical fiber capillary filled with Toluene. , 2017, , .		0
79	Observation of Elastic Anisotropy in Strained Optical Nanofibers using Brillouin Spectroscopy. , 2019, , .		0
80	Scattering field imaging along an optical waveguide in operando. , 2021, , .		0
81	Guided Acoustic Wave Brillouin Scattering in a Nanostructure Core Fiber. , 2010, , .		0
82	Capteur Brillouin r��parti � fibre optique � haute r��solution et longue port��e. Instrumentation Mesure Metrologie, 2013, 13, 31-45.	0.3	0
83	Observation of surface Brillouin scattering in microstructured optical fibers. , 2016, , .		0
84	Stimulated Brillouin scattering in Germanium-doped-core optical fibers up to 98% mol doping level. , 2018, , .		0
85	Brillouin reflectometry of optical microfibers. , 2018, , .		0
86	Diameter and tensile strain measurements of optical nanofibers using Brillouin reflectometry. , 2018, , .		0
87	Optical scattering field imaging along a nanofiber in operando. EPJ Web of Conferences, 2020, 238, 08007.	0.3	0
88	Ultra-sensitive Brillouin nanofiber force sensor. , 2020, , .		0
89	Tapered optical fiber for Micro-Newton force sensor. EPJ Web of Conferences, 2020, 238, 08009.	0.3	0
90	Optical scattering field imaging along a nanofiber in operando. , 2021, , .		0

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91	Micronewton force sensor with tapered silica optical fiber. , 2021, , .		0
92	Brillouin scattering in photonic crystal fibers. Semiconductors and Semimetals, 2022, , 133-158.	0.7	0