Franck Billard

List of Publications by Year
in descending order

79	1,163	393982	433756
papers	citations	19 h-index	31 g-index

79	79	79	965
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	On-demand generation of soliton molecules through evolutionary algorithm optimization. Optics Letters, 2022, 47, 134.	1.7	14
2	Spectral phase reconstruction of femtosecond laser pulse from interferometric autocorrelation and evolutionary algorithm. Optics Communications, 2022, 509, 127887.	1.0	2
3	Echo-assisted impulsive alignment of room-temperature acetone molecules. Physical Review Research, 2021, 3, .	1.3	5
4	Autosetting Mode-locked Laser with Genetic Algorithm Optimization and Advanced Intracavity Controls. , 2021, , .		0
5	1.7â€“18ÂÂµm mid-infrared supercontinuum generation in a dispersion-engineered step-index chalcogenide fiber. Results in Physics, 2021, 26, 104397.	2.0	28
6	Characterizing ultrashort laser pulses by the rotational Doppler effect. Physical Review A, 2021, 104, .	1.0	1
7	Visualizing coherent molecular rotation in a gaseous medium. Physical Review A, 2021, 104, .	1.0	2
8	Timeâ€Resolved Molecular Imaging: Optical Imaging of Coherent Molecular Rotors (Laser Photonics Rev.) Tj ETQq0 0 0 rgBT /Overlock 10	4.4	0
9	Optical Imaging of Coherent Molecular Rotors. Laser and Photonics Reviews, 2020, 14, 1900344.	4.4	19
10	Ultrafast collisional dissipation of symmetric-top molecules probed by rotational alignment echoes. Physical Review A, 2020, 101, .	1.0	4
11	Molecular alignment echoes probing collision-induced rotational-speed changes. Physical Review Research, 2020, 2, .	1.3	8
12	Autosetting Mode-Locked Laser Using an Evolutionary Algorithm and Time-Stretch Spectral Characterization. IEEE Journal of Selected Topics in Quantum Electronics, 2020, 26, 1-8.	1.9	14
13	Doppler effect as a tool for ultrashort electric field reconstruction. Optics Letters, 2020, 45, 6795.	1.7	6
14	BOAR: Biprism based optical autocorrelation with retrieval. Review of Scientific Instruments, 2019, 90, 063110.	0.6	5
15	Torsional control of the methyl group in methanol. Physical Review A, 2019, 100, .	1.0	2
16	Mid-infrared two-octave spanning supercontinuum generation in a Geâ€“Seâ€“Te glass suspended core fiber. Laser Physics Letters, 2019, 16, 075402.	0.6	9
17	Rotational Echoes as a Tool for Investigating Ultrafast Collisional Dynamics of Molecules. Physical Review Letters, 2019, 122, 193401.	2.9	28
18	A generalized vibronic-coupling Hamiltonian for molecules without symmetry: Application to the photoisomerization of benzopyran. Journal of Chemical Physics, 2019, 150, 124109.	1.2	11

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19	Observing collisions beyond the secular approximation limit. Nature Communications, 2019, 10, 5780.	5.8	23
20	Mid-infrared supercontinuum generation from 2 to 14 Âµm in various chalcogenide glasses optical fibers. , 2019, , .		1
21	Mid-infrared supercontinuum generation from 2 to 14â€‰â€‰Î¼m in arsenic- and antimony-free chalcogenide glass fibers. Journal of the Optical Society of America B: Optical Physics, 2019, 36, A183.	0.9	37
22	Timeâ€domain measurement of pure rotational Raman collisional linewidths of ethane C₂H₆. Journal of Raman Spectroscopy, 2018, 49, 1350-1355.	1.2	12
23	Dissipation dynamics of field-free molecular alignment for symmetric-top molecules: Ethane (C2H6). Journal of Chemical Physics, 2018, 148, 124303.	1.2	11
24	Polarization-based tachometer for measuring spinning rotors. Optics Express, 2018, 26, 31839.	1.7	5
25	Collisional dissipation of the laser-induced alignment of ethane gas: A requantized classical model. Journal of Chemical Physics, 2018, 149, 154301.	1.2	5
26	Collisional dissipation of the laser-induced alignment of ethane gas: Energy corrected sudden quantum model. Journal of Chemical Physics, 2018, 149, 214305.	1.2	3
27	Expanding up to far-infrared filamentation-induced supercontinuum spanning in chalcogenide glasses. Applied Physics B: Lasers and Optics, 2018, 124, 1.	1.1	5
28	Linear and Nonlinear Optics in Coherently Spinning Molecules. Springer Series in Chemical Physics, 2018, , 37-64.	0.2	1
29	Experimental and theoretical study of free induction decay of water molecules induced by terahertz laser pulses. Physical Review A, 2017, 95, .	1.0	9
30	Third-order-harmonic generation in coherently spinning molecules. Physical Review A, 2017, 96, .	1.0	14
31	Terahertz pulse shaping through propagation in a gas of symmetric top molecules. Physical Review A, 2017, 96, .	1.0	1
32	Polarized all-normal dispersion supercontinuum reaching 25 Âµm generated in a birefringent microstructured silica fiber. Optics Express, 2017, 25, 27452.	1.7	31
33	Resonantly enhanced filamentation in gases. Optica, 2017, 4, 764.	4.8	11
34	Shaping of ultraviolet femtosecond laser pulses by Fourier domain harmonic generation. Optics Express, 2016, 24, 27702.	1.7	11
35	Toward an autosetting mode-locked fiber laser cavity. Journal of the Optical Society of America B: Optical Physics, 2016, 33, 825.	0.9	55
36	Dynamics, Efficiency, and Energy Distribution of Nonlinear Plasmon-Assisted Generation of Hot Carriers. ACS Photonics, 2016, 3, 791-795.	3.2	30

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37	Experimental observation of fractional echoes. Physical Review A, 2016, 94, .	1.0	25
38	Filament-induced visible-to-mid-IR supercontinuum in a ZnSe crystal: Towards multi-octave supercontinuum absorption spectroscopy. Optical Materials, 2016, 60, 355-358.	1.7	25
39	Observation of the field-free orientation of a symmetric-top molecule by terahertz laser pulses at high temperature. Physical Review A, 2016, 94, .	1.0	38
40	Filamentation-induced spectral broadening and pulse shortening of infrared pulses in Tellurite glass. Optics Communications, 2016, 380, 245-249.	1.0	13
41	Rotational Doppler effect in harmonic generation from spinning molecules. Physical Review A, 2016, 94, .	1.0	19
42	Measurement of dichroism in aligned molecules. Physical Review A, 2016, 94, .	1.0	9
43	Publisher's Note: Measurement of dichroism in aligned molecules [Phys. Rev. A 94 , 043422 (2016)]. Physical Review A, 2016, 94, .	1.0	0
44	Subcycle engineering of laser filamentation in gas by harmonic seeding. Physical Review A, 2015, 92, .	1.0	8
45	Mid-infrared filamentation-induced supercontinuum in Asâ€“S and an As-free Geâ€“S counterpart chalcogenide glasses. Applied Physics B: Lasers and Optics, 2015, 121, 433-438.	1.1	20
46	Dissipation of postâ€pulse laserâ€induced alignment of CO₂ through collisions with Ar. Journal of Raman Spectroscopy, 2015, 46, 691-694.	1.2	9
47	Polarization Shaping for Unidirectional Rotational Motion of Molecules. Physical Review Letters, 2015, 114, 103001.	2.9	59
48	Orientation and Alignment Echoes. Physical Review Letters, 2015, 114, 153601.	2.9	55
49	Fiber laser mode locked through an evolutionary algorithm. Optica, 2015, 2, 275.	4.8	96
50	Phase control of two-color filamentation. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 184005.	0.6	10
51	Using molecular alignment to track ultrafast collisional relaxation. Physical Review A, 2014, 89, .	1.0	14
52	Selective excitation of bright and dark plasmonic resonances of single gold nanorods. Optics Express, 2014, 22, 15088.	1.7	16
53	Harmonic Generation and Nonlinear Propagation: When Secondary Radiations Have Primary Consequences. Physical Review Letters, 2014, 112, .	2.9	18
54	Revisiting interferences for measuring and optimizing optical nonlinearities. Physical Review A, 2013, 88, .	1.0	2

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55	Molecular alignment allows low-order harmonic generation by circular light in a gas. Physical Review A, 2013, 88, .	1.0	17
56	Interpretation of negative birefringence observed in strong-field optical pump-probe experiments: High-order Kerr and plasma grating effects. Physical Review A, 2013, 88, .	1.0	4
57	Field-free molecular alignment for probing collisional relaxation dynamics. Physical Review A, 2013, 87, .	1.0	44
58	Dissipation of alignment in CO2 gas: A comparison between ab initio predictions and experiments. Journal of Chemical Physics, 2013, 139, 024306.	1.2	19
59	Optical Kerr effect in the strong field regime. , 2013, , .		0
60	Direct temporal reconstruction of picosecond pulse by cross-correlation in semiconductor device. Electronics Letters, 2012, 48, 778.	0.5	1
61	Field-free molecular alignment detection by 4f coherent imaging. Applied Physics B: Lasers and Optics, 2012, 108, 897-902.	1.1	2
62	Probing ultrafast thermalization with field-free molecular alignment. Physical Review A, 2012, 86, .	1.0	11
63	Observation of laser-induced field-free permanent planar alignment of molecules. Physical Review A, 2011, 84, .	1.0	32
64	Transverse chemical interface detection with coherent anti-Stokes Raman scattering microscopy. Journal of Biomedical Optics, 2011, 16, 086006.	1.4	3
65	Raman depolarization ratio of liquids probed by linear polarization coherent antiâ€Stokes Raman spectroscopy. Journal of Raman Spectroscopy, 2009, 40, 775-780.	1.2	12
66	Coherent anti-Stokes Raman scattering in a microcavity. Optics Letters, 2009, 34, 1789.	1.7	2
67	Coherent anti-Stokes Raman scattering in a Fabry-Perot cavity: A theoretical study. Journal of the Optical Society of America B: Optical Physics, 2009, 26, 1295.	0.9	1
68	Anisotropic nonlinear optical absorption of gold nanorods in a silica matrix. Optics Communications, 2008, 281, 331-340.	1.0	50
69	Local field calculations of the anisotropic nonlinear absorption coefficient of aligned gold nanorods embedded in silica. Journal of the Optical Society of America B: Optical Physics, 2008, 25, 961.	0.9	7
70	Background-free coherent anti-Stokes Raman spectroscopy near transverse interfaces: a vectorial study. Journal of the Optical Society of America B: Optical Physics, 2008, 25, 1655.	0.9	9
71	Focused field symmetries for background-free coherent anti-Stokes Raman spectroscopy. Physical Review A, 2008, 77, .	1.0	15
72	Coherent anti-Stokes Raman scattering (CARS) microscopy imaging at interfaces: evidence of interference effects. Optics Express, 2007, 15, 10408.	1.7	28

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73	Subpicosecond Z-scan measurements of the nonlinear refractive index of dense materials. , 2005, , .		2
74	Z-scan theoretical and experimental studies for accurate measurements of the nonlinear refractive index and absorption of optical glasses near damage threshold. , 2004, , .		3
75	Study and experimental setting of the Z-scan method for accurate nonlinear refractive index and absorption metrology. , 2004, , .		2
76	Nanosecond Z-scan measurements of the nonlinear refractive index of fused silica. Optics Express, 2004, 12, 1377.	1.7	38
77	Z-scan studies of the nonlinear refractive index of fused silica in the nanosecond regime. , 2004, , .		2
78	TIGER: TImeâ€Gated Electric field Reconstruction. Advanced Photonics Research, 0, , 2200107.	1.7	0
79	Generation and Control of Coherent Terahertz Phonons in Silicon Metasurfaces. Advanced Optical Materials, 0, , 2200357.	3.6	0