

Stephane Petit

List of Publications by Year in descending order

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121
papers

3,696
citations

126708

33
h-index

138251

58
g-index

121
all docs

121
docs citations

121
times ranked

2730
citing authors

#	ARTICLE	IF	CITATIONS
1	Intensity clamping of a femtosecond laser pulse in condensed matter. Optics Communications, 2002, 202, 189-197.	1.0	235
2	Probing molecular chirality on a sub-femtosecond timescale. Nature Physics, 2015, 11, 654-658.	6.5	219
3	A table-top ultrashort light source in the extreme ultraviolet for circular dichroism experiments. Nature Photonics, 2015, 9, 93-98.	15.6	217
4	Attosecond-resolved photoionization of chiral molecules. Science, 2017, 358, 1288-1294.	6.0	150
5	Re-focusing during the propagation of a focused femtosecond Ti:Sapphire laser pulse in air. Optics Communications, 1999, 171, 285-290.	1.0	148
6	Photoexcitation circular dichroism in chiral molecules. Nature Physics, 2018, 14, 484-489.	6.5	145
7	FILAMENTATION AND SUPERCONTINUUM GENERATION DURING THE PROPAGATION OF POWERFUL ULTRASHORT LASER PULSES IN OPTICAL MEDIA (WHITE LIGHT LASER). Journal of Nonlinear Optical Physics and Materials, 1999, 08, 121-146.	1.1	130
8	Filamentation of femtosecond laser pulses in turbulent air. Applied Physics B: Lasers and Optics, 2002, 74, 67-76.	1.1	108
9	High-order harmonic spectroscopy of the Cooper minimum in argon: Experimental and theoretical study. Physical Review A, 2011, 83, .	1.0	100
10	High-order harmonic generation at a megahertz-level repetition rate directly driven by an ytterbium-doped-fiber chirped-pulse amplification system. Optics Letters, 2009, 34, 1489.	1.7	90
11	Universality of photoelectron circular dichroism in the photoionization of chiral molecules. New Journal of Physics, 2016, 18, 102002.	1.2	83
12	Interference of transverse rings in multifilamentation of powerful femtosecond laser pulses in air. Optics Communications, 2002, 210, 329-341.	1.0	81
13	Relaxation Dynamics in Photoexcited Chiral Molecules Studied by Time-Resolved Photoelectron Circular Dichroism: Toward Chiral Femtochemistry. Journal of Physical Chemistry Letters, 2016, 7, 4514-4519.	2.1	81
14	Writing optical waveguides in fused silica using 1 kHz femtosecond infrared pulses. Journal of Applied Physics, 2003, 93, 3724-3728.	1.1	71
15	The White Light Supercontinuum Is Indeed an Ultrafast White Light Laser. Japanese Journal of Applied Physics, 1999, 38, L126-L128.	0.8	70
16	Inhomogeneous High Harmonic Generation in Krypton Clusters. Physical Review Letters, 2013, 110, 083902.	2.9	68
17	Role of Excited States In High-order Harmonic Generation. Physical Review Letters, 2016, 117, 203001.	2.9	66
18	Probing ultrafast dynamics of chiral molecules using time-resolved photoelectron circular dichroism. Faraday Discussions, 2016, 194, 325-348.	1.6	65

#	ARTICLE	IF	CITATIONS
19	Real-time determination of enantiomeric and isomeric content using photoelectron elliptical dichroism. <i>Nature Communications</i> , 2018, 9, 5212.	5.8	65
20	Multi-channel electronic and vibrational dynamics in polyatomic resonant high-order harmonic generation. <i>Nature Communications</i> , 2015, 6, 5952.	5.8	64
21	Ultra-broad bandwidth parametric amplification at degeneracy. <i>Optics Express</i> , 2005, 13, 7386.	1.7	63
22	Femtosecond measurements of the time of flight of photons in a three-dimensional photonic crystal. <i>Physical Review E</i> , 1999, 60, 1030-1035.	0.8	60
23	Fast pulsed electric field created from the self-generated filament of a femtosecond Ti:Sapphire laser pulse in air. <i>Optics Communications</i> , 2000, 174, 305-309.	1.0	60
24	Transverse ring formation of a focused femtosecond laser pulse propagating in air. <i>Optics Communications</i> , 2001, 188, 181-186.	1.0	58
25	Polarization dependence of the propagation of intense laser pulses in air. <i>Optics Communications</i> , 2000, 175, 323-327.	1.0	52
26	Post-compression of high-energy femtosecond pulses using gas ionization. <i>Optics Letters</i> , 2010, 35, 253.	1.7	44
27	Unraveling the Solid-Liquid-Vapor Phase Transition Dynamics at the Atomic Level with Ultrafast X-Ray Absorption Near-Edge Spectroscopy. <i>Physical Review Letters</i> , 2011, 107, 245006.	2.9	44
28	Broadband, high dynamics and high resolution charge coupled device-based spectrometer in dynamic mode for multi-keV repetitive x-ray sources. <i>Review of Scientific Instruments</i> , 2009, 80, 083505.	0.6	43
29	Experimental determination of temperature-dependent electron-electron collision frequency in isochorically heated warm dense gold. <i>Physical Review B</i> , 2014, 89, .	1.1	42
30	Ultrafast Short-Range Disorder of Femtosecond-Laser-Heated Warm Dense Aluminum. <i>Physical Review Letters</i> , 2013, 111, 245004.	2.9	41
31	Complex structure of spatially resolved high-order-harmonic spectra. <i>Physical Review A</i> , 2016, 94, .	1.0	38
32	Controlling Subcycle Optical Chirality in the Photoionization of Chiral Molecules. <i>Physical Review X</i> , 2019, 9, .	2.8	38
33	Spatio-spectral structures in high-order harmonic beams generated with Terawatt 10-fs pulses. <i>Nature Communications</i> , 2014, 5, 4637.	5.8	36
34	Optical limiting studies in a carbon-black suspension for subnanosecond and subpicosecond laser pulses. <i>Applied Optics</i> , 2002, 41, 2944.	2.1	33
35	Role of the Ionic Potential in High Harmonic Generation. <i>Physical Review Letters</i> , 2012, 108, 203001.	2.9	33
36	Cascaded harmonic generation from a fiber laser: a milliwatt XUV source. <i>Optics Express</i> , 2019, 27, 20383.	1.7	32

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37	High power Q-switched Yb-doped photonic crystal fiber laser producing sub-10 ns pulses. Applied Physics B: Lasers and Optics, 2005, 81, 19-21.	1.1	31
38	Phase-matching-free pulse retrieval based on transient absorption in solids. Optics Express, 2019, 27, 28998.	1.7	30
39	Polarization-resolved pump-probe spectroscopy with high harmonics. New Journal of Physics, 2008, 10, 025028.	1.2	29
40	100-kHz Yb-fiber laser pumped 3- μ m optical parametric amplifier for probing solid-state systems in the strong field regime. Optics Letters, 2017, 42, 891.	1.7	28
41	Broad M-band multi-keV x-ray emission from plasmas created by short laser pulses. Physics of Plasmas, 2009, 16, .	0.7	23
42	High-harmonic transient grating spectroscopy of NO ₂ electronic relaxation. Journal of Chemical Physics, 2012, 137, 224303.	1.2	23
43	Phase-resolved two-dimensional spectroscopy of electronic wave packets by laser-induced XUV free induction decay. Physical Review A, 2017, 95, .	1.0	23
44	High-power 1 kHz laser-plasma x-ray source for ultrafast x-ray absorption near-edge spectroscopy in the keV range. Applied Physics Letters, 2008, 93, .	1.5	21
45	Double conical crystal x-ray spectrometer for high resolution ultrafast x-ray absorption near-edge spectroscopy of Al-K edge. Review of Scientific Instruments, 2010, 81, 063107.	0.6	19
46	Controlling high harmonics generation by spatial shaping of high-energy femtosecond beam. Optics Letters, 2011, 36, 2486.	1.7	18
47	Laser Generation of Sub-Micrometer Wrinkles in a Chalcogenide Glass Film as Physical Unclonable Functions. Advanced Materials, 2020, 32, e2003032.	11.1	18
48	Tunable 1.6- μ m near infrared few-cycle pulse generation by filamentation. Applied Physics Letters, 2013, 102, .	1.5	17
49	Postcompression of high-energy terawatt-level femtosecond pulses and application to high-order harmonic generation. Journal of the Optical Society of America B: Optical Physics, 2015, 32, 1055.	0.9	17
50	Absolute gas density profiling in high-order harmonic generation. Optics Express, 2018, 26, 6001.	1.7	17
51	Luminescence and absorption of GaN films under high excitation. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1997, 43, 196-200.	1.7	16
52	Effective parameters for film-free femtosecond laser assisted bioprinting. Applied Optics, 2016, 55, 3879.	2.1	16
53	Phase characterization of the reflection on an extreme UV multilayer: comparison between attosecond metrology and standing wave measurements. Optics Letters, 2011, 36, 3386.	1.7	15
54	Femtosecond versus picosecond laser pulses for film-free laser bioprinting. Applied Optics, 2017, 56, 8648.	0.9	15

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55	Ultra-wide parametric amplification at 800 nm toward octave spanning. <i>Optics Express</i> , 2009, 17, 5153.	1.7	13
56	Spatial shaping of intense femtosecond beams for the generation of high-energy attosecond pulses. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2012, 45, 074018.	0.6	13
57	Multiphoton photoelectron circular dichroism of limonene with independent polarization state control of the bound-bound and bound-continuum transitions. <i>Journal of Chemical Physics</i> , 2018, 149, 134301.	1.2	13
58	Bright, polarization-tunable high repetition rate extreme ultraviolet beamline for coincidence electron-ion imaging. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2020, 53, 234003.	0.6	12
59	Particle characterization for the evaluation of the ^{181}Ta excitation yield in millijoule laser induced plasmas. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2008, 41, 145701.	0.6	11
60	High-order harmonic transient grating spectroscopy of SF ₆ molecular vibrations. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2014, 47, 124023.	0.6	11
61	Enhanced high harmonic generation driven by high-intensity laser in argon gas-filled hollow core waveguide. <i>Optics Letters</i> , 2014, 39, 3770.	1.7	11
62	Transverse Electromagnetic Mode Conversion for High-Harmonic Self-Probing Spectroscopy. <i>Photonics</i> , 2015, 2, 184-199.	0.9	11
63	High-power sub-15-fs nonlinear pulse compression at 515 nm of an ultrafast Yb-doped fiber amplifier. <i>Optics Letters</i> , 2021, 46, 1804.	1.7	11
64	Ultrafast relaxation investigated by photoelectron circular dichroism: an isomeric comparison of camphor and fenchone. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 25612-25628.	1.3	11
65	Self-Steepening and Self-Compression of Ultrashort Optical Pulses in a Defocusing CdS Crystal. <i>Physical Review Letters</i> , 1999, 82, 1032-1035.	2.9	10
66	Picosecond pulses of variable duration from a high-power passively mode-locked Nd:YVO ₄ laser free of spatial hole burning. <i>Optics Letters</i> , 2010, 35, 1644.	1.7	10
67	Application of optical-field-ionization-induced spectral broadening in helium gas to the postcompression of high-energy femtosecond laser pulses. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2012, 29, 1277.	0.9	10
68	Sub-picosecond and nanometer scale dynamics of aluminum target surface heated by ultrashort laser pulse. <i>Applied Physics Letters</i> , 2013, 102, 194104.	1.5	10
69	Photoelectron elliptical dichroism spectroscopy of resonance-enhanced multiphoton ionization via the 3s, 3p and 3d Rydberg series in fenchone. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 6415-6427.	1.3	10
70	A tunable femtosecond pulses amplifier. <i>Optics Communications</i> , 1996, 124, 49-55.	1.0	9
71	Two-Dimensional Frequency Resolved Optomolecular Gating of High-Order Harmonic Generation. <i>Physical Review Letters</i> , 2016, 116, 053002.	2.9	9
72	Collection and spectral control of high-order harmonics generated with a 50 W high-repetition rate Ytterbium femtosecond laser system. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2016, 49, 085601.	0.6	9

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73	Study of middle infrared difference frequency generation using a femtosecond laser source in LGT. Optics Letters, 2017, 42, 3698.	1.7	9
74	Combined high-harmonic interferometries for vectorial spectroscopy. Optics Letters, 2015, 40, 5387.	1.7	8
75	Ultrafast electronic relaxations from the S ₃ state of pyrene. Physical Chemistry Chemical Physics, 2019, 21, 14111-14125.	1.3	8
76	Subpicosecond Nonequilibrium States in the Amorphous Phase of GeTe Phase-Change Material Thin Films. Advanced Materials, 2021, 33, e2102721.	11.1	8
77	Femtosecond time-resolved spectroscopy of sexithiophene thin single crystals. Chemical Physics Letters, 1998, 283, 201-206.	1.2	7
78	Absolute energy distribution of hard x rays produced in the interaction of a kilohertz femtosecond laser with tantalum targets. Review of Scientific Instruments, 2006, 77, 093302.	0.6	7
79	High-energy femtosecond laser pulse compression in single- and multi-ionization regime of rare gases: experiment versus theory. Applied Physics B: Lasers and Optics, 2013, 111, 75-87.	1.1	7
80	Using photoelectron elliptical dichroism (PEELD) to determine real-time variation of enantiomeric excess. Chirality, 2020, 32, 1225-1233.	1.3	7
81	Aurore: A platform for ultrafast sciences. Review of Scientific Instruments, 2020, 91, 105104.	0.6	7
82	High-order parametric generation of coherent XUV radiation. Optics Express, 2021, 29, 5982.	1.7	7
83	Revealing the Influence of Molecular Chirality on Tunnel-Ionization Dynamics. Physical Review X, 2021, 11, .	2.8	7
84	Ultrafast intense laser "explosion" of hardwood. Applied Surface Science, 2002, 191, 328-333.	3.1	6
85	Ultrafast changes in optical properties of SiO ₂ excited by femtosecond laser at the damage threshold and above. Physical Review B, 2018, 98, .	1.1	6
86	Optical nonlinearities of gallium nitride. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1997, 50, 197-200.	1.7	5
87	Using high harmonic radiation to reveal the ultrafast dynamics of radiosensitiser molecules. Faraday Discussions, 2016, 194, 407-425.	1.6	5
88	On an EUV Atmospheric Simulation Chamber to Study the Photochemical Processes of Titan's Atmosphere. Scientific Reports, 2020, 10, 10009.	1.6	5
89	Aromatic Formation Promoted by Ion-Driven Radical Pathways in EUV Photochemical Experiments Simulating Titan's Atmospheric Chemistry. Journal of Physical Chemistry A, 2021, 125, 3159-3168.	1.1	5
90	Interferometric detection of cross-phase modulation in CdS. Applied Physics Letters, 1994, 65, 959-961.	1.5	4

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91	Single-shot phase-matching free ultrashort pulse characterization based on transient absorption in solids. Optics Express, 2020, 28, 35807.	1.7	4
92	Ultrafast polarization-tunable monochromatic extreme ultraviolet source at high-repetition-rate. Journal of Optics (United Kingdom), 2022, 24, 084003.	1.0	4
93	21â€…W, 18â€…ps SESAM-passively modelocked Nd:YAG oscillator with diode-side-pumped single laser head. Electronics Letters, 2009, 45, 884.	0.5	3
94	An interferometric diagnostic for the experimental study of dynamics of solids exposed to intense and ultrashort radiation. , 2013, , .		3
95	Laser assisted bioprinting using a femtosecond laser with and without a gold transductive layer: a parametric study. Proceedings of SPIE, 2016, , .	0.8	3
96	Dynamics of laser-induced defects by multiple femtosecond pulses in potassium dihydrogen phosphate crystals. Journal of the Optical Society of America B: Optical Physics, 2018, 35, 1119.	0.9	3
97	Hyper-Raman lines emission concomitant with high-order harmonic generation. New Journal of Physics, 2019, 21, 073006.	1.2	3
98	Experimental and numerical study of laser-induced secondary jetting. Journal of Fluid Mechanics, 2022, 934, .	1.4	3
99	Energetic electrons produced in the interaction of a kiloHertz femtosecond laser with tantalum targets. Journal of Modern Optics, 2007, 54, 2585-2593.	0.6	2
100	High-power passively mode-locked Nd:YVO 4 oscillator with adjustable pulse duration between 46 ps and 12 ps. , 2010, , .		2
101	Optimized XUV source at 100 kHz repetition rate. EPJ Web of Conferences, 2013, 41, 01015.	0.1	2
102	High-order Harmonic Spectroscopy : Experimental and Theoretical study of Cooper Minimum in Argon. Journal of Physics: Conference Series, 2012, 388, 022023.	0.3	1
103	Terawatt Post compression of high energy fs pulses using ionization: A way to overcome the conventional limitation in energy of few optical cycle pulses. EPJ Web of Conferences, 2013, 41, 10021.	0.1	1
104	Hot electron jets from femtosecond heated plasmas at intensities of 10^{16} – 10^{17} W/cm ² . European Physical Journal Special Topics, 2006, 133, 271-275.	0.2	1
105	From an intense femtosecond laser pulse to a strongly deformed white-light laser. AIP Conference Proceedings, 2000, , .	0.3	0
106	Powerful femtosecond laser pulse propagation in the atmosphere and applications. , 0, , .		0
107	Writing waveguide in pure fused silica with 1 kHz femtosecond laser. , 2003, , .		0
108	High order harmonic generation at ultra high repetition rate from ytterbium doped fiber chirped pulse amplification. Proceedings of SPIE, 2009, , .	0.8	0

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109	Gas Ionization Induced Post-Compression of High Energy and Super-Intense Femtosecond Pulses. , 2010, , .		0
110	Characterization of 8 fs pulses through wideband SPIRIT. , 2011, , .		0
111	Noise performances of a high-power picosecond Nd:YVO 4 oscillator. Proceedings of SPIE, 2011, , .	0.8	0
112	Polarization-Resolved Pump-Probe Spectroscopy with High Order Harmonics. Springer Series in Chemical Physics, 2009, , 24-26.	0.2	0
113	High Order Harmonic Generation Driven By an Yb-doped Fiber Amplifier System at 1 MHz Repetition Rate. , 2009, , .		0
114	High-contrast pump-probe spectroscopy with high-order harmonics. , 2009, , .		0
115	32 ps-45 W to 12 ps-15 W Spatial-Hole-Burning-Free Nd:YVO4 Oscillator. , 2010, , .		0
116	G�n�ration d'harmoniques d'ordre �lev� en r�gime de forte focalisation � 100 kHz. , 2013, , .		0
117	Dynamique ultra-rapide de la transition de phase solide-liquide-vapeur par spectroscopie XANES r�solue en temps. , 2013, , .		0
118	High Order Harmonic Generation in ZnSe Driven by 3 �/4m Parametric Laser Source at High Repetition Rate. , 2017, , .		0
119	1.9 mW XUV source by cascaded harmonic generation from an Yb: fiber laser. , 2020, , .		0
120	Ultrashort, sub-20fs, high-power visible source. , 2020, , .		0
121	Absolute gas density profiling in high-order harmonic generation: erratum. Optics Express, 2020, 28, 32105.	1.7	0