Philippe Balcou

List of Publications by Year
in descending order

84 papers	10,796 citations	126708 33 h-index	95083 68 g-index
86 all docs	86 docs citations	86 times ranked	4316 citing authors

#	Article	IF	Citations
1	Theory of high-harmonic generation by low-frequency laser fields. Physical Review A, 1994, 49, 2117-2132.	1.0	3,431
2	Observation of a Train of Attosecond Pulses from High Harmonic Generation. Science, 2001, 292, 1689-1692.	6.0	2,279
3	High-order harmonic generation in rare gases with a 1-ps 1053-nm laser. Physical Review Letters, 1993, 70, 774-777.	2.9	674
4	Non-thermal melting in semiconductors measured at femtosecond resolution. Nature, 2001, 410, 65-68.	13.7	661
5	A high-intensity highly coherent soft X-ray femtosecond laser seeded by a high harmonic beam. Nature, 2004, 431, 426-429.	13.7	313
6	Generalized phase-matching conditions for high harmonics: The role of field-gradient forces. Physical Review A, 1997, 55, 3204-3210.	1.0	300
7	High-order harmonic generation in rare gases with an intense short-pulse laser. Physical Review A, 1993, 48, 4709-4720.	1.0	261
8	Dual Optical Tunneling Times in Frustrated Total Internal Reflection. Physical Review Letters, 1997, 78, 851-854.	2.9	231
9	Calculations of high-order harmonic-generation processes in xenon at 1064 nm. Physical Review A, 1992, 46, 2778-2790.	1.0	224
10	Spatiotemporal separation of high harmonic radiation into two quantum path components. Physical Review A, 1999, 59, 1367-1373.	1.0	175
11	Deuterium-Deuterium Fusion Dynamics in Low-Density Molecular-Cluster Jets Irradiated by Intense Ultrafast Laser Pulses. Physical Review Letters, 2002, 89, 065005.	2.9	163
12	Global Optimization of High Harmonic Generation. Physical Review Letters, 2003, 90, 193901.	2.9	151
13	Frequency chirp of harmonic and attosecond pulses. Journal of Modern Optics, 2005, 52, 379-394.	0.6	121
14	Saturated Amplification of a Collisionally Pumped Optical-Field-Ionization Soft X-Ray Laser at 41.8 nm. Physical Review Letters, 2001, 86, 3004-3007.	2.9	120
15	Attosecond Electron Wave Packet Dynamics in Strong Laser Fields. Physical Review Letters, 2005, 95, 013001.	2.9	107
16	Phase-matching effects in strong-field harmonic generation. Physical Review A, 1993, 47, 1447-1459.	1.0	102
17	Optimizing high-order harmonic generation in strong fields. Journal of Physics B: Atomic, Molecular and Optical Physics, 1992, 25, 4467-4485.	0.6	91
18	Quantum-path analysis and phase matching of high-order harmonic generation and high-order frequency mixing processes in strong laser fields. Journal of Physics B: Atomic, Molecular and Optical Physics, 1999, 32, 2973-2989.	0.6	91

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19	Demonstration of a Ni-Like Kr Optical-Field-Ionization Collisional Soft X-Ray Laser at 32.8Ânm. Physical Review Letters, 2002, 89, 253901.	2.9	91
20	Generation of high-order spatially coherent harmonics from solid targets by femtosecond laser pulses. Physical Review A, 2000, 62, .	1.0	88
21	Enhancement of high-order harmonic generation at tuned wavelengths through adaptive control. Optics Letters, 2004, 29, 86.	1.7	85
22	Compression of attosecond harmonic pulses by extreme-ultraviolet chirped mirrors. Optics Letters, 2005, 30, 1554.	1.7	73
23	Optical biopsy of fixed human skin with backward-collected optical harmonics signals. Optics Express, 2005, 13, 8231.	1.7	70
24	Intrinsic chirp of attosecond pulses: Single-atom model versus experiment. Physical Review A, 2004, 69, .	1.0	67
25	High order harmonic generation optimization with an apertured laser beam. European Physical Journal D, 2002, 21, 353-359.	0.6	65
26	Design and characterization of extreme-ultraviolet broadband mirrors for attosecond science. Optics Letters, 2006, 31, 1558.	1.7	60
27	Relativistic electron generation in interactions of a 30 TW laser pulse with a thin foil target. Physical Review E, 2002, 66, 066402.	0.8	59
28	Measurement of the Subcycle Timing of Attosecond XUV Bursts in High-Harmonic Generation. Physical Review Letters, 2003, 91, 063901.	2.9	59
29	Coherence and resonance effects in high-order harmonic generation. Physical Review Letters, 1992, 68, 166-169.	2.9	51
30	Broadband attosecond pulse shaping. Optics Letters, 2007, 32, 1353.	1.7	50
31	Kilohertz extreme-ultraviolet light source based on femtosecond high-order harmonic generation from noble gases. Applied Physics B: Lasers and Optics, 2001, 73, 687-692.	1.1	40
32	HIGH-ORDER HARMONICS: A COHERENT SOURCE IN THE XUV RANGE. Journal of Nonlinear Optical Physics and Materials, 1995, 04, 647-665.	1.1	34
33	Imaging and quality assessment of high-harmonic focal spots. Optics Letters, 2003, 28, 1049.	1.7	34
34	High-order harmonic generation processes in classical and quantum anharmonic oscillators. Physical Review A, 1996, 53, 3456-3468.	1.0	32
35	Controlling phase matching of high-order harmonic generation by manipulating the fundamental field. Physical Review A, 1999, 60, 5010-5018.	1.0	32
36	High-order-harmonic generation: towards laser-induced phase-matching control and relativistic effects. Applied Physics B: Lasers and Optics, 2002, 74, 509-515.	1.1	27

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37	High-energy electron beam production by femtosecond laser interactions with exploding-foil plasmas. Physical Review E, 2001, 64, 015402.	0.8	24
38	Adaptive shaping of a focused intense laser beam into a doughnut mode. Optics Communications, 2005, 246, 131-140.	1.0	22
39	Proposal for a Raman X-ray free electron laser. European Physical Journal D, 2010, 59, 525-537.	0.6	22
40	Angular Goosâ€“HÃnchen effect in curved dielectric microstructures. Optics Letters, 1995, 20, 1233.	1.7	18
41	Collective properties of a relativistic electron beam injected into a high intensity optical lattice. European Physical Journal D, 2011, 65, 533-540.	0.6	18
42	Observation of high-contrast coherence fringes in high-order harmonic generation. Physical Review A, 2003, 68, .	1.0	17
43	Probing coherently excited optical phonons by extreme ultraviolet radiation with femtosecond time resolution. Applied Physics Letters, 2008, 93, .	1.5	16
44	Investigations of collisionally pumped optical field ionization soft-x-ray lasers. Journal of the Optical Society of America B: Optical Physics, 2003, 20, 195.	0.9	14
45	Recent developments in X-UV optics and X-UV diagnostics. Applied Physics B: Lasers and Optics, 2004, 78, 983-988.	1.1	13
46	Temporal superresolution of ultrashort laser pulses. Optics Express, 2005, 13, 8222.	1.7	13
47	Characterization of collisionally pumped optical-field-ionization soft X-ray lasers. Applied Physics B: Lasers and Optics, 2004, 78, 939-944.	1.1	10
48	Picosecond pulses of variable duration from a high-power passively mode-locked Nd:YVO_4 laser free of spatial hole burning. Optics Letters, 2010, 35, 1644.	1.7	10
49	Trains of attosecond electron wave packets. Journal of Modern Optics, 2006, 53, 233-245.	0.6	8
50	Systematic study of high-order harmonic optimal control by temporal pulse shaping of laser pulses. Physical Review A, 2007, 76, .	1.0	8
51	Progress in optical-field-ionization soft X-ray lasers at LOA. Laser and Particle Beams, 2005, 23, .	0.4	7
52	Second generation X-ray lasers. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 99, 142-152.	1.1	7
53	Reverse relative Goos-HÃnchen effect. Europhysics Letters, 1996, 33, 359-364.	0.7	6
54	Investigation of ultraintense femtosecond laserâ€“plasma interactions through Ï‰ and 2Ï‰ imaging and spectroscopy. Laser and Particle Beams, 2001, 19, 47-53.	0.4	5

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55	Anomalous high-order harmonic generation. Journal of Physics B: Atomic, Molecular and Optical Physics, 2004, 37, 2661-2675.	0.6	5
56	Frustrated total internal reflection of laser eigenstates. Journal of the Optical Society of America B: Optical Physics, 1996, 13, 1559.	0.9	4
57	Optimization of the focused flux of high harmonics. European Physical Journal D, 2003, 26, 47-50.	0.6	4
58	Time-resolved study of the spectral characteristics of supercontinuum pulses propagating in scattering media. Applied Physics B: Lasers and Optics, 2003, 77, 253-257.	1.1	4
59	<title>Optimizing photonuclear reactions with a high-intensity laser</title>. , 2001, , .		3
60	<title>Collisional optical-field ionization soft x-ray lasers</title>. , 2001, 4505, 195.		3
61	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
62	Double-helicoidal eigenstates in lasers. Journal of the Optical Society of America B: Optical Physics, 1995, 12, 132.	0.9	2
63	Advances in collisionally pumped optical-field-ionization soft x-ray lasers. , 2003, 5197, 119.		2
64	Experimental observation of anomalous high harmonics at low intensities. Applied Physics B: Lasers and Optics, 2004, 78, 845-849.	1.1	2
65	High-power passively mode-locked Nd:YVO 4 oscillator with adjustable pulse duration between 46 ps and 12 ps. , 2010, , .		2
66	Amplified short-wavelength light scattered by relativistic electrons in the laser-induced optical lattice. Physical Review Special Topics: Accelerators and Beams, 2015, 18, .	1.8	2
67	Femtosecond laser driven XUV sources: High-harmonic and OFI X-ray laser studies. European Physical Journal Special Topics, 2001, 11, Pr2-175-Pr2-180.	0.2	1
68	<title>Femtosecond solid-liquid phase transition studied with ultrafast x-ray diffraction</title>. , 2001, , .		1
69	Study of ambiguities inherent to the spectral analysis of Voigt profilesâ€"a modified Simplex approach. Chemometrics and Intelligent Laboratory Systems, 2002, 63, 41-55.	1.8	1
70	New techniques for the measurement of x-ray beam or x-ray optics quality. , 2003, 5197, 194.		1
71	Progress on Collisionally Pumped Optical-Field-Ionization Soft X-Ray Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2004, 10, 1351-1362.	1.9	1
72	Ã‰tude expÃ©rimentale de l'optimisation de la gÃ©nÃ©ration d'harmoniques d'ordre Ã©levÃ© par l'utilisation d'un algorithme gÃ©nÃ©tique. European Physical Journal Special Topics, 2006, 138, 35-41.	0.2	1

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73	‹title›X-ray laser progress for applications‹/title›. , 2001, 4505, 211.		0
74	Optimization of High Harmonic Generation by Genetic Algorithm. Acta Physica Hungarica A Heavy Ion Physics, 2006, 26, 335-342.	0.4	0
75	Sub- and superluminal velocity of supercontinuum pulses propagating in scattering media. Applied Physics B: Lasers and Optics, 2006, 85, 105-115.	1.1	0
76	Reply to comment on â€œProposal for Raman X-ray free electron laserâ€• European Physical Journal D, 2011, 62, 459-459.	0.6	0
77	Noise performances of a high-power picosecond Nd:YVO 4 oscillator. Proceedings of SPIE, 2011, , .	0.8	0
78	Adaptive Optimization of High Order Harmonic Generation in a Free Propagation Geometry. Springer Series in Chemical Physics, 2003, , 57-59.	0.2	0
79	Ã‰tude de la gÃ©nÃ©ration d'harmoniques parÂdesÂfaisceaux tronquÃ©s. European Physical Journal Special Topics, 2003, 108, 105-108.	0.2	0
80	Lasers XUV collisionnels pompÃ©s par des lasers femtoseconde. European Physical Journal Special Topics, 2003, 108, 161-164.	0.2	0
81	Mesure de la dynamique couplÃ©e de propagation et d'ionisation d'une impulsion laser â€“ Application au laser X-OFI ou Ã la gÃ©nÃ©ration d'harmoniques d'ordres Ã©levÃ©s. European Physical Journal Special Topics, 2003, 108, 109-112.	0.2	0
82	Ã‰tude de la gÃ©nÃ©ration d'harmoniques anormales d'ordre Ã©levÃ© Ã basse intensitÃ©. European Physical Journal Special Topics, 2005, 127, 181-185.	0.2	0
83	Lasers X de deuxiÃ¨me gÃ©nÃ©ration. European Physical Journal Special Topics, 2005, 127, 9-13.	0.2	0
84	Optimisation de la gÃ©nÃ©ration d'harmoniques d'ordre Ã©levÃ© Ã l'aide d'une optique adaptative et d'un modulateur acousto-optique. European Physical Journal Special Topics, 2005, 127, 99-103.	0.2	0