Olga Smirnova

List of Publications by Year
in descending order

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102 papers	7,291 citations	57719 44 h-index	54882 84 g-index
105 all docs	105 docs citations	105 times ranked	2769 citing authors

#	Article	IF	Citations
1	Strong chiral response in non-collinear high harmonic generation driven by purely electric-dipole interactions. Optics Express, 2022, 30, 4659.	1.7	11
2	Disentangling enantiosensitivity from dichroism using bichromatic fields. Physical Chemistry Chemical Physics, 2022, 24, 7264-7273.	1.3	9
3	Propensity rules for photoelectron circular dichroism in strong field ionization of chiral molecules. Physical Chemistry Chemical Physics, 2022, 24, 5720-5728.	1.3	5
4	A look under the tunnelling barrier via attosecond-gated interferometry. Nature Photonics, 2022, 16, 304-310.	15.6	14
5	A geometric approach to decoding molecular structure and dynamics from photoionization of isotropic samples. Physical Chemistry Chemical Physics, 2022, 24, 13605-13615.	1.3	3
6	Enantiosensitive steering of free-induction decay. Science Advances, 2022, 8, .	4.7	11
7	Observation of light-driven band structure via multiband high-harmonic spectroscopy. Nature Photonics, 2022, 16, 428-432.	15.6	30
8	Highly spin-polarized multi-GeV electron beams generated by single-species plasma photocathodes. Physical Review Research, 2022, 4, .	1.3	1
9	Inducing Enantiosensitive Permanent Multipoles in Isotropic Samples withÂTwo-Color Fields. , 2021, , 335-352.		3
10	Direct measurement of Coulomb-laser coupling. Scientific Reports, 2021, 11, 495.	1.6	6
11	Ultrafast Optical Rotation: Highly Sensitive Enantio-Discrimination with Controlled Few-Cycle Optical Pulses. , 2021, , .		0
12	Sub-cycle valleytronics: control of valley polarization using few-cycle linearly polarized pulses. Optica, 2021, 8, 277.	4.8	28
13	Ultrafast Optical Rotation for Extremely Sensitive Enantio-Discrimination. , 2021, , .		0
14	Enantio-sensitive unidirectional light bending. Nature Communications, 2021, 12, 3951.	5.8	28
15	Enantio-sensitive unidirectional light bending. , 2021, , .		0
16	Ultrafast optical rotation in chiral molecules with ultrashort and tightly focused beams. Optica, 2021, 8, 1243.	4.8	22
17	InÂSitu Generation of High-Energy Spin-Polarized Electrons in a Beam-Driven Plasma Wakefield Accelerator. Physical Review Letters, 2021, 126, 054801.	2.9	28
18	Structuring lightâ€™s chirality to induce enantio-sensitive light bending. , 2021, , .		0

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19	Ultrafast Optical Rotation in Chiral Molecules with Ultrashort and Tightly Focused Beams. , 2021, , .		0
20	Lightwave Control of Topological Properties in 2D Materials for Sub-Cycle and Non-Resonant Valley Manipulation. , 2021, , .		0
21	Ultrafast optical rotation in chiral molecules with ultrashort and tightly focused beams. , 2021, , .		0
22	Lightwave control of topological properties in 2D materials for sub-cycle and non-resonant valley manipulation. Nature Photonics, 2020, 14, 728-732.	15.6	61
23	Nasca patterning in the microworld. Nature Photonics, 2020, 14, 527-528.	15.6	1
24	Spatial molecular interferometry via multidimensional high-harmonic spectroscopy. Nature Photonics, 2020, 14, 188-194.	15.6	38
25	Attosecond spectral singularities in solid-state high-harmonic generation. Nature Photonics, 2020, 14, 183-187.	15.6	94
26	Controlled Optical Waveforms for Extremely Efficient Chiral Discrimination on Ultrafast Time Scales. , 2020, , .		0
27	Structuring Lightâ€™s Chirality: LR 6= RL. , 2020, , .		0
28	Ultrasensitive Chiral Spectroscopy by Dynamical Symmetry Breaking in High Harmonic Generation. Physical Review X, 2019, 9, .	2.8	55
29	Roadmap on photonic, electronic and atomic collision physics: I. Lightâ€“matter interaction. Journal of Physics B: Atomic, Molecular and Optical Physics, 2019, 52, 171001.	0.6	52
30	Synthetic chiral light for efficient control of chiral lightâ€“matter interaction. Nature Photonics, 2019, 13, 866-871.	15.6	132
31	Topological strong-field physics on sub-laser-cycle timescale. Nature Photonics, 2019, 13, 849-854.	15.6	132
32	Challenges and opportunities in attosecond and XFEL science. Nature Reviews Physics, 2019, 1, 107-111.	11.9	29
33	Propensity rules in photoelectron circular dichroism in chiral molecules. I. Chiral hydrogen. Physical Review A, 2019, 99, .	1.0	23
34	Propensity rules in photoelectron circular dichroism in chiral molecules. II. General picture. Physical Review A, 2019, 99, .	1.0	19
35	Ultrafast All-Optical Detection of Chiral Degrees of Freedom by Symmetry Breaking High Harmonic Spectroscopy. , 2019, , .		0
36	Chiral dichroism in bi-elliptical high-order harmonic generation. Journal of Physics B: Atomic, Molecular and Optical Physics, 2018, 51, 06LT01.	0.6	25

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37	Attosecond recorder of the polarization state of light. Nature Communications, 2018, 9, 850.	5.8	11
38	Amplification of intense light fields by nearly free electrons. Nature Physics, 2018, 14, 695-700.	6.5	33
39	Photoexcitation circular dichroism in chiral molecules. Nature Physics, 2018, 14, 484-489.	6.5	145
40	Control of attosecond light polarization in two-color bicircular fields. Physical Review A, 2018, 97, .	1.0	42
41	High-harmonic spectroscopy of ultrafast many-body dynamics in strongly correlated systems. Nature Photonics, 2018, 12, 266-270.	15.6	156
42	Ultrafast preparation and detection of ring currents in single atoms. Nature Physics, 2018, 14, 701-704.	6.5	93
43	Generalized perspective on chiral measurements without magnetic interactions. Physical Review A, 2018, 98, .	1.0	61
44	Electron correlations and pre-collision in the re-collision picture of high harmonic generation. Journal of Physics B: Atomic, Molecular and Optical Physics, 2018, 51, 134006.	0.6	10
45	Strong-field control and enhancement of chiral response in bi-elliptical high-order harmonic generation: an analytical model. Journal of Physics B: Atomic, Molecular and Optical Physics, 2018, 51, 124002.	0.6	22
46	Looking inside the tunnelling barrier: I. Strong field ionisation from orbitals with high angular momentum in circularly polarised fields. Journal of Physics B: Atomic, Molecular and Optical Physics, 2018, 51, 174001.	0.6	7
47	Reconstruction of the time-dependent electronic wave packet arising from molecular autoionization. Science Advances, 2018, 4, eaat3962.	4.7	14
48	General theory of photoexcitation induced photoelectron circular dichroism. Journal of Chemical Physics, 2018, 149, 064104.	1.2	10
49	Looking inside the tunnelling barrier: II. Co- and counter-rotating electrons at the â€˜tunnelling exitâ€™. Journal of Physics B: Atomic, Molecular and Optical Physics, 2018, 51, 174002.	0.6	5
50	Coulomb time delays in high harmonic generation. New Journal of Physics, 2017, 19, 023012.	1.2	25
51	Role of electronic correlations in photoionization of NO₂ in the vicinity of the ²A₁/²B₂ conical intersection. Physical Chemistry Chemical Physics, 2017, 19, 19673-19682.	1.3	9
52	Attosecond control of spin polarization in electronâ€“ion recollision driven by intense tailored fields. New Journal of Physics, 2017, 19, 073007.	1.2	34
53	Multidimensional high harmonic spectroscopy of polyatomic molecules: detecting sub-cycle laser-driven hole dynamics upon ionization in strong mid-IR laser fields. Faraday Discussions, 2016, 194, 369-405.	1.6	51
54	Electron spin polarization in strong-field ionization of xenon atoms. Nature Photonics, 2016, 10, 526-528.	15.6	103

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55	Opportunities for chiral discrimination using high harmonic generation in tailored laser fields. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 234005.	0.6	53
56	Opportunities for detecting ring currents using an attoclock setup. Physical Review A, 2015, 92, .	1.0	34
57	Interpreting attoclock measurements of tunnellingÂtimes. Nature Physics, 2015, 11, 503-508.	6.5	256
58	Spinâ€“orbit Larmor clock for ionization times in one-photon and strong-field regimes. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 234002.	0.6	16
59	The role of multichannel effects in the photoionization of the NO₂molecule: anab initio R-matrix study. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 245101.	0.6	17
60	Probing molecular chirality on a sub-femtosecondÂtimescale. Nature Physics, 2015, 11, 654-658.	6.5	219
61	Signatures of attosecond electronicâ€“nuclear dynamics in the one-photon ionization of molecular hydrogen: analytical model versusab initiocalculations. New Journal of Physics, 2015, 17, 053011.	1.2	8
62	Multidimensional high harmonic spectroscopy. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 174006.	0.6	22
63	Attosecond tunnelling interferometry. Nature Physics, 2015, 11, 815-819.	6.5	92
64	An R-matrix approach to electronâ€“photonâ€“molecule collisions: photoelectron angular distributions from aligned molecules. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 215005.	0.6	35
65	Time reconstruction of harmonic emission in molecules near the ionization threshold. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 241001.	0.6	1
66	Hole dynamics and spin currents after ionization in strong circularly polarized laser fields. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 204020.	0.6	23
67	Ab initioverification of the analytical R-matrix theory for strong field ionization. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 204021.	0.6	18
68	Nonadiabatic Coulomb effects in strong-field ionization in circularly polarized laser fields. Physical Review A, 2013, 88, .	1.0	73
69	The role of the Kramersâ€“Henneberger atom in the higher-order Kerr effect. New Journal of Physics, 2013, 15, 083012.	1.2	54
70	Opportunities for sub-laser-cycle spectroscopy in condensed phase. Chemical Physics, 2013, 414, 3-9.	0.9	23
71	Nonadiabatic tunneling in circularly polarized laser fields. II. Derivation of formulas. Physical Review A, 2013, 87, .	1.0	89
72	Spin-polarized electrons produced by strong-field ionization. Physical Review A, 2013, 88, .	1.0	88

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73	Time-resolving electron-core dynamics during strong-field ionization in circularly polarized fields. Physical Review A, 2013, 88, .	1.0	45
74	Multidimensional high harmonic spectroscopy: a semi-classical perspective on measuring multielectron rearrangement upon ionization. Journal of Physics B: Atomic, Molecular and Optical Physics, 2013, 46, 171001.	0.6	15
75	Scaling Laws for Photoelectron Holography in the Midinfrared Wavelength Regime. Physical Review Letters, 2012, 109, 013002.	2.9	93
76	Time-dependent analytical<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>R</mml:mi></mml:math>-matrix approach for strong-field dynamics. I. One-electron systems. Physical Review A, 2012, 86, .	1.0	109
77	Time-dependent analytical<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>R</mml:mi></mml:math>-matrix approach for strong-field dynamics. II. Many-electron systems. Physical Review A, 2012, 86, .	1.0	83
78	Resolving the time when an electron exits a tunnelling barrier. Nature, 2012, 485, 343-346.	13.7	414
79	Time-Resolved Holography with Photoelectrons. Science, 2011, 331, 61-64.	6.0	483
80	Nonadiabatic tunneling in circularly polarized laser fields: Physical picture and calculations. Physical Review A, 2011, 84, .	1.0	187
81	How Accurate Is the Attosecond Streak Camera?. Physical Review Letters, 2011, 107, 213605.	2.9	103
82	Imaging the Kramersâ€"Henneberger atom. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16906-16911.	3.3	79
83	Attosecond correlation dynamics during electron tunnelling from molecules. Journal of Physics B: Atomic, Molecular and Optical Physics, 2010, 43, 161002.	0.6	44
84	Exchange and polarization effect in high-order harmonic imaging of molecular structures. Physical Review A, 2010, 82, .	1.0	41
85	Attosecond prints of electrons. Nature, 2010, 466, 701-702.	13.7	9
86	Towards a one-femtosecond film. Nature Physics, 2010, 6, 159-160.	6.5	20
87	High Harmonic Spectroscopy of Multichannel Dynamics in Strong-Field Ionization. Physical Review Letters, 2010, 104, 213601.	2.9	197
88	Revealing molecular structure and dynamics through high-order harmonic generation driven by mid-IR fields. Physical Review A, 2010, 81, .	1.0	84
89	Extension of high harmonic spectroscopy in molecules by a 1300 nm laser field. Optics Express, 2010, 18, 3174.	1.7	61
90	Attosecond Circular Dichroism Spectroscopy of Polyatomic Molecules. Physical Review Letters, 2009, 102, 063601.	2.9	104

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91	Strong-field control and spectroscopy of attosecond electron-hole dynamics in molecules. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 16556-16561.	3.3	90
92	High harmonic interferometry of multi-electron dynamics in molecules. Nature, 2009, 460, 972-977.	13.7	960
93	Analytical solutions for strong field-driven atomic and molecular one- and two-electron continua and applications to strong-field problems. Physical Review A, 2008, 77, .	1.0	151
94	Coulombâ€"laser coupling in laser-assisted photoionization and molecular tomography. Journal of Physics B: Atomic, Molecular and Optical Physics, 2007, 40, F197-F206.	0.6	66
95	Anatomy of strong field ionization II: to dress or not to dress?. Journal of Modern Optics, 2007, 54, 1019-1038.	0.6	58
96	Coulomb and polarization effects in laser-assisted XUV ionization. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, S323-S339.	0.6	56
97	Measuring and controlling the birth of attosecond XUV pulses. Nature Physics, 2006, 2, 781-786.	6.5	335
98	Use of Electron Correlation to Make Attosecond Measurements without Attosecond Pulses. Physical Review Letters, 2005, 94, 213001.	2.9	20
99	Anatomy of strong field ionization. Journal of Modern Optics, 2005, 52, 165-184.	0.6	267
100	Kapitza-Dirac Diffraction without Standing Waves: Diffraction without a Grating?. Physical Review Letters, 2004, 92, 223601.	2.9	26
101	Reading diffraction images in strong field ionization of diatomic molecules. Journal of Physics B: Atomic, Molecular and Optical Physics, 2004, 37, L243-L250.	0.6	206
102	Quantum Coherence in the Time-Resolved Auger Measurement. Physical Review Letters, 2003, 91, 253001.	2.9	48