

Daniel Rolles

List of Publications by Year in descending order

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154
papers

9,719
citations

53794

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37204

96
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155
all docs

155
docs citations

155
times ranked

6788
citing authors

#	ARTICLE	IF	CITATIONS
1	UV-induced dissociation of CH ₂ BrI probed by intense femtosecond XUV pulses. Journal of Physics B: Atomic, Molecular and Optical Physics, 2022, 55, 014001.	1.5	7
2	High harmonic generation in mixed XUV and NIR fields at a free-electron laser. Journal of Optics (United Kingdom), 2022, 24, 025502.	2.2	2
3	Sizes of pure and doped helium droplets from single shot x-ray imaging. Journal of Chemical Physics, 2022, 156, 041102.	3.0	3
4	Coulomb explosion imaging of small polyatomic molecules with ultrashort x-ray pulses. Physical Review Research, 2022, 4, .	3.6	17
5	X-ray multiphoton-induced Coulomb explosion images complex single molecules. Nature Physics, 2022, 18, 423-428.	16.7	48
6	A localized view on molecular dissociation via electron-ion partial covariance. Communications Chemistry, 2022, 5, .	4.5	10
7	Few-femtosecond resolved imaging of laser-driven nanoplasma expansion. New Journal of Physics, 2022, 24, 043024.	2.9	7
8	High-resolution electron time-of-flight spectrometers for angle-resolved measurements at the SQS Instrument at the European XFEL. Journal of Synchrotron Radiation, 2022, 29, 755-764.	2.4	3
9	Fragmentation Dynamics of Fluorene Explored Using Ultrafast XUV-Vis Pump-Probe Spectroscopy. Frontiers in Physics, 2022, 10, .	2.1	2
10	Two-body dissociation of formic acid following double ionization by ultrafast laser pulses. Physical Review A, 2022, 105, .	2.5	10
11	Resonance-enhanced x-ray multiple ionization of a polyatomic molecule. Physical Review A, 2022, 105, .	2.5	5
12	Strong-Field-Induced Coulomb Explosion Imaging of Tribromomethane. Journal of Physical Chemistry Letters, 2022, 13, 5845-5853.	4.6	9
13	Multi-channel photodissociation and XUV-induced charge transfer dynamics in strong-field-ionized methyl iodide studied with time-resolved recoil-frame covariance imaging. Faraday Discussions, 2021, 228, 571-596.	3.2	18
14	Electron-ion coincidence measurements of molecular dynamics with intense X-ray pulses. Scientific Reports, 2021, 11, 505.	3.3	11
15	Strong-field induced fragmentation and isomerization of toluene probed by ultrafast femtosecond electron diffraction and mass spectrometry. Faraday Discussions, 2021, 228, 39-59.	3.2	10
16	Pulse Energy and Pulse Duration Effects in the Ionization and Fragmentation of Iodomethane by Ultraintense Hard X Rays. Physical Review Letters, 2021, 127, 093202.	7.8	6
17	Simple model for sequential multiphoton ionization by ultraintense x rays. Physical Review A, 2021, 104, .	2.5	5
18	Time-resolved diffraction: general discussion. Faraday Discussions, 2021, 228, 161-190.	3.2	2

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19	Imaging multiphoton ionization dynamics of CH ₃ I at a high repetition rate XUV free-electron laser. Journal of Physics B: Atomic, Molecular and Optical Physics, 2021, 54, 014001.	1.5	3
20	Time-resolved relaxation and fragmentation of polycyclic aromatic hydrocarbons investigated in the ultrafast XUV-IR regime. Nature Communications, 2021, 12, 6107.	12.8	18
21	Gently stirred not shaken. Nature Physics, 2021, 17, 165-166.	16.7	0
22	Inner-Shell-Ionization-Induced Femtosecond Structural Dynamics of Water Molecules Imaged at an X-Ray Free-Electron Laser. Physical Review X, 2021, 11, .	8.9	10
23	Double Core-Hole Generation in O^{2+} Molecules Using an X-Ray Free-Electron Laser: Molecular-Frame Photoelectron Angular Distributions. Physical Review Letters, 2020, 125, 163201.	7.8	0
24	Tracking the ultraviolet-induced photochemistry of thiophenone during and after ultrafast ring opening. Nature Chemistry, 2020, 12, 795-800.	13.6	44
25	Differentiating and Quantifying Gas-Phase Conformational Isomers Using Coulomb Explosion Imaging. Journal of Physical Chemistry Letters, 2020, 11, 10205-10211.	4.6	17
26	The Small Quantum System (SQS) Instrument at European XFEL: Results of commissioning and first experiments. Journal of Physics: Conference Series, 2020, 1412, 112005.	0.4	3
27	Ultrafast ionization and fragmentation dynamics of polycyclic aromatic hydro-carbons by XUV radiation. Journal of Physics: Conference Series, 2020, 1412, 112008.	0.4	0
28	X-ray spectroscopy on ultrafast-decaying core-excited atomic ions. Journal of Physics: Conference Series, 2020, 1412, 112001.	0.4	0
29	Angle-dependent strong-field ionization and fragmentation of carbon dioxide measured using rotational wave packets. Physical Review A, 2020, 102, .	2.5	16
30	Amplified spontaneous emission in the extreme ultraviolet by expanding xenon clusters. Physical Review A, 2020, 101, .	2.5	6
31	Ultrafast Structural Changes in Chiral Molecules Measured with Free-Electron Lasers. Journal of Physics: Conference Series, 2020, 1412, 112009.	0.4	2
32	Intermolecular Coulombic Decay in Endohedral Fullerene at the d^4f Resonance. Physical Review Letters, 2020, 124, 113002.	7.8	18
33	Photoionization of the 4d and valence orbitals of methyl iodide. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 155101.	1.5	8
34	X-ray diffractive imaging of controlled gas-phase molecules: Toward imaging of dynamics in the molecular frame. Journal of Chemical Physics, 2020, 152, 084307.	3.0	24
35	Time-resolved site-selective imaging of predissociation and charge transfer dynamics: the CH ₃ I B-band. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 224001.	1.5	14
36	Channel-resolved molecular Auger spectroscopy. Journal of Physics: Conference Series, 2020, 1412, 152075.	0.4	0

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37	Detecting coherent core-hole wave-packet dynamics in N ₂ by time- and angle-resolved inner-shell photoelectron spectroscopy. <i>Journal of Chemical Physics</i> , 2019, 151, .	3.0	12
38	The effect of elliptical polarization in MSX [±] calculations of the molecular-frame photoelectron angular distributions of CO C(1s) ionization. <i>European Physical Journal D</i> , 2019, 73, 1.	1.3	1
39	xcalib: a focal spot calibrator for intense X-ray free-electron laser pulses based on the charge state distributions of light atoms. <i>Journal of Synchrotron Radiation</i> , 2019, 26, 1017-1030.	2.4	16
40	Evidence of Extreme Ultraviolet Superfluorescence in Xenon. <i>Physical Review Letters</i> , 2019, 123, 023201.	7.8	23
41	Femtosecond-resolved observation of the fragmentation of buckminsterfullerene following X-ray multiphoton ionization. <i>Nature Physics</i> , 2019, 15, 1279-1283.	16.7	22
42	Time-resolved imaging of bound and dissociating nuclear wave packets in strong-field ionized iodomethane. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 14090-14102.	2.8	22
43	A coincidence velocity map imaging spectrometer for ions and high-energy electrons to study inner-shell photoionization of gas-phase molecules. <i>Review of Scientific Instruments</i> , 2019, 90, 055103.	1.3	14
44	Strong-field-induced bond rearrangement in triatomic molecules. <i>Physical Review A</i> , 2019, 99, .	2.5	20
45	An intense, few-cycle source in the long-wave infrared. <i>Scientific Reports</i> , 2019, 9, 6002.	3.3	18
46	Photodissociation of aligned CH ₃ I and C ₆ H ₃ F ₂ I molecules probed with time-resolved Coulomb explosion imaging by site-selective extreme ultraviolet ionization. <i>Structural Dynamics</i> , 2018, 5, 014301.	2.3	40
47	Native Frames: Disentangling Sequential from Concerted Three-Body Fragmentation. <i>Physical Review Letters</i> , 2018, 120, 103001.	7.8	56
48	Time-resolved ion imaging at free-electron lasers using TimepixCam. <i>Journal of Synchrotron Radiation</i> , 2018, 25, 336-345.	2.4	15
49	The LAMP instrument at the Linac Coherent Light Source free-electron laser. <i>Review of Scientific Instruments</i> , 2018, 89, 035112.	1.3	24
50	Highly efficient nanoscale X-ray sources. <i>Nature Photonics</i> , 2018, 12, 62-63.	31.4	7
51	Roadmap of ultrafast x-ray atomic and molecular physics. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2018, 51, 032003.	1.5	240
52	Time-resolved inner-shell photoelectron spectroscopy: From a bound molecule to an isolated atom. <i>Physical Review A</i> , 2018, 97, .	2.5	40
53	An Experimental Protocol for Femtosecond NIR/UV - XUV Pump-Probe Experiments with Free-Electron Lasers. <i>Journal of Visualized Experiments</i> , 2018, , .	0.3	9
54	H ₂ roaming chemistry and the formation of H ₃ ⁺ from organic molecules in strong laser fields. <i>Nature Communications</i> , 2018, 9, 5186.	12.8	73

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55	Coulomb explosion imaging of CH ₃ I and CH ₂ ClI photodissociation dynamics. Journal of Chemical Physics, 2018, 149, 204313.	3.0	46
56	Auger electron angular distributions following excitation or ionization of the I 3d level in methyl iodide. Journal of Chemical Physics, 2018, 149, 094304.	3.0	11
57	CAMP@FLASH: an end-station for imaging, electron- and ion-spectroscopy, and pump-probe experiments at the FLASH free-electron laser. Journal of Synchrotron Radiation, 2018, 25, 1529-1540.	2.4	37
58	Relativistic and resonant effects in the ionization of heavy atoms by ultra-intense hard X-rays. Nature Communications, 2018, 9, 4200.	12.8	29
59	Photoionization of the iodine 3d, 4s, and 4p orbitals in methyl iodide. Journal of Chemical Physics, 2018, 149, 144302.	3.0	13
60	Photophysics of indole upon X-ray absorption. Physical Chemistry Chemical Physics, 2018, 20, 20205-20216.	2.8	9
61	XUV double-pulses with femtosecond to 650 ps separation from a multilayer-mirror-based split-and-delay unit at FLASH. Journal of Synchrotron Radiation, 2018, 25, 1517-1528.	2.4	6
62	Isomer-dependent fragmentation dynamics of inner-shell photoionized difluoriodobenzene. Physical Chemistry Chemical Physics, 2017, 19, 13419-13431.	2.8	19
63	Femtosecond response of polyatomic molecules to ultra-intense hard X-rays. Nature, 2017, 546, 129-132.	27.8	139
64	Soft-x-ray-induced ionization and fragmentation dynamics of N_3^- investigated using an ion-ion-coincidence momentum-imaging technique. Physical Review A, 2017, 96, .	2.5	11
65	Alignment, orientation, and Coulomb explosion of difluoriodobenzene studied with the pixel imaging mass spectrometry (PlmMS) camera. Journal of Chemical Physics, 2017, 147, 013933.	3.0	26
66	Inner-shell photodetachment from Ni ²⁺ : A giant Feshbach resonance. Physical Review A, 2017, 96, .	2.5	2
67	Jitter-correction for IR/UV-XUV pump-probe experiments at the FLASH free-electron laser. New Journal of Physics, 2017, 19, 043009.	2.9	34
68	Coulomb-explosion imaging of concurrent CH_2^+ photodissociation dynamics. Physical Review A, 2017, 96, .	2.5	50
69	Mechanisms and time-resolved dynamics for trihydrogen cation (H ₃ ⁺) formation from organic molecules in strong laser fields. Scientific Reports, 2017, 7, 4703.	3.3	62
70	High-repetition-rate and high-photon-flux 70 eV high-harmonic source for coincidence ion imaging of gas-phase molecules. Optics Express, 2016, 24, 18133.	3.4	60
71	Identification of absolute geometries of cis and trans molecular isomers by Coulomb Explosion Imaging. Scientific Reports, 2016, 6, 38202.	3.3	32
72	Structural dynamics: general discussion. Faraday Discussions, 2016, 194, 583-620.	3.2	0

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73	Attosecond processes and X-ray spectroscopy: general discussion. Faraday Discussions, 2016, 194, 427-462.	3.2	0
74	Hetero-site-specific X-ray pump-probe spectroscopy for femtosecond intramolecular dynamics. Nature Communications, 2016, 7, 11652.	12.8	70
75	Charge transfer in dissociating iodomethane and fluoromethane molecules ionized by intense femtosecond X-ray pulses. Structural Dynamics, 2016, 3, 043207.	2.3	59
76	Ultrafast x-ray-induced nuclear dynamics in diatomic molecules using femtosecond x-ray-pump x-ray-probe spectroscopy. Physical Review A, 2016, 94, .	2.5	24
77	Coupled motion of Xe clusters and quantum vortices in He nanodroplets. Physical Review B, 2016, 93, .	3.2	31
78	Femtosecond and nanometre visualization of structural dynamics in superheated nanoparticles. Nature Photonics, 2016, 10, 93-97.	31.4	89
79	Communication: X-ray coherent diffractive imaging by immersion in nanodroplets. Structural Dynamics, 2015, 2, 051102.	2.3	38
80	Time-resolved study of ICD in Ne dimers using FEL radiation. Journal of Electron Spectroscopy and Related Phenomena, 2015, 204, 245-256.	1.7	14
81	Diffraction effects in the Recoil-Frame Photoelectron Angular Distributions of Halomethanes. Journal of Physics: Conference Series, 2015, 635, 112020.	0.4	1
82	Strongly aligned gas-phase molecules at free-electron lasers. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 204002.	1.5	28
83	Auf der Jagd nach Quantentornados. Physik in Unserer Zeit, 2015, 46, 9-10.	0.0	0
84	Time-resolved studies with FELs. Journal of Electron Spectroscopy and Related Phenomena, 2015, 204, 228-236.	1.7	18
85	Ultrafast isomerization initiated by X-ray core ionization. Nature Communications, 2015, 6, 8199.	12.8	92
86	Toward atomic resolution diffractive imaging of isolated molecules with X-ray free-electron lasers. Faraday Discussions, 2014, 171, 393-418.	3.2	29
87	Automated identification and classification of single particle serial femtosecond X-ray diffraction data. Optics Express, 2014, 22, 2497.	3.4	45
88	ALS User Meeting and Workshops. Synchrotron Radiation News, 2014, 27, 5-9.	0.8	0
89	Chemical reaction dynamics I and electron dynamics in molecules: general discussion. Faraday Discussions, 2014, 171, 145-168.	3.2	1
90	Imaging molecular structure through femtosecond photoelectron diffraction on aligned and oriented gas-phase molecules. Faraday Discussions, 2014, 171, 57-80.	3.2	55

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91	A superconfiguration approach to multi-electron ionization of Xe under strong x-ray irradiation. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2014, 47, 011001.	1.5	6
92	High-throughput imaging of heterogeneous cell organelles with an X-ray laser. <i>Nature Photonics</i> , 2014, 8, 943-949.	31.4	156
93	Shapes and vorticities of superfluid helium nanodroplets. <i>Science</i> , 2014, 345, 906-909.	12.6	197
94	Imaging charge transfer in iodomethane upon x-ray photoabsorption. <i>Science</i> , 2014, 345, 288-291.	12.6	183
95	Probing ultrafast electronic and molecular dynamics with free-electron lasers. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2014, 47, 124006.	1.5	34
96	X-Ray Diffraction from Isolated and Strongly Aligned Gas-Phase Molecules with a Free-Electron Laser. <i>Physical Review Letters</i> , 2014, 112, .	7.8	217
97	Femtosecond x-ray photoelectron diffraction on gas-phase dibromobenzene molecules. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2014, 47, 124035.	1.5	46
98	Nanoscale spin reversal by non-local angular momentum transfer following ultrafast laser excitation in ferrimagnetic GdFeCo. <i>Nature Materials</i> , 2013, 12, 293-298.	27.5	267
99	Resonance-enhanced multiple ionization of krypton at an x-ray free-electron laser. <i>Physical Review A</i> , 2013, 87, .	2.5	57
100	Ultrafast Charge Rearrangement and Nuclear Dynamics upon Inner-Shell Multiple Ionization of Small Polyatomic Molecules. <i>Physical Review Letters</i> , 2013, 110, 053003.	7.8	98
101	Sensing the wavefront of x-ray free-electron lasers using aerosol spheres. <i>Optics Express</i> , 2013, 21, 12385.	3.4	28
102	Toward unsupervised single-shot diffractive imaging of heterogeneous particles using X-ray free-electron lasers. <i>Optics Express</i> , 2013, 21, 28729.	3.4	20
103	Ultrafast dynamics in acetylene clocked in a femtosecond XUV stopwatch. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2013, 46, 164027.	1.5	34
104	Inner-shell multiple ionization of polyatomic molecules with an intense x-ray free-electron laser studied by coincident ion momentum imaging. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2013, 46, 164031.	1.5	27
105	Mesoscale morphology of airborne core-shell nanoparticle clusters: x-ray laser coherent diffraction imaging. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2013, 46, 164033.	1.5	12
106	Anomalous signal from S atoms in protein crystallographic data from an X-ray free-electron laser. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2013, 69, 838-842.	2.5	48
107	Femtosecond photoelectron diffraction on laser-aligned molecules: Towards time-resolved imaging of molecular structure. <i>Physical Review A</i> , 2013, 88, .	2.5	76
108	Time-Resolved Measurement of Interatomic Coulombic Decay in Ne^{2+} . <i>Physical Review Letters</i> , 2013, 111, 093402.	7.8	117

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109	Femtosecond free-electron laser x-ray diffraction data sets for algorithm development. Optics Express, 2012, 20, 4149.	3.4	56
110	Noise-robust coherent diffractive imaging with a single diffraction pattern. Optics Express, 2012, 20, 16650.	3.4	73
111	Time-resolved protein nanocrystallography using an X-ray free-electron laser. Optics Express, 2012, 20, 2706.	3.4	219
112	Femtosecond dark-field imaging with an X-ray free electron laser. Optics Express, 2012, 20, 13501.	3.4	38
113	X-ray "optical cross-correlator for gas-phase experiments at the Linac Coherent Light Source free-electron laser. Applied Physics Letters, 2012, 100, .	3.3	76
114	Next Generation Endstation for Concurrent Measurements of Charged Products and Photons in LCLS FEL Experiments. Journal of Physics: Conference Series, 2012, 388, 142025.	0.4	2
115	Ultra-efficient ionization of heavy atoms by intense X-ray free-electron laser pulses. Nature Photonics, 2012, 6, 858-865.	31.4	218
116	Ultrafast Transitions from Solid to Liquid and Plasma States of Graphite Induced by X-Ray Free-Electron Laser Pulses. Physical Review Letters, 2012, 108, 217402.	7.8	60
117	Lipidic phase membrane protein serial femtosecond crystallography. Nature Methods, 2012, 9, 263-265.	19.0	135
118	Fractal morphology, imaging and mass spectrometry of single aerosol particles in flight. Nature, 2012, 486, 513-517.	27.8	170
119	Self-terminating diffraction gates femtosecond X-ray nanocrystallography measurements. Nature Photonics, 2012, 6, 35-40.	31.4	292
120	Nanoplasma Dynamics of Single Large Xenon Clusters Irradiated with Superintense X-Ray Pulses from the Linac Coherent Light Source Free-Electron Laser. Physical Review Letters, 2012, 108, 245005.	7.8	129
121	In vivo protein crystallization opens new routes in structural biology. Nature Methods, 2012, 9, 259-262.	19.0	193
122	Unsupervised classification of single-particle X-ray diffraction snapshots by spectral clustering. Optics Express, 2011, 19, 16542.	3.4	91
123	Radiation damage in protein serial femtosecond crystallography using an x-ray free-electron laser. Physical Review B, 2011, 84, 214111.	3.2	156
124	Single mimivirus particles intercepted and imaged with an X-ray laser. Nature, 2011, 470, 78-81.	27.8	790
125	Femtosecond X-ray protein nanocrystallography. Nature, 2011, 470, 73-77.	27.8	1,771
126	Fragmentation dynamics of gas-phase furan following $K\text{-shell}$ ionization. Physical Review A, 2010, 82, .	2.5	10

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145	Velocity map ion imaging applied to studies of molecular fragmentation with synchrotron radiation. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2007, 155, 155-159.	1.7	22
146	Low-Energy Nondipole Effects in Molecular Nitrogen Valence-Shell Photoionization. <i>Physical Review Letters</i> , 2006, 97, 103006.	7.8	13
147	Isotope-induced partial localization of core electrons in the homonuclear molecule N ₂ . <i>Nature</i> , 2005, 437, 711-715.	27.8	157
148	An investigation of dissociative resonant photoionization in HCl and DCl using two-dimensional photoelectron spectroscopy. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2005, 38, 1535-1544.	1.5	16
149	Auger cascades versus direct double Auger: relaxation processes following photoionization of the Kr 3d and Xe 4d, 3d inner shells. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2005, 38, 3885-3903.	1.5	53
150	Nearest-Neighbor-Atom Core-Hole Transfer in Isolated Molecules. <i>Physical Review Letters</i> , 2004, 92, 223002.	7.8	12
151	Nondipole Effects in the Photoionization of Xe 4d _{5/2} and 4d _{3/2} : Evidence for Quadrupole Satellites. <i>Physical Review Letters</i> , 2004, 93, 113001.	7.8	14
152	Circular Dichroism in K-Shell Ionization from Fixed-in-Space CO and N ₂ Molecules. <i>Physical Review Letters</i> , 2002, 88, 073002.	7.8	126
153	Angular distributions of electrons photoemitted from core levels of oriented diatomic molecules: multiple scattering theory in non-spherical potentials. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2002, 35, L359-L365.	1.5	14
154	K-shell photoionization of CO and N ₂ : is there a link between the photoelectron angular distribution and the molecular decay dynamics?. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2001, 34, 3669-3678.	1.5	111