

Roger Falcone

List of Publications by Year in descending order

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Version: 2024-02-01

60
papers

2,904
citations

279798

23
h-index

161849

54
g-index

62
all docs

62
docs citations

62
times ranked

2706
citing authors

#	ARTICLE	IF	CITATIONS
1	X-ray linear dichroic ptychography. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	20
2	Demonstration of a laser-driven, narrow spectral bandwidth x-ray source for collective x-ray scattering experiments. Physics of Plasmas, 2021, 28, .	1.9	8
3	Measuring the structure and equation of state of polyethylene terephthalate at megabar pressures. Scientific Reports, 2021, 11, 12883.	3.3	10
4	Demonstration of an x-ray Raman spectroscopy setup to study warm dense carbon at the high energy density instrument of European XFEL. Physics of Plasmas, 2021, 28, 082701.	1.9	11
5	Soft x-ray linear dichroic ptychography: the study of crystal orientation in biominerals. , 2021, , .		2
6	Demonstration of X-ray Thomson scattering as diagnostics for miscibility in warm dense matter. Nature Communications, 2020, 11, 2620.	12.8	27
7	Reduction of electron-phonon coupling in warm dense iron. Physical Review B, 2020, 101, .	3.2	8
8	Measurement of diamond nucleation rates from hydrocarbons at conditions comparable to the interiors of icy giant planets. Physical Review B, 2020, 101, .	3.2	10
9	SQUARREL: Scattering Quotient Analysis to Retrieve the Ratio of Elements in X-ray Ptychography. Microscopy and Microanalysis, 2019, 25, 112-113.	0.4	2
10	Reply to: Reconsidering X-ray plasmons. Nature Photonics, 2019, 13, 751-753.	31.4	0
11	Multimodal x-ray and electron microscopy of the Allende meteorite. Science Advances, 2019, 5, eaax3009.	10.3	17
12	Evidence for Crystalline Structure in Dynamically-Compressed Polyethylene up to 200 GPa. Scientific Reports, 2019, 9, 4196.	3.3	22
13	Engineering Nanoscale Thermal Transport: Size- and Spacing-Dependent Cooling of Nanostructures. Physical Review Applied, 2019, 11, .	3.8	28
14	Characterizing plasma conditions in radiatively heated solid-density samples with x-ray Thomson scattering. Physical Review E, 2018, 98, .	2.1	9
15	Liquid Structure of Shock-Compressed Hydrocarbons at Megabar Pressures. Physical Review Letters, 2018, 121, 245501.	7.8	16
16	Developing a long-duration Zn K- β source for x-ray scattering experiments. Review of Scientific Instruments, 2018, 89, 10F109.	1.3	4
17	Using time-resolved penumbral imaging to measure low hot spot x-ray emission signals from capsule implosions at the National Ignition Facility. Review of Scientific Instruments, 2018, 89, 10G111.	1.3	5
18	High-pressure chemistry of hydrocarbons relevant to planetary interiors and inertial confinement fusion. Physics of Plasmas, 2018, 25, .	1.9	24

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19	Formation of diamonds in laser-compressed hydrocarbons at planetary interior conditions. <i>Nature Astronomy</i> , 2017, 1, 606-611.	10.1	152
20	Platform for spectrally resolved x-ray scattering from imploding capsules at the National Ignition Facility. <i>Journal of Physics: Conference Series</i> , 2016, 717, 012067.	0.4	16
21	Measurement of Electron-Ion Relaxation in Warm Dense Copper. <i>Scientific Reports</i> , 2016, 6, 18843.	3.3	60
22	X-ray scattering measurements on imploding CH spheres at the National Ignition Facility. <i>Physical Review E</i> , 2016, 94, 011202.	2.1	64
23	Nanosecond formation of diamond and lonsdaleite by shock compression of graphite. <i>Nature Communications</i> , 2016, 7, 10970.	12.8	167
24	Improving a high-efficiency, gated spectrometer for x-ray Thomson scattering experiments at the National Ignition Facility. <i>Review of Scientific Instruments</i> , 2016, 87, 11E515.	1.3	6
25	Investigation of femtosecond collisional ionization rates in a solid-density aluminium plasma. <i>Nature Communications</i> , 2015, 6, 6397.	12.8	73
26	Observation of finite-wavelength screening in high-energy-density matter. <i>Nature Communications</i> , 2015, 6, 6839.	12.8	20
27	Ultrabright X-ray laser scattering for dynamic warm dense matter physics. <i>Nature Photonics</i> , 2015, 9, 274-279.	31.4	208
28	Observations of strong ion-ion correlations in dense plasmas. <i>Physics of Plasmas</i> , 2014, 21, 056302.	1.9	16
29	Exploring Mbar shock conditions and isochorically heated aluminum at the Matter in Extreme Conditions end station of the Linac Coherent Light Source (invited). <i>Review of Scientific Instruments</i> , 2014, 85, 11E702.	1.3	6
30	User Workshop on High-Power Lasers at the Linac Coherent Light Source. <i>Synchrotron Radiation News</i> , 2014, 27, 56-58.	0.8	6
31	Using penumbral imaging to measure micrometer size plasma hot spots in Gbar equation of state experiments on the National Ignition Facility. <i>Review of Scientific Instruments</i> , 2014, 85, 11D614.	1.3	16
32	Qualification of a high-efficiency, gated spectrometer for x-ray Thomson scattering on the National Ignition Facility. <i>Review of Scientific Instruments</i> , 2014, 85, 11D617.	1.3	22
33	X-ray continuum emission spectroscopy from hot dense matter at Gbar pressures. <i>Review of Scientific Instruments</i> , 2014, 85, 11D606.	1.3	5
34	Observations of Continuum Depression in Warm Dense Matter with X-Ray Thomson Scattering. <i>Physical Review Letters</i> , 2014, 112, 145004.	7.8	105
35	Picosecond Single-Shot X-ray Absorption Spectroscopy for Warm and Dense Matter. <i>Synchrotron Radiation News</i> , 2012, 25, 12-16.	0.8	6
36	Adiabatic Index in Shock-Compressed Beryllium. <i>Contributions To Plasma Physics</i> , 2012, 52, 186-193.	1.1	4

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37	New directions in X-ray microscopy. Contemporary Physics, 2011, 52, 293-318.	1.8	99
38	Observation of Transient Iron(II) Formation in Dye-Sensitized Iron Oxide Nanoparticles by Time-Resolved X-ray Spectroscopy. Journal of Physical Chemistry Letters, 2010, 1, 1372-1376.	4.6	31
39	Ultrafast K α x-ray Thomson scattering from shock compressed lithium hydride. Physics of Plasmas, 2009, 16, 056308.	1.9	8
40	K α X-ray Thomson Scattering From Dense Plasmas. , 2009, , .		0
41	X-Ray Thomson-Scattering Measurements of Density and Temperature in Shock-Compressed Beryllium. Physical Review Letters, 2009, 102, 115001.	7.8	147
42	Formation of secondary electron cascades in single-crystalline plasma-deposited diamond upon exposure to femtosecond x-ray pulses. Journal of Applied Physics, 2008, 103, .	2.5	28
43	A setup for ultrafast time-resolved x-ray absorption spectroscopy. Review of Scientific Instruments, 2004, 75, 24-30.	1.3	91
44	Characterization of CsI photocathodes at grazing incidence for use in a unit quantum efficiency x-ray streak camera. Review of Scientific Instruments, 2004, 75, 3131-3137.	1.3	19
45	Ultrafast X-ray science at the advanced light source. Synchrotron Radiation News, 2001, 14, 20-27.	0.8	5
46	Time-resolved x-ray photoabsorption and diffraction on timescales from ns to fs. AIP Conference Proceedings, 2000, , .	0.4	0
47	Time-Resolved X-Ray Diffraction from Coherent Phonons during a Laser-Induced Phase Transition. Physical Review Letters, 2000, 84, 111-114.	7.8	345
48	Time-resolved x-ray emission spectra from optically ionized helium and neon plasmas. Physical Review E, 1998, 57, 982-993.	2.1	3
49	Intense and ultrashort pulse laser interactions with matter. , 1998, , .		0
50	High-Order Harmonic Generation in Atom Clusters. Physical Review Letters, 1996, 76, 2472-2475.	7.8	285
51	Soft x-ray emission from plasmas produced by ultraintense KrF laser pulses in colloidal Al. Applied Physics Letters, 1996, 68, 1338-1340.	3.3	22
52	Strong X-Ray Emission from High-Temperature Plasmas Produced by Intense Irradiation of Clusters. Physical Review Letters, 1995, 75, 3122-3125.	7.8	260
53	Measurement of Velocity Distributions and Recombination Kinetics in Tunnel-Ionized Helium Plasmas. Physical Review Letters, 1995, 75, 445-448.	7.8	31
54	Efficient coupling of high-intensity subpicosecond laser pulses into solids. Applied Physics Letters, 1993, 62, 1068-1070.	3.3	141

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55	X-rays from high-intensity, short-pulse laser interaction with solids. AIP Conference Proceedings, 1993, , .	0.4	0
56	Generation of efficient ultrafast laser-plasma X-ray sources. Physics of Fluids B, 1991, 3, 2409-2413.	1.7	34
57	X-ray streak camera with 2 ps response. Applied Physics Letters, 1990, 56, 1948-1950.	3.3	77
58	Rapid lattice expansion and increased X-ray reflectivity of a multilayer structure due to pulsed laser heating. Applied Physics Letters, 1987, 51, 1873-1875.	3.3	14
59	Proposal for a femtosecond X-ray light source. AIP Conference Proceedings, 1986, , .	0.4	4
60	Observation of a Short-Wavelength Laser Pumped by Auger Decay. Physical Review Letters, 1986, 57, 2939-2942.	7.8	85