

Eric Dufresne

List of Publications by Year in descending order

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77
papers

1,523
citations

279798

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330143

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all docs

77
docs citations

77
times ranked

1878
citing authors

#	ARTICLE	IF	CITATIONS
1	Nanosecond Domain Wall Dynamics in Ferroelectric Pb(Zr,Ti)O ₃ Thin Films. Physical Review Letters, 2006, 96, 187601.	7.8	138
2	Structural visualization of polarization fatigue in epitaxial ferroelectric oxide devices. Nature Materials, 2004, 3, 365-369.	27.5	95
3	Direct determination of epitaxial interface structure in Gd ₂ O ₃ passivation of GaAs. Nature Materials, 2002, 1, 99-101.	27.5	92
4	The 7BM beamline at the APS: a facility for time-resolved fluid dynamics measurements. Journal of Synchrotron Radiation, 2012, 19, 654-657.	2.4	80
5	X-Ray Intensity Fluctuation Spectroscopy Studies on Phase-Ordering Systems. Physical Review Letters, 2005, 94, 055501.	7.8	69
6	Mapping single-crystal dendritic microstructure and defects in nickel-base superalloys with synchrotron radiation. Acta Materialia, 2008, 56, 4715-4723.	7.9	58
7	Nanosecond Dynamics of Ferroelectric/Dielectric Superlattices. Physical Review Letters, 2011, 107, 055501.	7.8	58
8	Nonlinear Piezoelectricity in Epitaxial Ferroelectrics at High Electric Fields. Physical Review Letters, 2008, 100, 027604.	7.8	50
9	Structural and electronic recovery pathways of a photoexcited ultrathin VO ₂ film. Physical Review B, 2013, 88, .	3.2	43
10	Shear banding leads to accelerated aging dynamics in a metallic glass. Physical Review B, 2018, 97, .	3.2	43
11	Sub-microsecond-resolved multi-speckle X-ray photon correlation spectroscopy with a pixel array detector. Journal of Synchrotron Radiation, 2018, 25, 1408-1416.	2.4	41
12	X-ray synchrotron studies of ultrafast crystalline dynamics. Journal of Synchrotron Radiation, 2005, 12, 177-192.	2.4	39
13	Structural dynamics and rejuvenation during cryogenic cycling in a Zr-based metallic glass. Acta Materialia, 2020, 196, 723-732.	7.9	38
14	Experimental study on the effect of nozzle hole-to-hole angle on the near-field spray of diesel injector using fast X-ray phase-contrast imaging. Fuel, 2016, 185, 142-150.	6.4	34
15	Dynamic Scaling of Colloidal Gel Formation at Intermediate Concentrations. Physical Review Letters, 2017, 119, 178006.	7.8	31
16	Piezoelectricity in the Dielectric Component of Nanoscale Dielectric-Ferroelectric Superlattices. Physical Review Letters, 2010, 104, 207601.	7.8	28
17	Field-Dependent Domain Distortion and Interlayer Polarization Distribution in PbTiO ₃ . Physical Review Letters, 2013, 110, 047601.	7.8	28
18	Stress breaks universal aging behavior in a metallic glass. Nature Communications, 2019, 10, 5006.	12.8	28

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19	Subnanosecond piezoelectric x-ray switch. Applied Physics Letters, 2006, 89, 021109.	3.3	27
20	Ultrafast Three-Dimensional X-ray Imaging of Deformation Modes in ZnO Nanocrystals. Nano Letters, 2017, 17, 1102-1108.	9.1	25
21	Submillisecond X-ray photon correlation spectroscopy from a pixel array detector with fast dual gating and no readout dead-time. Journal of Synchrotron Radiation, 2016, 23, 679-684.	2.4	25
22	Concentration fluctuations in the binary mixture hexane-nitrobenzene with static and dynamic x-ray scattering. Physical Review E, 2002, 65, 061507.	2.1	24
23	Mesoscopic structural phase progression in photo-excited VO ₂ revealed by time-resolved x-ray diffraction microscopy. Scientific Reports, 2016, 6, 21999.	3.3	24
24	Hard-sphere-like dynamics in highly concentrated alpha-crystallin suspensions. Physical Review E, 2018, 97, 020601.	2.1	24
25	Time-Resolved Research at the Advanced Photon Source Beamline 7-ID. AIP Conference Proceedings, 2010, , .	0.4	23
26	Application of X-ray fluorescence to turbulent mixing. Journal of Synchrotron Radiation, 2011, 18, 811-815.	2.4	20
27	<i>IN SITU</i> X-RAY PROBES FOR PIEZOELECTRICITY IN EPITAXIAL FERROELECTRIC CAPACITORS. Integrated Ferroelectrics, 2008, 101, 174-181.	0.7	19
28	Fast nanoparticle rotational and translational diffusion in synovial fluid and hyaluronic acid solutions. Science Advances, 2021, 7, .	10.3	18
29	Ordered Hydrophobic Organosilicates Templated by Block Copolymers. Chemistry of Materials, 2002, 14, 5173-5178.	6.7	17
30	Structural investigation of CoMnGe combinatorial epitaxial thin films using microfocused synchrotron X-ray. Applied Surface Science, 2004, 223, 175-182.	6.1	17
31	20-Å-resolved high-throughput X-ray photon correlation spectroscopy on a 500k pixel detector enabled by data-management workflow. Journal of Synchrotron Radiation, 2021, 28, 259-265.	2.4	17
32	Stability of the unswitched polarization state of ultrathin epitaxial $\text{PbZr}_{1-x}\text{Ti}_x\text{O}_3$ ferroelectric thin films under large electric fields. Physical Review B, 2009, 80, .	3.2	16
33	A technique for high-frequency laser-pump X-ray probe experiments at the APS. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 649, 191-193.	1.6	16
34	Fast X-ray microdiffraction techniques for studying irreversible transformations in materials. Journal of Synchrotron Radiation, 2011, 18, 464-474.	2.4	16
35	Thermal Fluctuations of Ferroelectric Nanodomains in a Ferroelectric-Dielectric PbTiO_3 Superlattice. Physical Review Letters, 2017, 118, 097601.	7.8	16
36	Dynamics in hard condensed matter probed by X-ray photon correlation spectroscopy: Present and beyond. Current Opinion in Solid State and Materials Science, 2018, 22, 202-212.	11.5	16

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37	Nanoscale Critical Phenomena in a Complex Fluid Studied by X-Ray Photon Correlation Spectroscopy. <i>Physical Review Letters</i> , 2020, 125, 125504.	7.8	16
38	Nonlinearity in the high-electric-field piezoelectricity of epitaxial BiFeO ₃ on SrTiO ₃ . <i>Applied Physics Letters</i> , 2012, 100, 062906.	3.3	14
39	Ultrafast Three-Dimensional Integrated Imaging of Strain in Core/Shell Semiconductor/Metal Nanostructures. <i>Nano Letters</i> , 2017, 17, 7696-7701.	9.1	14
40	Structural Transformation of LiFePO ₄ during Ultrafast Delithiation. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 6160-6164.	4.6	13
41	Use of continuous sample translation to reduce radiation damage for XPCS studies of protein diffusion. <i>Journal of Synchrotron Radiation</i> , 2021, 28, 490-498.	2.4	11
42	Synchronizing fast electrically driven phenomena with synchrotron x-ray probes. <i>Review of Scientific Instruments</i> , 2007, 78, 023105.	1.3	10
43	Component-specific electromechanical response in a ferroelectric/dielectric superlattice. <i>Physical Review B</i> , 2010, 82, .	3.2	10
44	±-Synuclein Sterically Stabilizes Spherical Nanoparticle-Supported Lipid Bilayers. <i>ACS Applied Bio Materials</i> , 2019, 2, 1413-1419.	4.6	8
45	Relaxation and Aging of Nanosphere Assemblies at a Water/Oil Interface. <i>ACS Nano</i> , 2022, 16, 8967-8973.	14.6	7
46	Evolution of structure and dynamics of thermo-reversible nanoparticle gels: A combined XPCS and rheology study. <i>Journal of Chemical Physics</i> , 2019, 151, 104902.	3.0	6
47	<i>pyXPCSviewer</i> : an open-source interactive tool for X-ray photon correlation spectroscopy visualization and analysis. <i>Journal of Synchrotron Radiation</i> , 2022, 29, 1122-1129.	2.4	6
48	Double gradient multilayers for broadband focusing. , 2003, , .		5
49	Domain- and symmetry-transition origins of reduced nanosecond piezoelectricity in ferroelectric/dielectric superlattices. <i>New Journal of Physics</i> , 2012, 14, 013034.	2.9	5
50	Universal aging characteristics of macroscopically and microscopically dissimilar metallic glasses. <i>Acta Materialia</i> , 2018, 155, 35-42.	7.9	5
51	Development of new apertures for coherent X-ray experiments. <i>Journal of Synchrotron Radiation</i> , 2009, 16, 358-367.	2.4	4
52	Pushing x-ray photon correlation spectroscopy beyond the continuous frame rate limit. <i>Optics Express</i> , 2016, 24, 355.	3.4	4
53	Anomalous fast atomic dynamics in bulk metallic glasses. <i>Materials Today Physics</i> , 2021, 17, 100351.	6.0	4
54	Focusing a round coherent beam by spatial filtering the horizontal source. <i>Journal of Synchrotron Radiation</i> , 2020, 27, 1528-1538.	2.4	4

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55	NANOSECOND STRUCTURAL VISUALIZATION OF THE REPRODUCIBILITY OF POLARIZATION SWITCHING IN FERROELECTRICS. <i>Integrated Ferroelectrics</i> , 2006, 85, 165-173.	0.7	3
56	The Effect of Intensity Fluctuations on Sequential X-ray Photon Correlation Spectroscopy at the X-ray Free Electron Laser Facilities. <i>Crystals</i> , 2020, 10, 1109.	2.2	3
57	Shape memory effect in metallic glasses. <i>Matter</i> , 2021, 4, 3327-3338.	10.0	3
58	Structural dynamics of PZT thin films at the nanoscale. <i>Materials Research Society Symposia Proceedings</i> , 2005, 902, 1.	0.1	2
59	Optoelectronic measurement of x-ray synchrotron pulses: A proof of concept demonstration. <i>Applied Physics Letters</i> , 2013, 102, 051109.	3.3	2
60	Observation of Collective Molecular Dynamics in a Chalcogenide Glass: Results from X-ray Photon Correlation Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2022, 126, 5320-5325.	2.6	2
61	Synchrotron X-ray Microdiffraction Images of Polarization Switching in Epitaxial PZT Capacitors with Pt and SrRuO ₃ Top Electrodes. <i>Materials Research Society Symposia Proceedings</i> , 2003, 784, 641.	0.1	1
62	Large-aperture x-ray refractive lens from lithium. , 2004, , .		1
63	Beryllium and lithium x-ray lenses at the APS. , 2006, 6317, 195.		1
64	Impact of Pressure Regulation of Cryogenic Fluids and EPICS EPID Feedback on the Monochromatic Beam Position Stability of the 7ID Beamline at the Advanced Photon Source. <i>AIP Conference Proceedings</i> , 2007, , .	0.4	1
65	Fabrication and Performance of a Lithium X-Ray Lens. <i>AIP Conference Proceedings</i> , 2007, , .	0.4	1
66	Studies of Ultrafast Femtosecond-Laser-Generated Strain Fields with Coherent X-rays. <i>AIP Conference Proceedings</i> , 2007, , .	0.4	1
67	Using refractive lenses to provide a variable spot size for Kirkpatrick-Baez mirrors. <i>Journal of Synchrotron Radiation</i> , 2018, 25, 1514-1516.	2.4	1
68	Time delay measurement in the frequency domain. <i>Journal of Synchrotron Radiation</i> , 2015, 22, 1293-1296.	2.4	1
69	Microscopic Dynamics of Inverse Wormlike Micelles Probed Using X-ray Photon Correlation Spectroscopy. <i>ACS Macro Letters</i> , 2022, 11, 575-579.	4.8	1
70	<title>Simple x-ray focusing mirror using float glass</title>. , 1996, , .		0
71	Acoustic phonon dispersion measured with time-resolved x-ray diffraction. , 0, , .		0
72	Acoustic phonon dispersion measured with time-resolved X-ray diffraction. , 0, , .		0

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73	Structure of Complex Oxides in High Electric Fields. <i>Microscopy and Microanalysis</i> , 2008, 14, 222-223.	0.4	0
74	Structural Response of BaTiO ₃ /CaTiO ₃ Superlattice to Applied Electric Fields. <i>Materials Research Society Symposia Proceedings</i> , 2009, 1199, 18.	0.1	0
75	A Sagittally Bent Crystal for the Short Pulse X-ray Beamline at the Advanced Photon Source. <i>Journal of Physics: Conference Series</i> , 2014, 493, 012023.	0.4	0
76	Lensless Imaging of Nano- and Meso-Scale Dynamics with X-rays. <i>Microscopy and Microanalysis</i> , 2015, 21, 2165-2166.	0.4	0
77	Alpha-Synuclein Disrupts Inter-Membrane Interactions. <i>Biophysical Journal</i> , 2019, 116, 494a-495a.	0.5	0