

Mark Sutton

List of Publications by Year in descending order

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72
papers

2,133
citations

304368

22
h-index

223531

46
g-index

73
all docs

73
docs citations

73
times ranked

2017
citing authors

#	ARTICLE	IF	CITATIONS
1	Observation of speckle by diffraction with coherent X-rays. <i>Nature</i> , 1991, 352, 608-610.	13.7	371
2	Hydrogen desorption mechanism in MgH ₂ -Nb nanocomposites. <i>Physical Review B</i> , 2001, 63, .	1.1	149
3	A review of X-ray intensity fluctuation spectroscopy. <i>Comptes Rendus Physique</i> , 2008, 9, 657-667.	0.3	141
4	Area detector based photon correlation in the regime of short data batches: Data reduction for dynamic x-ray scattering. <i>Review of Scientific Instruments</i> , 2000, 71, 3274-3289.	0.6	132
5	Dynamics of Block Copolymer Micelles Revealed by X-Ray Intensity Fluctuation Spectroscopy. <i>Physical Review Letters</i> , 1997, 78, 1275-1278.	2.9	123
6	Coherent X-Ray Study of Fluctuations during Domain Coarsening. <i>Physical Review Letters</i> , 1998, 81, 5832-5835.	2.9	102
7	High Contrast X-ray Speckle from Atomic-Scale Order in Liquids and Glasses. <i>Physical Review Letters</i> , 2012, 109, 185502.	2.9	97
8	Mapping momentum-dependent electron-phonon coupling and nonequilibrium phonon dynamics with ultrafast electron diffuse scattering. <i>Physical Review B</i> , 2018, 97, .	1.1	81
9	Reversible Nanoparticle Cubic Lattices in Blue Phase Liquid Crystals. <i>ACS Nano</i> , 2016, 10, 3410-3415.	7.3	66
10	Ultrafast correlated charge and lattice motion in a hybrid metal halide perovskite. <i>Science Advances</i> , 2019, 5, eaaw5558.	4.7	66
11	Speckle from phase-ordering systems. <i>Physical Review E</i> , 1997, 56, 6601-6612.	0.8	60
12	Towards ultrafast dynamics with split-pulse X-ray photon correlation spectroscopy at free electron laser sources. <i>Nature Communications</i> , 2018, 9, 1704.	5.8	55
13	Instrumentation for millisecond-resolution scattering studies (invited). <i>Review of Scientific Instruments</i> , 1989, 60, 1537-1540.	0.6	53
14	Study of density in pulsed laser deposited amorphous carbon films using x-ray reflectivity. <i>Applied Physics Letters</i> , 1994, 65, 830-832.	1.5	46
15	XPCS Investigation of the Dynamics of Filler Particles in Stretched Filled Elastomers. <i>Macromolecules</i> , 2012, 45, 8691-8701.	2.2	44
16	Sub-microsecond-resolved multi-speckle X-ray photon correlation spectroscopy with a pixel array detector. <i>Journal of Synchrotron Radiation</i> , 2018, 25, 1408-1416.	1.0	41
17	Model of the Kinetics of Polymorphous Crystallization. <i>Physical Review Letters</i> , 1995, 75, 2156-2159.	2.9	40
18	Mechanisms of electron-phonon coupling unraveled in momentum and time: The case of soft phonons in TiSe ₂ . <i>Science Advances</i> , 2021, 7, .	4.7	38

#	ARTICLE	IF	CITATIONS
19	MeV ion irradiation of Co/Cu multilayers. <i>Journal of Applied Physics</i> , 1997, 81, 5200-5202.	1.1	36
20	Time- and momentum-resolved phonon population dynamics with ultrafast electron diffuse scattering. <i>Physical Review B</i> , 2019, 100, .	1.1	33
21	Perfect Crystals in the Asymmetric Bragg Geometry as Optical Elements for Coherent X-ray Beams. <i>Journal of Synchrotron Radiation</i> , 1995, 2, 163-173.	1.0	28
22	Direct Measurement of Microstructural Avalanches during the Martensitic Transition of Cobalt Using Coherent X-Ray Scattering. <i>Physical Review Letters</i> , 2011, 107, 015702.	2.9	26
23	Simultaneous, Single-Particle Measurements of Size and Loading Give Insights into the Structure of Drug-Delivery Nanoparticles. <i>ACS Nano</i> , 2021, 15, 19244-19255.	7.3	23
24	Evolution of speckle during spinodal decomposition. <i>Physical Review E</i> , 1999, 60, 5151-5162.	0.8	22
25	Velocity measurement by coherent x-ray heterodyning. <i>Review of Scientific Instruments</i> , 2017, 88, 015112.	0.6	19
26	Compact hard x-ray split-delay system based on variable-gap channel-cut crystals. <i>Optics Letters</i> , 2019, 44, 2582.	1.7	18
27	Influence of Silane Coupling Agents on Filler Network Structure and Stress-Induced Particle Rearrangement in Elastomer Nanocomposites. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 47891-47901.	4.0	15
28	Experimental clues of soft glassy rheology in strained filled elastomers. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2014, 52, 647-656.	2.4	13
29	Accurate contrast determination for X-ray speckle visibility spectroscopy. <i>Journal of Synchrotron Radiation</i> , 2020, 27, 999-1007.	1.0	13
30	A statistical technique for characterizing X-ray position-sensitive detectors. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 1995, 364, 380-393.	0.7	12
31	Realizing split-pulse x-ray photon correlation spectroscopy to measure ultrafast dynamics in complex matter. <i>Physical Review Research</i> , 2020, 2, .	1.3	12
32	Ordering fluctuation dynamics in AuAgZn ₂ . <i>Physical Review B</i> , 2015, 92, .	1.1	10
33	Software tools for X-ray photon correlation and X-ray speckle visibility spectroscopy. , 2016, , .		9
34	Nonuniform Flow Dynamics Probed by Nanosecond X-Ray Speckle Visibility Spectroscopy. <i>Physical Review Letters</i> , 2021, 127, 058001.	2.9	9
35	First experimental feasibility study of VIPIC: a custom-made detector for X-ray speckle measurements. <i>Journal of Synchrotron Radiation</i> , 2016, 23, 404-409.	1.0	9
36	Effect of annealing on magnetic and structural properties of Co/Re superlattices. <i>Journal of Applied Physics</i> , 1993, 73, 5530-5532.	1.1	8

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37	Structural Properties Of Co/Re Superlattices. Materials Research Society Symposia Proceedings, 1991, 238, 671.	0.1	7
38	Deposition-temperature dependence of texture and magnetic properties of sputtered Ni/Fe multilayers. Journal of Applied Physics, 1997, 81, 4758-4760.	1.1	7
39	Double-pulse speckle contrast correlations with near Fourier transform limited free-electron laser light using hard X-ray split-and-delay. Scientific Reports, 2020, 10, 5054.	1.6	7
40	High resolution strain measurements in highly disordered materials. Physical Review Research, 2021, 3, .	1.3	7
41	Dewetting in immiscible polymer bilayer films. Physical Review Materials, 2017, 1, .	0.9	7
42	Generation of highly mutually coherent hard-x-ray pulse pairs with an amplitude-splitting delay line. Physical Review Research, 2021, 3, .	1.3	7
43	Cumulative interface roughness and magnetization in antiferromagnetically coupled NiCo/Cu multilayers. Journal of Applied Physics, 1994, 76, 7084-7086.	1.1	6
44	X-ray diffraction imaging of strain fields in a domain-inverted LiTaO3 crystal. Journal of Applied Physics, 2008, 104, 043515.	1.1	6
45	Coherent charge-phonon correlations and exciton dynamics in orthorhombic CH3NH3PbI3 measured by ultrafast multi-THz spectroscopy. Journal of Chemical Physics, 2019, 151, 214201.	1.2	6
46	Creating coherent x-rays and putting them to use: X-ray photon correlation spectroscopy at beamline 8-1d at the advanced photon source. Synchrotron Radiation News, 2000, 13, 28-37.	0.2	5
47	Universal dynamics of coarsening during polymer-polymer thin-film spinodal dewetting kinetics. Physical Review E, 2020, 102, 032802.	0.8	5
48	Design of an amplitude-splitting hard x-ray delay line with subnanoradian stability. Optics Letters, 2020, 45, 2086.	1.7	5
49	X-ray structural studies of nitrogen diffusion in Dy2Fe17. Journal of Applied Physics, 1994, 76, 6038-6040.	1.1	4
50	X-ray microdiffraction imaging of a silicon microcantilever. Journal of Applied Physics, 2007, 101, 063546.	1.1	4
51	Measuring the dynamical critical exponent of an ordering alloy using x-ray photon correlation spectroscopy. Physical Review B, 2018, 98, .	1.1	4
52	Ion Beam Mixing and Thermal Demixing of Co/Cu Multilayers. Materials Research Society Symposia Proceedings, 1997, 504, 197.	0.1	3
53	Critical behavior at the nematic to lamellar phase transitions: A synchrotron x-ray scattering study. Physical Review E, 1998, 57, R3711-R3714.	0.8	3
54	An x-ray confinement cell for studies of complex fluids under shear and confinement. Review of Scientific Instruments, 2004, 75, 936-941.	0.6	3

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55	Investigation of Stress Relaxation in Filled Elastomers by XPCS with Heterodyne Detection. , 2009, , .		3
56	A Contrast Calibration Protocol for X-ray Speckle Visibility Spectroscopy. Applied Sciences (Switzerland), 2021, 11, 10041.	1.3	3
57	Extremely Slow Diffusion of Gold Nanoparticles under Confinement in Mesoporous Silica. Journal of Physical Chemistry C, 2022, 126, 3614-3622.	1.5	3
58	Polymorphic Crystallization of Metal-Metalloid-Glasses above the Glass Transition Temperature. Materials Research Society Symposia Proceedings, 1990, 205, 233.	0.1	1
59	Structural and magnetotransport properties of Co/Re superlattices. Journal of Applied Physics, 1994, 75, 6554-6556.	1.1	1
60	Structural Studies of Sputtered Ni ₈₀ Co ₂₀ /Cu Multilayers. Materials Research Society Symposia Proceedings, 1995, 382, 197.	0.1	1
61	Kalman-Predictive-Proportional-Integral-Derivative (KPPID) Temperature Control. AIP Conference Proceedings, 2003, , .	0.3	1
62	Ruthenium nano-oxide layer in CoFe-Ru-CoFe trilayer system: An x-ray reflectivity study. Journal of Applied Physics, 2008, 103, 094904.	1.1	1
63	Sodium — Excess selenium interaction in Bridgman-grown CuInSe ₂ . , 2011, , .		1
64	Speckle correlation as a monitor of X-ray free-electron laser induced crystal lattice deformation. Journal of Synchrotron Radiation, 2020, 27, 1470-1476.	1.0	1
65	Temperature dependence of deep-level photoluminescence in Ga _{0.5} In _{0.5} P epilayers grown by metal-organic chemical vapour deposition. Journal of Materials Science Letters, 1993, 12, 53-55.	0.5	1
66	High Resolution X-Ray Studies of Ga _{1-x} In _x As Epilayers on GaAs Substrates. Materials Research Society Symposia Proceedings, 1991, 239, 461.	0.1	0
67	In-Situ Time-Resolved X-Ray Studies of Eutectic Crystallization in Amorphous Fe _{1-x} B _x and Co _{1-x} Zr _x . Materials Research Society Symposia Proceedings, 1991, 237, 159.	0.1	0
68	Time-resolved X-ray scattering studies of rapid crystallization of amorphous metals. International Journal of Thermophysics, 1993, 14, 541-553.	1.0	0
69	Small Angle Scattering and the Structure and Dynamics of Filled and Unfilled Rubbers. Materials Research Society Symposia Proceedings, 2000, 661, KK9.1.1.	0.1	0
70	Workshop report: Science with the XFEL. AIP Conference Proceedings, 2001, , .	0.3	0
71	Ultrafast Electron Scattering: Femtosecond Electron Pulses in Materials Research. , 2021, , .		0
72	Modelling the statics and the dynamics of fluctuations in the ordering alloy AuAgZn ₂ . EPJ Applied Physics, 0, , .	0.3	0