

Mark Sutton

List of Publications by Year in descending order

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72
papers

2,133
citations

304743
22
h-index

223800
46
g-index

73
all docs

73
docs citations

73
times ranked

2017
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Extremely Slow Diffusion of Gold Nanoparticles under Confinement in Mesoporous Silica. Journal of Physical Chemistry C, 2022, 126, 3614-3622. | 3.1 | 3 |
| 2 | High resolution strain measurements in highly disordered materials. Physical Review Research, 2021, 3, . | 3.6 | 7 |
| 3 | Mechanisms of electron-phonon coupling unraveled in momentum and time: The case of soft phonons in TiSe ₂ . Science Advances, 2021, 7, . | 10.3 | 38 |
| 4 | Nonuniform Flow Dynamics Probed by Nanosecond X-Ray Speckle Visibility Spectroscopy. Physical Review Letters, 2021, 127, 058001. | 7.8 | 9 |
| 5 | Generation of highly mutually coherent hard-x-ray pulse pairs with an amplitude-splitting delay line. Physical Review Research, 2021, 3, . | 3.6 | 7 |
| 6 | A Contrast Calibration Protocol for X-ray Speckle Visibility Spectroscopy. Applied Sciences (Switzerland), 2021, 11, 10041. | 2.5 | 3 |
| 7 | Ultrafast Electron Scattering: Femtosecond Electron Pulses in Materials Research. , 2021, , . | | 0 |
| 8 | Simultaneous, Single-Particle Measurements of Size and Loading Give Insights into the Structure of Drug-Delivery Nanoparticles. ACS Nano, 2021, 15, 19244-19255. | 14.6 | 23 |
| 9 | Speckle correlation as a monitor of X-ray free-electron laser induced crystal lattice deformation. Journal of Synchrotron Radiation, 2020, 27, 1470-1476. | 2.4 | 1 |
| 10 | Influence of Silane Coupling Agents on Filler Network Structure and Stress-Induced Particle Rearrangement in Elastomer Nanocomposites. ACS Applied Materials & Interfaces, 2020, 12, 47891-47901. | 8.0 | 15 |
| 11 | Universal dynamics of coarsening during polymer-polymer thin-film spinodal dewetting kinetics. Physical Review E, 2020, 102, 032802. | 2.1 | 5 |
| 12 | 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. | 3.3 | 7 |
| 13 | Realizing split-pulse x-ray photon correlation spectroscopy to measure ultrafast dynamics in complex matter. Physical Review Research, 2020, 2, . | 3.6 | 12 |
| 14 | Accurate contrast determination for X-ray speckle visibility spectroscopy. Journal of Synchrotron Radiation, 2020, 27, 999-1007. | 2.4 | 13 |
| 15 | Design of an amplitude-splitting hard x-ray delay line with subnanoradian stability. Optics Letters, 2020, 45, 2086. | 3.3 | 5 |
| 16 | Ultrafast correlated charge and lattice motion in a hybrid metal halide perovskite. Science Advances, 2019, 5, eaaw5558. | 10.3 | 66 |
| 17 | Time- and momentum-resolved phonon population dynamics with ultrafast electron diffuse scattering. Physical Review B, 2019, 100, . | 3.2 | 33 |
| 18 | Coherent charge-phonon correlations and exciton dynamics in orthorhombic CH ₃ NH ₃ PbI ₃ measured by ultrafast multi-THz spectroscopy. Journal of Chemical Physics, 2019, 151, 214201. | 3.0 | 6 |

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|----|---|------|-----------|
| 19 | Compact hard x-ray split-delay system based on variable-gap channel-cut crystals. Optics Letters, 2019, 44, 2582. | 3.3 | 18 |
| 20 | Mapping momentum-dependent electron-phonon coupling and nonequilibrium phonon dynamics with ultrafast electron diffuse scattering. Physical Review B, 2018, 97, . | 3.2 | 81 |
| 21 | Towards ultrafast dynamics with split-pulse X-ray photon correlation spectroscopy at free electron laser sources. Nature Communications, 2018, 9, 1704. | 12.8 | 55 |
| 22 | 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 |
| 23 | Measuring the dynamical critical exponent of an ordering alloy using x-ray photon correlation spectroscopy. Physical Review B, 2018, 98, . | 3.2 | 4 |
| 24 | Velocity measurement by coherent x-ray heterodyning. Review of Scientific Instruments, 2017, 88, 015112. | 1.3 | 19 |
| 25 | Dewetting in immiscible polymer bilayer films. Physical Review Materials, 2017, 1, . | 2.4 | 7 |
| 26 | Software tools for X-ray photon correlation and X-ray speckle visibility spectroscopy. , 2016, , . | | 9 |
| 27 | Reversible Nanoparticle Cubic Lattices in Blue Phase Liquid Crystals. ACS Nano, 2016, 10, 3410-3415. | 14.6 | 66 |
| 28 | First experimental feasibility study of VIPIC: a custom-made detector for X-ray speckle measurements. Journal of Synchrotron Radiation, 2016, 23, 404-409. | 2.4 | 9 |
| 29 | Ordering fluctuation dynamics in AuAgZn ₂ . Physical Review B, 2015, 92, . | 3.2 | 10 |
| 30 | Experimental clues of soft glassy rheology in strained filled elastomers. Journal of Polymer Science, Part B: Polymer Physics, 2014, 52, 647-656. | 2.1 | 13 |
| 31 | High Contrast X-ray Speckle from Atomic-Scale Order in Liquids and Glasses. Physical Review Letters, 2012, 109, 185502. | 7.8 | 97 |
| 32 | XPCS Investigation of the Dynamics of Filler Particles in Stretched Filled Elastomers. Macromolecules, 2012, 45, 8691-8701. | 4.8 | 44 |
| 33 | Sodium — Excess selenium interaction in Bridgman-grown CuInSe ₂ . , 2011, , . | | 1 |
| 34 | Direct Measurement of Microstructural Avalanches during the Martensitic Transition of Cobalt Using Coherent X-Ray Scattering. Physical Review Letters, 2011, 107, 015702. | 7.8 | 26 |
| 35 | Investigation of Stress Relaxation in Filled Elastomers by XPCS with Heterodyne Detection. , 2009, , . | | 3 |
| 36 | A review of X-ray intensity fluctuation spectroscopy. Comptes Rendus Physique, 2008, 9, 657-667. | 0.9 | 141 |

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|----|--|-----|-----------|
| 37 | Ruthenium nano-oxide layer in CoFe-Ru-CoFe trilayer system: An x-ray reflectivity study. Journal of Applied Physics, 2008, 103, 094904. | 2.5 | 1 |
| 38 | X-ray diffraction imaging of strain fields in a domain-inverted LiTaO ₃ crystal. Journal of Applied Physics, 2008, 104, 043515. | 2.5 | 6 |
| 39 | X-ray microdiffraction imaging of a silicon microcantilever. Journal of Applied Physics, 2007, 101, 063546. | 2.5 | 4 |
| 40 | An x-ray confinement cell for studies of complex fluids under shear and confinement. Review of Scientific Instruments, 2004, 75, 936-941. | 1.3 | 3 |
| 41 | Kalman-Predictive-Proportional-Integral-Derivative (KPPID) Temperature Control. AIP Conference Proceedings, 2003, , . | 0.4 | 1 |
| 42 | Workshop report: Science with the XFEL. AIP Conference Proceedings, 2001, , . | 0.4 | 0 |
| 43 | Hydrogen desorption mechanism in MgH ₂ -Nb nanocomposites. Physical Review B, 2001, 63, . | 3.2 | 149 |
| 44 | 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 |
| 45 | 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. | 0.8 | 5 |
| 46 | Area detector based photon correlation in the regime of short data batches: Data reduction for dynamic x-ray scattering. Review of Scientific Instruments, 2000, 71, 3274-3289. | 1.3 | 132 |
| 47 | Evolution of speckle during spinodal decomposition. Physical Review E, 1999, 60, 5151-5162. | 2.1 | 22 |
| 48 | Coherent X-Ray Study of Fluctuations during Domain Coarsening. Physical Review Letters, 1998, 81, 5832-5835. | 7.8 | 102 |
| 49 | Critical behavior at the nematic to lamellar phase transitions: A synchrotron x-ray scattering study. Physical Review E, 1998, 57, R3711-R3714. | 2.1 | 3 |
| 50 | Speckle from phase-ordering systems. Physical Review E, 1997, 56, 6601-6612. | 2.1 | 60 |
| 51 | Dynamics of Block Copolymer Micelles Revealed by X-Ray Intensity Fluctuation Spectroscopy. Physical Review Letters, 1997, 78, 1275-1278. | 7.8 | 123 |
| 52 | Deposition-temperature dependence of texture and magnetic properties of sputtered Ni/Fe multilayers. Journal of Applied Physics, 1997, 81, 4758-4760. | 2.5 | 7 |
| 53 | MeV ion irradiation of Co/Cu multilayers. Journal of Applied Physics, 1997, 81, 5200-5202. | 2.5 | 36 |
| 54 | Ion Beam Mixing and Thermal Demixing of Co/Cu Multilayers. Materials Research Society Symposia Proceedings, 1997, 504, 197. | 0.1 | 3 |

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|----|---|------|-----------|
| 55 | Structural Studies of Sputtered Ni ₈₀ Co ₂₀ /Cu Multilayers. Materials Research Society Symposia Proceedings, 1995, 382, 197. | 0.1 | 1 |
| 56 | Perfect Crystals in the Asymmetric Bragg Geometry as Optical Elements for Coherent X-ray Beams. Journal of Synchrotron Radiation, 1995, 2, 163-173. | 2.4 | 28 |
| 57 | A statistical technique for characterizing X-ray position-sensitive detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1995, 364, 380-393. | 1.6 | 12 |
| 58 | Model of the Kinetics of Polymorphous Crystallization. Physical Review Letters, 1995, 75, 2156-2159. | 7.8 | 40 |
| 59 | Cumulative interface roughness and magnetization in antiferromagnetically coupled NiCo/Cu multilayers. Journal of Applied Physics, 1994, 76, 7084-7086. | 2.5 | 6 |
| 60 | Structural and magnetotransport properties of Co/Re superlattices. Journal of Applied Physics, 1994, 75, 6554-6556. | 2.5 | 1 |
| 61 | Study of density in pulsed laser deposited amorphous carbon films using x-ray reflectivity. Applied Physics Letters, 1994, 65, 830-832. | 3.3 | 46 |
| 62 | X-ray structural studies of nitrogen diffusion in Dy ₂ Fe ₁₇ . Journal of Applied Physics, 1994, 76, 6038-6040. | 2.5 | 4 |
| 63 | Time-resolved X-ray scattering studies of rapid crystallization of amorphous metals. International Journal of Thermophysics, 1993, 14, 541-553. | 2.1 | 0 |
| 64 | Effect of annealing on magnetic and structural properties of Co/Re superlattices. Journal of Applied Physics, 1993, 73, 5530-5532. | 2.5 | 8 |
| 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 | Structural Properties Of Co/Re Superlattices. Materials Research Society Symposia Proceedings, 1991, 238, 671. | 0.1 | 7 |
| 69 | Observation of speckle by diffraction with coherent X-rays. Nature, 1991, 352, 608-610. | 27.8 | 371 |
| 70 | Polymorphic Crystallization of Metal-Metalloid-Glasses above the Glass Transition Temperature. Materials Research Society Symposia Proceedings, 1990, 205, 233. | 0.1 | 1 |
| 71 | Instrumentation for millisecond resolution scattering studies (invited). Review of Scientific Instruments, 1989, 60, 1537-1540. | 1.3 | 53 |
| 72 | Modelling the statics and the dynamics of fluctuations in the ordering alloy AuAgZn ₂ . EPJ Applied Physics, 0, , . | 0.7 | 0 |