

Stephan Hruszkewycz

List of Publications by Year in descending order

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47
papers

1,234
citations

394421

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361022

35
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48
all docs

48
docs citations

48
times ranked

1643
citing authors

#	ARTICLE	IF	CITATIONS
1	High Contrast X-ray Speckle from Atomic-Scale Order in Liquids and Glasses. Physical Review Letters, 2012, 109, 185502.	7.8	97
2	High-resolution three-dimensional structural microscopy by single-angle Bragg ptychography. Nature Materials, 2017, 16, 244-251.	27.5	97
3	Quantitative Nanoscale Imaging of Lattice Distortions in Epitaxial Semiconductor Heterostructures Using Nanofocused X-ray Bragg Projection Ptychography. Nano Letters, 2012, 12, 5148-5154.	9.1	83
4	Three-dimensional imaging of dislocation dynamics during the hydriding phase transformation. Nature Materials, 2017, 16, 565-571.	27.5	81
5	Measuring Three-Dimensional Strain and Structural Defects in a Single InGaAs Nanowire Using Coherent X-ray Multiangle Bragg Projection Ptychography. Nano Letters, 2018, 18, 811-819.	9.1	80
6	Imaging Local Polarization in Ferroelectric Thin Films by Coherent X-Ray Bragg Projection Ptychography. Physical Review Letters, 2013, 110, 177601.	7.8	67
7	Strain Imaging of Nanoscale Semiconductor Heterostructures with X-Ray Bragg Projection Ptychography. Physical Review Letters, 2014, 112, 165502.	7.8	56
8	Towards ultrafast dynamics with split-pulse X-ray photon correlation spectroscopy at free electron laser sources. Nature Communications, 2018, 9, 1704.	12.8	55
9	Using automatic differentiation as a general framework for ptychographic reconstruction. Optics Express, 2019, 27, 18653.	3.4	54
10	Octahedral rotations in strained LaAlO ₃ /SrTiO ₃ (001) heterostructures. APL Materials, 2014, 2, 021102.	5.1	47
11	Three Dimensional Variable-Wavelength X-Ray Bragg Coherent Diffraction Imaging. Physical Review Letters, 2016, 117, 225501.	7.8	42
12	Stabilization of point-defect spin qubits by quantum wells. Nature Communications, 2019, 10, 5607.	12.8	42
13	Single shot speckle and coherence analysis of the hard X-ray free electron laser LCLS. Optics Express, 2013, 21, 24647.	3.4	37
14	Stability Limits and Defect Dynamics in Ag Nanoparticles Probed by Bragg Coherent Diffractive Imaging. Nano Letters, 2017, 17, 1595-1601.	9.1	29
15	Rapid 3D nanoscale coherent imaging via physics-aware deep learning. Applied Physics Reviews, 2021, 8, .	11.3	26
16	Identifying Defects with Guided Algorithms in Bragg Coherent Diffractive Imaging. Scientific Reports, 2017, 7, 9920.	3.3	25
17	Sparse recovery of undersampled intensity patterns for coherent diffraction imaging at high X-ray energies. Scientific Reports, 2018, 8, 4959.	3.3	24
18	Gas-Induced Segregation in Pt-Rh Alloy Nanoparticles Observed by <i>In Situ</i> Bragg Coherent Diffraction Imaging. Physical Review Letters, 2019, 123, 246001.	7.8	22

#	ARTICLE	IF	CITATIONS
19	Phase stabilization of $\hat{\Gamma}$ -Bi ₂ O ₃ nanostructures by epitaxial growth onto single crystal SrTiO ₃ or DyScO ₃ substrates. Applied Physics Letters, 2010, 96, .	3.3	20
20	Strain Mapping of CdTe Grains in Photovoltaic Devices. IEEE Journal of Photovoltaics, 2019, 9, 1790-1799.	2.5	20
21	Multimodal X-ray imaging of grain-level properties and performance in a polycrystalline solar cell. Journal of Synchrotron Radiation, 2019, 26, 1316-1321.	2.4	20
22	<i>In situ</i> study of annealing-induced strain relaxation in diamond nanoparticles using Bragg coherent diffraction imaging. APL Materials, 2017, 5, .	5.1	18
23	X-ray nanodiffraction of tilted domains in a poled epitaxial BiFeO ₃ thin film. Applied Physics Letters, 2011, 99, .	3.3	16
24	Phase retrieval for Bragg coherent diffraction imaging at high x-ray energies. Physical Review A, 2019, 99, .	2.5	15
25	Framework for three-dimensional coherent diffraction imaging by focused beam x-ray Bragg ptychography. Optics Letters, 2011, 36, 2227.	3.3	12
26	General approaches for shear-correcting coordinate transformations in Bragg coherent diffraction imaging. Part I. Journal of Applied Crystallography, 2020, 53, 393-403.	4.5	12
27	Strain annealing of SiC nanoparticles revealed through Bragg coherent diffraction imaging for quantum technologies. Physical Review Materials, 2018, 2, .	2.4	12
28	Efficient modeling of Bragg coherent x-ray nanobeam diffraction. Optics Letters, 2015, 40, 3241.	3.3	11
29	In-situ synchrotron x-ray studies of the microstructure and stability of In ₂ O ₃ epitaxial films. Applied Physics Letters, 2017, 111, 161602.	3.3	11
30	Correlated Nanoscale Analysis of the Emission from Wurtzite versus Zincblende (In,Ga)As/GaAs Nanowire Core-Shell Quantum Wells. Nano Letters, 2019, 19, 4448-4457.	9.1	11
31	Coherent diffractive imaging of time-evolving samples with improved temporal resolution. Physical Review B, 2016, 93, .	3.2	10
32	Impact and mitigation of angular uncertainties in Bragg coherent x-ray diffraction imaging. Scientific Reports, 2019, 9, 6386.	3.3	10
33	Nonuniform Flow Dynamics Probed by Nanosecond X-Ray Speckle Visibility Spectroscopy. Physical Review Letters, 2021, 127, 058001.	7.8	9
34	Coherent Bragg nanodiffraction at the hard X-ray Nanoprobe beamline. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130118.	3.4	8
35	Structural sensitivity of x-ray Bragg projection ptychography to domain patterns in epitaxial thin films. Physical Review A, 2016, 94, .	2.5	8
36	High-Energy Coherent X-Ray Diffraction Microscopy of Polycrystal Grains: Steps Toward a Multiscale Approach. Physical Review Applied, 2020, 14, .	3.8	8

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37	Double-pulse speckle contrast correlations with near Fourier transform limited free-electron laser light using hard X-ray split-and-delay. <i>Scientific Reports</i> , 2020, 10, 5054.	3.3	7
38	The effect of exit beam phase aberrations on parallel beam coherent x-ray reconstructions. <i>Review of Scientific Instruments</i> , 2010, 81, 123706.	1.3	6
39	Designing silicon carbide heterostructures for quantum information science: challenges and opportunities. <i>Materials for Quantum Technology</i> , 2022, 2, 023001.	3.1	6
40	Efficient ptychographic phase retrieval via a matrix-free Levenberg-Marquardt algorithm. <i>Optics Express</i> , 2021, 29, 23019.	3.4	5
41	Utilizing broadband X-rays in a Bragg coherent X-ray diffraction imaging experiment. <i>Journal of Synchrotron Radiation</i> , 2016, 23, 1241-1244.	2.4	4
42	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
43	Experimental demonstration of coupled multi-peak Bragg coherent diffraction imaging with genetic algorithms. <i>Physical Review B</i> , 2021, 103, .	3.2	3
44	Optical transient grating pumped X-ray diffraction microscopy for studying mesoscale structural dynamics. <i>Scientific Reports</i> , 2021, 11, 19322.	3.3	3
45	Bragg Coherent Diffraction Imaging of Epitaxial Nanostructures Using Focused Hard X-ray Ptychography. , 2011, , .		2
46	Detector Tilt Considerations in Bragg Coherent Diffraction Imaging: A Simulation Study. <i>Crystals</i> , 2020, 10, 1150.	2.2	0
47	Sub-pixel high-resolution imaging of high-energy x-rays inspired by sub-wavelength optical imaging. <i>Optics Express</i> , 2021, 29, 35003-35021.	3.4	0