

# Hanfei Yan

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/872733/publications.pdf>

Version: 2024-02-01

127  
papers

16,147  
citations

117625

34  
h-index

25787

108  
g-index

128  
all docs

128  
docs citations

128  
times ranked

17488  
citing authors

#	ARTICLE	IF	CITATIONS
1	Probing lattice defects in crystalline battery cathode using hard X-ray nanoprobe with data-driven modeling. <i>Energy Storage Materials</i> , 2022, 45, 647-655.	18.0	7
2	Three-dimensional visualization of nanoparticle lattices and multimaterial frameworks. <i>Science</i> , 2022, 376, 203-207.	12.6	27
3	Three-dimensional imaging of grain boundaries via quantitative fluorescence X-ray tomography analysis. <i>Communications Materials</i> , 2022, 3, .	6.9	5
4	Mapping of the mechanical response in Si/SiGe nanosheet device geometries. , 2022, 1, .		4
5	X-Ray Induced Chemical Reaction Revealed by In Situ X-Ray Diffraction and Scanning X-Ray Microscopy in 15 nm Resolution. <i>Journal of Electrochemical Energy Conversion and Storage</i> , 2022, 19, .	2.1	0
6	Bragg coherent diffraction imaging by simultaneous reconstruction of multiple diffraction peaks. <i>Physical Review B</i> , 2021, 103, .	3.2	11
7	Design nanoporous metal thin films <i>via</i> solid state interfacial dealloying. <i>Nanoscale</i> , 2021, 13, 17725-17736.	5.6	9
8	Hierarchical nickel valence gradient stabilizes high-nickel content layered cathode materials. <i>Nature Communications</i> , 2021, 12, 2350.	12.8	59
9	Selective dopant segregation modulates mesoscale reaction kinetics in layered transition metal oxide. <i>Nano Energy</i> , 2021, 84, 105926.	16.0	42
10	Strain-Induced Lateral Heterostructures in Patterned Semiconductor Nanomembranes for Micro- and Optoelectronics. <i>ACS Applied Nano Materials</i> , 2021, 4, 6160-6169.	5.0	2
11	Recent advances in nano-scale spatial resolution x-ray microscopy instrumentation at NSLS-II. , 2021, , .		2
12	Proton distribution visualization in perovskite nickelate devices utilizing nanofocused x rays. <i>Physical Review Materials</i> , 2021, 5, .	2.4	6
13	Dislocation microstructure and its influence on corrosion behavior in laser additively manufactured 316L stainless steel. <i>Additive Manufacturing</i> , 2021, 47, 102263.	3.0	15
14	Lanthanide-Binding Tags for 3D X-ray Imaging of Proteins in Cells at Nanoscale Resolution. <i>Journal of the American Chemical Society</i> , 2020, 142, 2145-2149.	13.7	27
15	Micromachined Silicon Platform for Precise Assembly of 2D Multilayer Laue Lenses for High-Resolution X-ray Microscopy. <i>Micromachines</i> , 2020, 11, 939.	2.9	2
16	Multimodal, Multidimensional, and Multiscale X-ray Imaging at the National Synchrotron Light Source II. <i>Synchrotron Radiation News</i> , 2020, 33, 29-36.	0.8	5
17	Hierarchical Defect Engineering for LiCoO <sub>2</sub> through Low-Solubility Trace Element Doping. <i>Chem</i> , 2020, 6, 2759-2769.	11.7	74
18	Complete Strain Mapping of Nanosheets of Tantalum Disulfide. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 43173-43179.	8.0	6

#	ARTICLE	IF	CITATIONS
19	High-sensitivity nanoscale chemical imaging with hard x-ray nano-XANES. <i>Science Advances</i> , 2020, 6, .	10.3	41
20	Perovskite neural trees. <i>Nature Communications</i> , 2020, 11, 2245.	12.8	38
21	Devising novel methods for the controlled synthesis with morphology and size control of scintillator materials. <i>Journal of Materials Chemistry C</i> , 2020, 8, 8622-8634.	5.5	5
22	Ptychographic phase retrieval by proximal algorithms. <i>New Journal of Physics</i> , 2020, 22, 023035.	2.9	17
23	Nanoscale x-ray and electron tomography. <i>MRS Bulletin</i> , 2020, 45, 264-271.	3.5	12
24	Spatially correlated incommensurate lattice modulations in an atomically thin high-temperature $\text{BiO}_2$ . <i>Physical Review Materials</i> , 2020, 4, .	2.1	1
25	Ptychographic X-ray speckle tracking with multi-layer Laue lens systems. <i>Journal of Applied Crystallography</i> , 2020, 53, 927-936.	4.5	11
26	2D MEMS-based multilayer Laue lens nanofocusing optics for high-resolution hard x-ray microscopy. <i>Optics Express</i> , 2020, 28, 17660.	3.4	9
27	Tunable hard x-ray nanofocusing with Fresnel zone plates fabricated using deep etching. <i>Optica</i> , 2020, 7, 410.	9.3	19
28	Studying Catalytically Viable Single-Crystalline Metal Oxide Nanorods Using Synchrotron-Based Scanning Hard X-ray Microscopy. <i>Journal of Physical Chemistry C</i> , 2019, 123, 17185-17195.	3.1	3
29	Quantitative Nanoscale 3D Imaging of Intergranular Corrosion of 304ÅStainless Steel Using Hard X-Ray Nanoprobe. <i>Journal of the Electrochemical Society</i> , 2019, 166, C3320-C3325.	2.9	6
30	Strain Mapping of CdTe Grains in Photovoltaic Devices. <i>IEEE Journal of Photovoltaics</i> , 2019, 9, 1790-1799.	2.5	20
31	Synthesis, Characterization, and Stability Studies of Ge-Based Perovskites of Controllable Mixed Cation Composition, Produced with an Ambient Surfactant-Free Approach. <i>ACS Omega</i> , 2019, 4, 18219-18233.	3.5	33
32	Effect of CeO <sub>2</sub> nanomaterial surface functional groups on tissue and subcellular distribution of Ce in tomato ( <i>Solanum lycopersicum</i> ). <i>Environmental Science: Nano</i> , 2019, 6, 273-285.	4.3	32
33	Bi-continuous pattern formation in thin films <i>via</i> solid-state interfacial dealloying studied by multimodal characterization. <i>Materials Horizons</i> , 2019, 6, 1991-2002.	12.2	28
34	Multimodal X-ray imaging of grain-level properties and performance in a polycrystalline solar cell. <i>Journal of Synchrotron Radiation</i> , 2019, 26, 1316-1321.	2.4	20
35	Resolving 500 nm axial separation by multi-slice X-ray ptychography. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2019, 75, 336-341.	0.1	7
36	Extending the depth of field for ptychography using complex-valued wavelets. <i>Optics Letters</i> , 2019, 44, 503.	3.3	2

#	ARTICLE	IF	CITATIONS
37	X-ray microscopy instrumentation developments at NSLS-II: recent progress and future directions. , 2019, , .		0
38	Focusing of hard x-rays with monolithic two-dimensional multilayer Laue lenses: technical challenges and current status. , 2019, , .		0
39	Hard x-ray nanoprobe: a scanning hard x-ray microscopy beamline offering multi-modal imaging capabilities at 10 nm. , 2019, , .		0
40	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
41	Seasonal differences in trace element concentrations and distribution in Spartina alterniflora root tissue. Chemosphere, 2018, 204, 359-370.	8.2	8
42	Multimodal hard x-ray imaging with resolution approaching 10 nm for studies in material science. Nano Futures, 2018, 2, 011001.	2.2	89
43	High-Performance Multi-Mode Ptychography Reconstruction on Distributed GPUs. , 2018, , .		9
44	Microscopy Instrumentation and Nanopositioning at NSLS-II: Current Status and Future Directions. Synchrotron Radiation News, 2018, 31, 3-8.	0.8	3
45	Nanospectroscopy Captures Nanoscale Compositional Zonation in Barite Solid Solutions. Scientific Reports, 2018, 8, 13041.	3.3	21
46	X-ray Fluorescence Nanotomography of Single Bacteria with a Sub-15â€‰nm Beam. Scientific Reports, 2018, 8, 13415.	3.3	28
47	Imaging Capabilities, Performance and Applications of the Hard X-ray Nanoprobe Beamline at NSLS-II. Microscopy and Microanalysis, 2018, 24, 196-197.	0.4	0
48	High-Resolution and High-Throughput Ptychography with Depth Sensitivity Using Multilayer Laue Lenses. Microscopy and Microanalysis, 2018, 24, 30-31.	0.4	1
49	X-ray focusing with efficient high-NA multilayer Laue lenses. Light: Science and Applications, 2018, 7, 17162-17162.	16.6	114
50	Dynamic diffraction artefacts in Bragg coherent diffractive imaging. Journal of Applied Crystallography, 2018, 51, 167-174.	4.5	16
51	Multi-slice ptychography with large numerical aperture multilayer Laue lenses. Optica, 2018, 5, 601.	9.3	57
52	Nanoscale measurement of trace element distributions in Spartina alterniflora root tissue during dormancy. Scientific Reports, 2017, 7, 40420.	3.3	10
53	High resolution tip-tilt positioning system for a next generation MLL-based x-ray microscope. Measurement Science and Technology, 2017, 28, 127001.	2.6	5
54	Design and performance of an X-ray scanning microscope at the Hard X-ray Nanoprobe beamline of NSLS-II. Journal of Synchrotron Radiation, 2017, 24, 1113-1119.	2.4	84

#	ARTICLE	IF	CITATIONS
55	In-situ synchrotron x-ray studies of the microstructure and stability of In <sub>2</sub> O <sub>3</sub> epitaxial films. Applied Physics Letters, 2017, 111, 161602.	3.3	11
56	Artifact mitigation of ptychography integrated with on-the-fly scanning probe microscopy. Applied Physics Letters, 2017, 111, .	3.3	34
57	Electrochemical (de)lithiation of silver ferrite and composites: mechanistic insights from ex situ, in situ, and operando X-ray techniques. Physical Chemistry Chemical Physics, 2017, 19, 22329-22343.	2.8	9
58	Performance evaluation of Bragg coherent diffraction imaging. New Journal of Physics, 2017, 19, 103001.	2.9	18
59	A Self-Forming Composite Electrolyte for Solid-State Sodium Battery with Ultralong Cycle Life. Advanced Energy Materials, 2017, 7, 1601196.	19.5	231
60	Hard x-ray scanning imaging achieved with bonded multilayer Laue lenses. Optics Express, 2017, 25, 8698.	3.4	15
61	Achieving diffraction-limited nanometer-scale X-ray point focus with two crossed multilayer Laue lenses: alignment challenges. Optics Express, 2017, 25, 25234.	3.4	38
62	PyXRF: Python-based X-ray fluorescence analysis package. , 2017, , .		13
63	Initial performances of first undulator-based hard x-ray beamlines of NSLS-II compared to simulations. AIP Conference Proceedings, 2016, , .	0.4	3
64	Nm-scale spatial resolution X-ray imaging with MLL nanofocusing optics: Instrumentational requirements and challenges. AIP Conference Proceedings, 2016, , .	0.4	3
65	Towards a portable open-source tomography toolbox: Containerizing tomography software with docker. AIP Conference Proceedings, 2016, , .	0.4	0
66	Development and characterization of monolithic multilayer Laue lens nanofocusing optics. Applied Physics Letters, 2016, 108, .	3.3	32
67	Multilayer Laue Lens: A Brief History and Current Status. Synchrotron Radiation News, 2016, 29, 16-20.	0.8	19
68	Multimodality hard-x-ray imaging of a chromosome with nanoscale spatial resolution. Scientific Reports, 2016, 6, 20112.	3.3	51
69	Correlating sampling and intensity statistics in nanoparticle diffraction experiments. Journal of Applied Crystallography, 2015, 48, 1212-1227.	4.5	7
70	Pushing the limits: an instrument for hard X-ray imaging below 20â€¦nm. Journal of Synchrotron Radiation, 2015, 22, 336-341.	2.4	71
71	Achieving hard X-ray nanofocusing using a wedged multilayer Laue lens. Optics Express, 2015, 23, 12496.	3.4	27
72	Sampling statistics of diffraction from nanoparticle powder aggregates. Journal of Applied Crystallography, 2014, 47, 1016-1025.	4.5	9

#	ARTICLE	IF	CITATIONS
73	Optimization of overlap uniformness for ptychography. Optics Express, 2014, 22, 12634.	3.4	150
74	Design and performance of a scanning ptychography microscope. Review of Scientific Instruments, 2014, 85, 033707.	1.3	32
75	X-ray dynamical diffraction from single crystals with arbitrary shape and strain field: A universal approach to modeling. Physical Review B, 2014, 89, .	3.2	10
76	Hard x-ray nanofocusing by multilayer Laue lenses. Journal Physics D: Applied Physics, 2014, 47, 263001.	2.8	102
77	Piezo control for 1 nm spatial resolution synchrotron X-ray microscopy. Journal of Physics: Conference Series, 2014, 493, 012026.	0.4	5
78	Oxidation of PtNi nanoparticles studied by a scanning X-ray fluorescence microscope with multi-layer Laue lenses. Nanoscale, 2013, 5, 7184.	5.6	28
79	Accelerating Differential Phase Contrast imaging for NSLS-II data analysis. , 2013, , .		2
80	Optimization of multilayer Laue lenses for a scanning X-ray microscope. Journal of Synchrotron Radiation, 2013, 20, 89-97.	2.4	24
81	Performance and characterization of the prototype nm-scale spatial resolution scanning multilayer Laue lenses microscope. Review of Scientific Instruments, 2013, 84, 033701.	1.3	53
82	Compact prototype apparatus for reducing the circle of confusion down to 40 nm for x-ray nanotomography. Review of Scientific Instruments, 2013, 84, 035006.	1.3	31
83	Ion beam lithography for Fresnel zone plates in X-ray microscopy. Optics Express, 2013, 21, 11747.	3.4	35
84	11 nm hard X-ray focus from a large-aperture multilayer Laue lens. Scientific Reports, 2013, 3, 3562.	3.3	117
85	Optomechanical Design of a Multilayer Laue Lens Test Bed for 10-nm Focusing of Hard X-rays. Journal of Physics: Conference Series, 2013, 463, 012029.	0.4	11
86	Quantitative x-ray phase imaging at the nanoscale by multilayer Laue lenses. Scientific Reports, 2013, 3, 1307.	3.3	48
87	Advanced multilayer Laue lens fabrication at NSLS-II. , 2012, , .		6
88	Two dimensional hard x-ray nanofocusing with crossed multilayer Laue lenses. Optics Express, 2011, 19, 15069.	3.4	91
89	Development of an Advanced Sample Scanning Stage System Prototype for an MLL Based Hard X-ray Nanoprobe. AIP Conference Proceedings, 2011, , .	0.4	3
90	Application of partially coherent wavefront propagation calculations for design of coherence-preserving synchrotron radiation beamlines. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 649, 118-122.	1.6	24

#	ARTICLE	IF	CITATIONS
91	Hard x-ray nano patterning using a sectioned multilayer. Journal of Applied Physics, 2011, 109, 044307-044307-5.	2.5	3
92	Full Multilayer Laue Lens for Focusing Hard X-rays. , 2010, , .		2
93	Performance Optimization for Hard X-ray Microscopy Beamlines Guided by Partially-Coherent Wavefront Propagation Calculations. , 2010, , .		2
94	Multilayer Laue Lens: A Path Toward One Nanometer X-Ray Focusing. X-Ray Optics and Instrumentation, 2010, 2010, 1-10.	0.7	19
95	X-ray nanofocusing by kinoform lenses: A comparative study using different modeling approaches. Physical Review B, 2010, 81, .	3.2	28
96	X-ray dynamical diffraction from multilayer Laue lenses with rough interfaces. Physical Review B, 2009, 79, .	3.2	17
97	Wedged multilayer Laue lens. Review of Scientific Instruments, 2008, 79, 053104.	1.3	61
98	Focusing of hard x-rays to 16 nanometers with a multilayer Laue lens. Applied Physics Letters, 2008, 92, 221114.	3.3	190
99	Coherency effects in nanobeam x-ray diffraction analysis. Journal of Applied Physics, 2008, 104, 023506.	2.5	4
100	Effects of visible and synchrotron x-ray radiation on the growth of silver nanoplates on n-GaAs wafers: A comparative study. Applied Physics Letters, 2008, 92, 183109.	3.3	9
101	A theoretical study of two-dimensional point focusing by two multilayer Laue lenses. , 2008, , .		7
102	Comparative Study on the Growth of Silver Nanoplates on GaAs Substrates by Electron Microscopy, Synchrotron X-ray Diffraction, and Optical Spectroscopy. Journal of Physical Chemistry C, 2008, 112, 8928-8938.	3.1	16
103	Sectioning of multilayers to make a multilayer Laue lens. Review of Scientific Instruments, 2007, 78, 046103.	1.3	35
104	Mapping local strain in thin film/substrate systems using x-ray microdiffraction topography. Applied Physics Letters, 2007, 90, 091918.	3.3	21
105	Takagi-Taupin description of x-ray dynamical diffraction from diffractive optics with large numerical aperture. Physical Review B, 2007, 76, .	3.2	128
106	Mechanics of microelectronics structures as revealed by X-ray diffraction. Powder Diffraction, 2007, 22, 98-102.	0.2	0
107	Diffraction profiles of elastically bent single crystals with constant strain gradients. Journal of Applied Crystallography, 2007, 40, 322-331.	4.5	21
108	Bonded Multilayer Laue Lens for focusing hard X-rays. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 582, 123-125.	1.6	6

#	ARTICLE	IF	CITATIONS
109	Characterization of a multilayer Laue lens with imperfections. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 582, 126-128.	1.6	16
110	Mechanism for increasing dopant incorporation in semiconductors via doped nanostructures. Physical Review B, 2006, 73, .	3.2	10
111	Measurement of stress/strain in single-crystal samples using diffraction. Journal of Applied Crystallography, 2006, 39, 320-325.	4.5	17
112	Structure of ZnSe/Te system with submonolayer insertion of ZnTe grown by migration enhanced epitaxy. Journal of Applied Physics, 2006, 99, 064913.	2.5	10
113	Dynamical diffraction artifacts in Laue microdiffraction images. Journal of Applied Physics, 2005, 98, 073527.	2.5	15
114	Optical routing and sensing with nanowire assemblies. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 7800-7805.	7.1	224
115	High-resolution strain mapping in heteroepitaxial thin-film features. Journal of Applied Physics, 2005, 98, 013504.	2.5	68
116	ZnO Nanoribbon Microcavity Lasers. Advanced Materials, 2003, 15, 1907-1911.	21.0	220
117	One-Dimensional Nanostructures: Synthesis, Characterization, and Applications. Advanced Materials, 2003, 15, 353-389.	21.0	8,229
118	Growth of Silicon Nanowires by Heating Si Substrate. Chinese Physics Letters, 2002, 19, 240-242.	3.3	17
119	Nanowire Ultraviolet Photodetectors and Optical Switches. Advanced Materials, 2002, 14, 158-160.	21.0	2,129
120	Controlled Growth of ZnO Nanowires and Their Optical Properties. Advanced Functional Materials, 2002, 12, 323.	14.9	1,690
121	Nanowire Ultraviolet Photodetectors and Optical Switches. , 2002, 14, 158.		1
122	Nanowire Ultraviolet Photodetectors and Optical Switches. , 2002, 14, 158.		8
123	Controlled Growth of ZnO Nanowires and Their Optical Properties. , 2002, 12, 323.		9
124	Controlled growth of oriented amorphous silicon nanowires via a solid-liquid-solid (SLS) mechanism. Physica E: Low-Dimensional Systems and Nanostructures, 2001, 9, 305-309.	2.7	135
125	Solid-liquid-solid (SLS) growth of coaxial nanocables: silicon carbide sheathed with silicon oxide. Chemical Physics Letters, 2001, 345, 29-32.	2.6	38
126	Growth of amorphous silicon nanowires via a solid-liquid-solid mechanism. Chemical Physics Letters, 2000, 323, 224-228.	2.6	233



#	ARTICLE	IF	CITATIONS
127	Hard x-ray nanoprobe facility at the National Synchrotron Light Source II. SPIE Newsroom, 0, , .	0.1	3