Hanfei Yan

List of Publications by Year
in descending order

127	16,147	117625	25787
papers	citations	34 h-index	108 g-index

128	128	128	17488
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	One-Dimensional Nanostructures: Synthesis, Characterization, and Applications. Advanced Materials, 2003, 15, 353-389.	21.0	8,229
2	Nanowire Ultraviolet Photodetectors and Optical Switches. Advanced Materials, 2002, 14, 158-160.	21.0	2,129
3	Controlled Growth of ZnO Nanowires and Their Optical Properties. Advanced Functional Materials, 2002, 12, 323.	14.9	1,690
4	Growth of amorphous silicon nanowires via a solidâ€“liquidâ€“solid mechanism. Chemical Physics Letters, 2000, 323, 224-228.	2.6	233
5	A Selfâ€Forming Composite Electrolyte for Solidâ€State Sodium Battery with Ultralong Cycle Life. Advanced Energy Materials, 2017, 7, 1601196.	19.5	231
6	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
7	ZnO Nanoribbon Microcavity Lasers. Advanced Materials, 2003, 15, 1907-1911.	21.0	220
8	Focusing of hard x-rays to 16 nanometers with a multilayer Laue lens. Applied Physics Letters, 2008, 92, 221114.	3.3	190
9	Optimization of overlap uniformness for ptychography. Optics Express, 2014, 22, 12634.	3.4	150
10	Controlled growth of oriented amorphous silicon nanowires via a solidâ€“liquidâ€“solid (SLS) mechanism. Physica E: Low-Dimensional Systems and Nanostructures, 2001, 9, 305-309.	2.7	135
11	Takagi-Taupin description of x-ray dynamical diffraction from diffractive optics with large numerical aperture. Physical Review B, 2007, 76, .	3.2	128
12	11 nm hard X-ray focus from a large-aperture multilayer Laue lens. Scientific Reports, 2013, 3, 3562.	3.3	117
13	X-ray focusing with efficient high-NA multilayer Laue lenses. Light: Science and Applications, 2018, 7, 17162-17162.	16.6	114
14	Hard x-ray nanofocusing by multilayer Laue lenses. Journal Physics D: Applied Physics, 2014, 47, 263001.	2.8	102
15	Two dimensional hard x-ray nanofocusing with crossed multilayer Laue lenses. Optics Express, 2011, 19, 15069.	3.4	91
16	Multimodal hard x-ray imaging with resolution approaching 10 nm for studies in material science. Nano Futures, 2018, 2, 011001.	2.2	89
17	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
18	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

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19	Hierarchical Defect Engineering for LiCoO2 through Low-Solubility Trace Element Doping. CheM, 2020, 6, 2759-2769.	11.7	74
20	Pushing the limits: an instrument for hard X-ray imaging below 20â€…nm. Journal of Synchrotron Radiation, 2015, 22, 336-341.	2.4	71
21	High-resolution strain mapping in heteroepitaxial thin-film features. Journal of Applied Physics, 2005, 98, 013504.	2.5	68
22	Wedged multilayer Laue lens. Review of Scientific Instruments, 2008, 79, 053104.	1.3	61
23	Hierarchical nickel valence gradient stabilizes high-nickel content layered cathode materials. Nature Communications, 2021, 12, 2350.	12.8	59
24	Multi-slice ptychography with large numerical aperture multilayer Laue lenses. Optica, 2018, 5, 601.	9.3	57
25	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
26	Multimodality hard-x-ray imaging of a chromosome with nanoscale spatial resolution. Scientific Reports, 2016, 6, 20112.	3.3	51
27	Quantitative x-ray phase imaging at the nanoscale by multilayer Laue lenses. Scientific Reports, 2013, 3, 1307.	3.3	48
28	Selective dopant segregation modulates mesoscale reaction kinetics in layered transition metal oxide. Nano Energy, 2021, 84, 105926.	16.0	42
29	High-sensitivity nanoscale chemical imaging with hard x-ray nano-XANES. Science Advances, 2020, 6, .	10.3	41
30	Solidâ€“liquidâ€“solid (SLS) growth of coaxial nanocables: silicon carbide sheathed with silicon oxide. Chemical Physics Letters, 2001, 345, 29-32.	2.6	38
31	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
32	Perovskite neural trees. Nature Communications, 2020, 11, 2245.	12.8	38
33	Sectioning of multilayers to make a multilayer Laue lens. Review of Scientific Instruments, 2007, 78, 046103.	1.3	35
34	Ion beam lithography for Fresnel zone plates in X-ray microscopy. Optics Express, 2013, 21, 11747.	3.4	35
35	Artifact mitigation of ptychography integrated with on-the-fly scanning probe microscopy. Applied Physics Letters, 2017, 111, .	3.3	34
36	Synthesis, Characterization, and Stability Studies of Ge-Based Perovskites of Controllable Mixed Cation Composition, Produced with an Ambient Surfactant-Free Approach. ACS Omega, 2019, 4, 18219-18233.	3.5	33

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37	Design and performance of a scanning ptychography microscope. Review of Scientific Instruments, 2014, 85, 033707.	1.3	32
38	Development and characterization of monolithic multilayer Laue lens nanofocusing optics. Applied Physics Letters, 2016, 108, .	3.3	32
39	Effect of CeO₂ nanomaterial surface functional groups on tissue and subcellular distribution of Ce in tomato (Solanum lycopersicum). Environmental Science: Nano, 2019, 6, 273-285.	4.3	32
40	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
41	X-ray nanofocusing by kinoform lenses: A comparative study using different modeling approaches. Physical Review B, 2010, 81, .	3.2	28
42	Oxidation of PtNi nanoparticles studied by a scanning X-ray fluorescence microscope with multi-layer Laue lenses. Nanoscale, 2013, 5, 7184.	5.6	28
43	X-ray Fluorescence Nanotomography of Single Bacteria with a Sub-15â€‰nm Beam. Scientific Reports, 2018, 8, 13415.	3.3	28
44	Bi-continuous pattern formation in thin films via solid-state interfacial dealloying studied by multimodal characterization. Materials Horizons, 2019, 6, 1991-2002.	12.2	28
45	Achieving hard X-ray nanofocusing using a wedged multilayer Laue lens. Optics Express, 2015, 23, 12496.	3.4	27
46	Lanthanide-Binding Tags for 3D X-ray Imaging of Proteins in Cells at Nanoscale Resolution. Journal of the American Chemical Society, 2020, 142, 2145-2149.	13.7	27
47	Three-dimensional visualization of nanoparticle lattices and multimaterial frameworks. Science, 2022, 376, 203-207.	12.6	27
48	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
49	Optimization of multilayer Laue lenses for a scanning X-ray microscope. Journal of Synchrotron Radiation, 2013, 20, 89-97.	2.4	24
50	Mapping local strain in thin film/substrate systems using x-ray microdiffraction topography. Applied Physics Letters, 2007, 90, 091918.	3.3	21
51	Diffraction profiles of elastically bent single crystals with constant strain gradients. Journal of Applied Crystallography, 2007, 40, 322-331.	4.5	21
52	Nanospectroscopy Captures Nanoscale Compositional Zonation in Barite Solid Solutions. Scientific Reports, 2018, 8, 13041.	3.3	21
53	Strain Mapping of CdTe Grains in Photovoltaic Devices. IEEE Journal of Photovoltaics, 2019, 9, 1790-1799.	2.5	20
54	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

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55	Multilayer Laue Lens: A Path Toward One Nanometer X-Ray Focusing. X-Ray Optics and Instrumentation, 2010, 2010, 1-10.	0.7	19
56	Multilayer Laue Lens: A Brief History and Current Status. Synchrotron Radiation News, 2016, 29, 16-20.	0.8	19
57	Tunable hard x-ray nanofocusing with Fresnel zone plates fabricated using deep etching. Optica, 2020, 7, 410.	9.3	19
58	Performance evaluation of Bragg coherent diffraction imaging. New Journal of Physics, 2017, 19, 103001.	2.9	18
59	Growth of Silicon Nanowires by Heating Si Substrate. Chinese Physics Letters, 2002, 19, 240-242.	3.3	17
60	Measurement of stress/strain in single-crystal samples using diffraction. Journal of Applied Crystallography, 2006, 39, 320-325.	4.5	17
61	X-ray dynamical diffraction from multilayer Laue lenses with rough interfaces. Physical Review B, 2009, 79, .	3.2	17
62	Ptychographic phase retrieval by proximal algorithms. New Journal of Physics, 2020, 22, 023035.	2.9	17
63	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
64	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
65	Dynamic diffraction artefacts in Bragg coherent diffractive imaging. Journal of Applied Crystallography, 2018, 51, 167-174.	4.5	16
66	Dynamical diffraction artifacts in Laue microdiffraction images. Journal of Applied Physics, 2005, 98, 073527.	2.5	15
67	Hard x-ray scanning imaging achieved with bonded multilayer Laue lenses. Optics Express, 2017, 25, 8698.	3.4	15
68	Dislocation microstructure and its influence on corrosion behavior in laser additively manufactured 316L stainless steel. Additive Manufacturing, 2021, 47, 102263.	3.0	15
69	PyXRF: Python-based X-ray fluorescence analysis package. , 2017, , .		13
70	Nanoscale x-ray and electron tomography. MRS Bulletin, 2020, 45, 264-271.	3.5	12
71	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
72	In-situ synchrotron x-ray studies of the microstructure and stability of In2O3 epitaxial films. Applied Physics Letters, 2017, 111, 161602.	3.3	11

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73	Bragg coherent diffraction imaging by simultaneous reconstruction of multiple diffraction peaks. Physical Review B, 2021, 103, .	3.2	11
74	Spatially correlated incommensurate lattice modulations in an atomically thin high-temperature <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Bi</mml:mi><mml:mrow><mml:mn>2.1</mml:mn> mathvariant="normal">O</mml:mi><mml:mrow><mml:mn>8</mml:mn><mml:mo>+<. Physical Review Materials, 2020, 4, .	2.4	11
75	Ptychographic X-ray speckle tracking with multi-layer Laue lens systems. Journal of Applied Crystallography, 2020, 53, 927-936.	4.5	11
76	Mechanism for increasing dopant incorporation in semiconductors via doped nanostructures. Physical Review B, 2006, 73, .	3.2	10
77	Structure of Znâ€“Seâ€“Te system with submonolayer insertion of ZnTe grown by migration enhanced epitaxy. Journal of Applied Physics, 2006, 99, 064913.	2.5	10
78	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
79	Nanoscale measurement of trace element distributions in Spartina alterniflora root tissue during dormancy. Scientific Reports, 2017, 7, 40420.	3.3	10
80	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
81	Sampling statistics of diffraction from nanoparticle powder aggregates. Journal of Applied Crystallography, 2014, 47, 1016-1025.	4.5	9
82	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
83	High-Performance Multi-Mode Ptychography Reconstruction on Distributed GPUs. , 2018, , .		9
84	Design nanoporous metal thin films via solid state interfacial dealloying. Nanoscale, 2021, 13, 17725-17736.	5.6	9
85	Controlled Growth of ZnO Nanowires and Their Optical Properties. , 2002, 12, 323.		9
86	2D MEMS-based multilayer Laue lens nanofocusing optics for high-resolution hard x-ray microscopy. Optics Express, 2020, 28, 17660.	3.4	9
87	Seasonal differences in trace element concentrations and distribution in Spartina alterniflora root tissue. Chemosphere, 2018, 204, 359-370.	8.2	8
88	Nanowire Ultraviolet Photodetectors and Optical Switches. , 2002, 14, 158.		8
89	A theoretical study of two-dimensional point focusing by two multilayer Laue lenses. , 2008, , .		7
90	Correlating sampling and intensity statistics in nanoparticle diffraction experiments. Journal of Applied Crystallography, 2015, 48, 1212-1227.	4.5	7

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91	Resolving 500 nm axial separation by multi-slice X-ray ptychography. Acta Crystallographica Section A: Foundations and Advances, 2019, 75, 336-341.	0.1	7
92	Probing lattice defects in crystalline battery cathode using hard X-ray nanoprobe with data-driven modeling. Energy Storage Materials, 2022, 45, 647-655.	18.0	7
93	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
94	Advanced multilayer Laue lens fabrication at NSLS-II. , 2012, , .		6
95	Quantitative Nanoscale 3D Imaging of Intergranular Corrosion of 304ÂStainless Steel Using Hard X-Ray Nanoprobe. Journal of the Electrochemical Society, 2019, 166, C3320-C3325.	2.9	6
96	Complete Strain Mapping of Nanosheets of Tantalum Disulfide. ACS Applied Materials & Interfaces, 2020, 12, 43173-43179.	8.0	6
97	Proton distribution visualization in perovskite nickelate devices utilizing nanofocused x rays. Physical Review Materials, 2021, 5, .	2.4	6
98	Piezo control for 1 nm spatial resolution synchrotron X-ray microscopy. Journal of Physics: Conference Series, 2014, 493, 012026.	0.4	5
99	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
100	Multimodal, Multidimensional, and Multiscale X-ray Imaging at the National Synchrotron Light Source II. Synchrotron Radiation News, 2020, 33, 29-36.	0.8	5
101	Devising novel methods for the controlled synthesis with morphology and size control of scintillator materials. Journal of Materials Chemistry C, 2020, 8, 8622-8634.	5.5	5
102	Three-dimensional imaging of grain boundaries via quantitative fluorescence X-ray tomography analysis. Communications Materials, 2022, 3, .	6.9	5
103	Coherency effects in nanobeam x-ray diffraction analysis. Journal of Applied Physics, 2008, 104, 023506.	2.5	4
104	Mapping of the mechanical response in Si/SiGe nanosheet device geometries. , 2022, 1, .		4
105	Development of an Advanced Sampleâ€Scanning Stage System Prototype for an MLLâ€Based Hard Xâ€ray Nanoprobe. AIP Conference Proceedings, 2011, , .	0.4	3
106	Hard x-ray nano patterning using a sectioned multilayer. Journal of Applied Physics, 2011, 109, 044307-044307-5.	2.5	3
107	Initial performances of first undulator-based hard x-ray beamlines of NSLS-II compared to simulations. AIP Conference Proceedings, 2016, , .	0.4	3
108	Nm-scale spatial resolution X-ray imaging with MLL nanofocusing optics: Instrumentational requirements and challenges. AIP Conference Proceedings, 2016, , .	0.4	3

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109	Microscopy Instrumentation and Nanopositioning at NSLS-II: Current Status and Future Directions. Synchrotron Radiation News, 2018, 31, 3-8.	0.8	3
110	Studying Catalytically Viable Single-Crystalline Metal Oxide Nanorods Using Synchrotron-Based Scanning Hard X-ray Microscopy. Journal of Physical Chemistry C, 2019, 123, 17185-17195.	3.1	3
111	Hard x-ray nanoprobe facility at the National Synchroton Light Source II. SPIE Newsroom, 0, , .	0.1	3
112	Full Multilayer Laue Lens for Focusing Hard X-rays. , 2010, , .		2
113	Performance Optimization for Hard X-ray Microscopy Beamlines Guided by Partially-Coherent Wavefront Propagation Calculations. , 2010, , .		2
114	Accelerating Differential Phase Contrast imaging for NSLS-II data analysis. , 2013, , .		2
115	Micromachined Silicon Platform for Precise Assembly of 2D Multilayer Laue Lenses for High-Resolution X-ray Microscopy. Micromachines, 2020, 11, 939.	2.9	2
116	Strain-Induced Lateral Heterostructures in Patterned Semiconductor Nanomembranes for Micro- and Optoelectronics. ACS Applied Nano Materials, 2021, 4, 6160-6169.	5.0	2
117	Recent advances in nano-scale spatial resolution x-ray microscopy instrumentation at NSLS-II. , 2021, , .		2
118	Extending the depth of field for ptychography using complex-valued wavelets. Optics Letters, 2019, 44, 503.	3.3	2
119	High-Resolution and High-Throughput Ptychography with Depth Sensitivity Using Multilayer Laue Lenses. Microscopy and Microanalysis, 2018, 24, 30-31.	0.4	1
120	Nanowire Ultraviolet Photodetectors and Optical Switches. , 2002, 14, 158.		1
121	Mechanics of microelectronics structures as revealed by X-ray diffraction. Powder Diffraction, 2007, 22, 98-102.	0.2	0
122	Towards a portable open-source tomography toolbox: Containerizing tomography software with docker. AIP Conference Proceedings, 2016, , .	0.4	0
123	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
124	X-ray microscopy instrumentation developments at NSLS-II: recent progress and future directions. , 2019, , .		0
125	Focusing of hard x-rays with monolithic two-dimensional multilayer Laue lenses: technical challenges and current status. , 2019, , .		0
126	Hard x-ray nanoprobe: a scanning hard x-ray microscopy beamline offering multi-modal imaging capabilities at 10 nm. , 2019, , .		0

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127	X-Ray Induced Chemical Reaction Revealed by In Situ X-Ray Diffraction and Scanning X-Ray Microscopy in 15 nm Resolution. Journal of Electrochemical Energy Conversion and Storage, 2022, 19, .	2.1	0