

Joan Vila-Comamala

List of Publications by Year in descending order

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Version: 2024-02-01

62
papers

2,727
citations

186265

28
h-index

175258

52
g-index

63
all docs

63
docs citations

63
times ranked

2683
citing authors

#	ARTICLE	IF	CITATIONS
1	Translation position determination in ptychographic coherent diffraction imaging. Optics Express, 2013, 21, 13592.	3.4	242
2	Characterization of high-resolution diffractive X-ray optics by ptychographic coherent diffractive imaging. Optics Express, 2011, 19, 21333.	3.4	166
3	Zone-Doubling Technique to Produce Ultrahigh-Resolution X-Ray Optics. Physical Review Letters, 2007, 99, 264801.	7.8	154
4	Three-dimensional characterization of electrodeposited lithium microstructures using synchrotron X-ray phase contrast imaging. Chemical Communications, 2015, 51, 266-268.	4.1	133
5	Phase retrieval by coherent modulation imaging. Nature Communications, 2016, 7, 13367.	12.8	125
6	Reconstruction of an astigmatic hard X-ray beam and alignment of K-B mirrors from ptychographic coherent diffraction data. Optics Express, 2010, 18, 23420.	3.4	120
7	Ptychographic characterization of the wavefield in the focus of reflective hard X-ray optics. Ultramicroscopy, 2010, 110, 325-329.	1.9	117
8	Phase-contrast tomography at the nanoscale using hard x rays. Physical Review B, 2010, 81, .	3.2	115
9	Ultra-high resolution zone-doubled λ -diffractive X-ray optics for the multi-keV regime. Optics Express, 2011, 19, 175.	3.4	114
10	Advanced thin film technology for ultrahigh resolution X-ray microscopy. Ultramicroscopy, 2009, 109, 1360-1364.	1.9	111
11	Role of the illumination spatial-frequency spectrum for ptychography. Physical Review B, 2012, 86, .	3.2	93
12	Direct e-beam writing of dense and high aspect ratio nanostructures in thick layers of PMMA for electroplating. Nanotechnology, 2010, 21, 295303.	2.6	92
13	High-efficiency Fresnel zone plates for hard X-rays by 100 keV e-beam lithography and electroplating. Journal of Synchrotron Radiation, 2011, 18, 442-446.	2.4	83
14	Zone-doubled Fresnel zone plates for high-resolution hard X-ray full-field transmission microscopy. Journal of Synchrotron Radiation, 2012, 19, 705-709.	2.4	59
15	Beam-shaping condenser lenses for full-field transmission X-ray microscopy. Journal of Synchrotron Radiation, 2008, 15, 106-108.	2.4	50
16	Metal assisted chemical etching of silicon in the gas phase: a nanofabrication platform for X-ray optics. Nanoscale Horizons, 2020, 5, 869-879.	8.0	50
17	Dense high aspect ratio hydrogen silsesquioxane nanostructures by 100 keV electron beam lithography. Nanotechnology, 2010, 21, 285305.	2.6	42
18	Full-field X-ray reflection microscopy of epitaxial thin-films. Journal of Synchrotron Radiation, 2014, 21, 1252-1261.	2.4	41

#	ARTICLE	IF	CITATIONS
19	Characterization of x-ray phase vortices by ptychographic coherent diffractive imaging. Optics Letters, 2014, 39, 5281.	3.3	40
20	Towards sub-micrometer high aspect ratio X-ray gratings by atomic layer deposition of iridium. Microelectronic Engineering, 2018, 192, 19-24.	2.4	39
21	Angular spectrum simulation of X-ray focusing by Fresnel zone plates. Journal of Synchrotron Radiation, 2013, 20, 397-404.	2.4	38
22	X-ray phase tomography with near-field speckles for three-dimensional virtual histology. Optica, 2020, 7, 1221.	9.3	37
23	Ion beam lithography for Fresnel zone plates in X-ray microscopy. Optics Express, 2013, 21, 11747.	3.4	35
24	Fresnel zone plate stacking in the intermediate field for high efficiency focusing in the hard X-ray regime. Optics Express, 2014, 22, 28142.	3.4	35
25	Effect of isopropanol on gold assisted chemical etching of silicon microstructures. Microelectronic Engineering, 2017, 177, 59-65.	2.4	35
26	High sensitivity X-ray phase contrast imaging by laboratory grating-based interferometry at high Talbot order geometry. Optics Express, 2021, 29, 2049.	3.4	35
27	Scanning transmission X-ray microscopy with a fast framing pixel detector. Ultramicroscopy, 2010, 110, 1143-1147.	1.9	33
28	Three-Dimensional Microstructural Imaging of Sulfur Poisoning-Induced Degradation in a Ni-YSZ Anode of Solid Oxide Fuel Cells. Scientific Reports, 2014, 4, 5246.	3.3	33
29	High Aspect Ratio Grating Microfabrication by Platinum Assisted Chemical Etching and Gold Electroplating. Advanced Engineering Materials, 2020, 22, 2000258.	3.5	32
30	Direct e-beam writing of high aspect ratio nanostructures in PMMA: A tool for diffractive X-ray optics fabrication. Microelectronic Engineering, 2010, 87, 1052-1056.	2.4	28
31	High aspect ratio metal microcasting by hot embossing for X-ray optics fabrication. Microelectronic Engineering, 2017, 176, 6-10.	2.4	27
32	High aspect ratio nanostructuring by high energy electrons and electroplating. Microelectronic Engineering, 2011, 88, 2259-2262.	2.4	25
33	Systematic efficiency study of line-doubled zone plates. Microelectronic Engineering, 2017, 177, 25-29.	2.4	25
34	The Effect of Nitrate on Salt Layers in Pitting Corrosion of 304L Stainless Steel. Journal of the Electrochemical Society, 2015, 162, C457-C464.	2.9	24
35	High resolution beam profiling of X-ray free electron laser radiation by polymer imprint development. Optics Express, 2017, 25, 30686.	3.4	23
36	Pushing the Limits of Bottom-Up Gold Filling for X-ray Grating Interferometry. Journal of the Electrochemical Society, 2020, 167, 132504.	2.9	20

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37	3D Nanostructuring of hydrogen silsesquioxane resist by 100 keV electron beam lithography. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2011, 29, 06F301.	1.2	19
38	X-ray phase microtomography with a single grating for high-throughput investigations of biological tissue. Biomedical Optics Express, 2017, 8, 1257.	2.9	19
39	An achromatic X-ray lens. Nature Communications, 2022, 13, 1305.	12.8	19
40	High-aspect ratio silicon structures by displacement Talbot lithography and Bosch etching. Proceedings of SPIE, 2017, , .	0.8	18
41	Light Yield Enhancement of 157-Gadolinium Oxysulfide Scintillator Screens for the High-Resolution Neutron Imaging. MethodsX, 2019, 6, 107-114.	1.6	18
42	X-ray computed tomography of the anterior cruciate ligament and patellar tendon. Muscles, Ligaments and Tendons Journal, 2014, 4, 238-44.	0.3	17
43	Silicon Fresnel zone plates for high heat load X-ray microscopy. Microelectronic Engineering, 2008, 85, 1241-1244.	2.4	14
44	<i>In-situ</i> observation of nickel oxidation using synchrotron based full-field transmission X-ray microscopy. Applied Physics Letters, 2013, 102, .	3.3	14
45	Hot embossing of Au- and Pb-based alloys for x-ray grating fabrication. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2017, 35, .	1.2	14
46	Fabrication of X-ray Gratings for Interferometric Imaging by Conformal Seedless Gold Electroplating. Micromachines, 2021, 12, 517.	2.9	14
47	Spatially resolved strain within a single SiGe island investigated by X-ray scanning microdiffraction. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1829-1832.	1.8	12
48	Coherent X-Ray Imaging of Collagen Fibril Distributions within Intact Tendons. Biophysical Journal, 2014, 106, 459-466.	0.5	12
49	Laboratory X-ray interferometry imaging with a fan-shaped source grating. Optics Letters, 2021, 46, 3693.	3.3	9
50	Beam-induced damage on diffractive hard X-ray optics. Journal of Synchrotron Radiation, 2010, 17, 786-790.	2.4	8
51	Tunable X-ray speckle-based phase-contrast and dark-field imaging using the unified modulated pattern analysis approach. Journal of Instrumentation, 2018, 13, C05005-C05005.	1.2	8
52	Nanofabrication of Fresnel zone plate lenses for X-ray optics. Microelectronic Engineering, 2006, 83, 1355-1359.	2.4	7
53	Generation of highly mutually coherent hard-x-ray pulse pairs with an amplitude-splitting delay line. Physical Review Research, 2021, 3, .	3.6	7
54	Development of Laboratory Grating-based X-ray Phase Contrast Microtomography for Improved Pathology. Microscopy and Microanalysis, 2018, 24, 192-193.	0.4	6

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55	<i>In Situ</i> Heater Design for Nanoscale Synchrotron-Based Full-Field Transmission X-Ray Microscopy. <i>Microscopy and Microanalysis</i> , 2015, 21, 290-297.	0.4	5
56	High Spatial Resolution STXM at 6.2 keV Photon Energy. , 2010, , .		4
57	Coherent x-ray diffraction imaging of paint pigment particles by scanning a phase plate modulator. <i>New Journal of Physics</i> , 2011, 13, 103022.	2.9	4
58	Transmission x-ray microscopy at Diamond-Manchester I13 Imaging Branchline. <i>AIP Conference Proceedings</i> , 2016, , .	0.4	3
59	Dynamic Pore-scale Reservoir-condition Imaging of Reaction in Carbonates Using Synchrotron Fast Tomography. <i>Journal of Visualized Experiments</i> , 2017, , .	0.3	3
60	Advanced X-ray phase-contrast and dark-field imaging with the unified modulated pattern analysis (UMPA). <i>Microscopy and Microanalysis</i> , 2018, 24, 22-23.	0.4	1
61	Characterization of a 20-nm hard x-ray focus by ptychographic coherent diffractive imaging. <i>Proceedings of SPIE</i> , 2011, , .	0.8	0
62	Examining Effects of Sulfur Poisoning on Ni/YSZ Solid Oxide Fuel Cell Anodes Using Synchrotron-Based X-Ray Imaging Techniques. , 2013, , .		0