

# Stefano Marchesini

## List of Publications by Year in descending order

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105  
papers

10,433  
citations

53794

45  
h-index

34986

98  
g-index

108  
all docs

108  
docs citations

108  
times ranked

8065  
citing authors

#	ARTICLE	IF	CITATIONS
1	Sizes of pure and doped helium droplets from single shot x-ray imaging. <i>Journal of Chemical Physics</i> , 2022, 156, 041102.	3.0	3
2	Ring artifact and Poisson noise attenuation via volumetric multiscale nonlocal collaborative filtering of spatially correlated noise. <i>Journal of Synchrotron Radiation</i> , 2022, 29, 829-842.	2.4	4
3	Introduction to the special issue on Ptychography: software and technical developments. <i>Journal of Applied Crystallography</i> , 2021, 54, 384-385.	4.5	0
4	Ring artifact reduction via multiscale nonlocal collaborative filtering of spatially correlated noise. <i>Journal of Synchrotron Radiation</i> , 2021, 28, 876-888.	2.4	5
5	Overlapping Domain Decomposition Methods for Ptychographic Imaging. <i>SIAM Journal of Scientific Computing</i> , 2021, 43, B570-B597.	2.8	6
6	One-dimensional phase retrieval: regularization, box relaxation and uniqueness. <i>Inverse Problems</i> , 2020, 36, 095004.	2.0	0
7	Iterative X-ray spectroscopic ptychography. <i>Journal of Applied Crystallography</i> , 2020, 53, 937-948.	4.5	2
8	Analyzer-free linear dichroic ptychography. <i>Journal of Applied Crystallography</i> , 2020, 53, 1283-1292.	4.5	3
9	An ultrahigh-resolution soft x-ray microscope for quantitative analysis of chemically heterogeneous nanomaterials. <i>Science Advances</i> , 2020, 6, .	10.3	47
10	Iterative Joint Ptychography-Tomography with Total Variation Regularization. , 2019, , .		4
11	Blind Ptychographic Phase Retrieval via Convergent Alternating Direction Method of Multipliers. <i>SIAM Journal on Imaging Sciences</i> , 2019, 12, 153-185.	2.2	36
12	High Performance Partial Coherent X-Ray Ptychography. <i>Lecture Notes in Computer Science</i> , 2019, , 46-59.	1.3	4
13	Shaping coherent x-rays with binary optics. <i>Optics Express</i> , 2019, 27, 907.	3.4	14
14	Advanced denoising for X-ray ptychography. <i>Optics Express</i> , 2019, 27, 10395.	3.4	18
15	Three-dimensional localization of nanoscale battery reactions using soft X-ray tomography. <i>Nature Communications</i> , 2018, 9, 921.	12.8	107
16	Variational Phase Retrieval with Globally Convergent Preconditioned Proximal Algorithm. <i>SIAM Journal on Imaging Sciences</i> , 2018, 11, 56-93.	2.2	19
17	Total Variation-Based Phase Retrieval for Poisson Noise Removal. <i>SIAM Journal on Imaging Sciences</i> , 2018, 11, 24-55.	2.2	50
18	Dataflow at the COSMIC Beamline - Stream Processing and Supercomputing. <i>Microscopy and Microanalysis</i> , 2018, 24, 58-59.	0.4	4

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19	<i>Xi-cam</i> : a versatile interface for data visualization and analysis. <i>Journal of Synchrotron Radiation</i> , 2018, 25, 1261-1270.	2.4	89
20	Partially coherent ptychography by gradient decomposition of the probe. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2018, 74, 157-169.	0.1	17
21	GPU-Based Implementation of Ptycho-ADMM for High Performance X-Ray Imaging. <i>Lecture Notes in Computer Science</i> , 2018, , 540-553.	1.3	2
22	Denoising Poisson phaseless measurements via orthogonal dictionary learning. <i>Optics Express</i> , 2018, 26, 19773.	3.4	10
23	Near-edge X-ray refraction fine structure microscopy. <i>Applied Physics Letters</i> , 2017, 110, .	3.3	39
24	Nanosurveyor: a framework for real-time data processing. <i>Advanced Structural and Chemical Imaging</i> , 2017, 3, 7.	4.0	9
25	Ptychographic Imaging of Nano-Materials at the Advanced Light Source with the Nanosurveyor Instrument. <i>Journal of Physics: Conference Series</i> , 2017, 849, 012028.	0.4	15
26	<i>SHARP</i> : a distributed GPU-based ptychographic solver. <i>Journal of Applied Crystallography</i> , 2016, 49, 1245-1252.	4.5	110
27	Measuring spectroscopy and magnetism of extracted and intracellular magnetosomes using soft X-ray ptychography. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, E8219-E8227.	7.1	75
28	Real-time data-intensive computing. <i>AIP Conference Proceedings</i> , 2016, , .	0.4	10
29	Alternating projection, ptychographic imaging and phase synchronization. <i>Applied and Computational Harmonic Analysis</i> , 2016, 41, 815-851.	2.2	70
30	Robust X-Ray Phase Ptycho-Tomography. <i>IEEE Signal Processing Letters</i> , 2016, 23, 944-948.	3.6	14
31	Effects of Particle Size, Electronic Connectivity, and Incoherent Nanoscale Domains on the Sequence of Lithiation in $\text{LiFePO}_4$ Porous Electrodes. <i>Advanced Materials</i> , 2015, 27, 6591-6597.	21.0	72
32	Soft X-ray Ptychographic Imaging and Morphological Quantification of Calcium Silicate Hydrates ( $\text{Ca-Si-H}$ ). <i>Journal of the American Ceramic Society</i> , 2015, 98, 4090-4095.	3.8	38
33	Dependence on Crystal Size of the Nanoscale Chemical Phase Distribution and Fracture in $\text{Li}_x\text{FePO}_4$ . <i>Nano Letters</i> , 2015, 15, 4282-4288.	9.1	99
34	Electrode Lithiation: Effects of Particle Size, Electronic Connectivity, and Incoherent Nanoscale Domains on the Sequence of Lithiation in $\text{LiFePO}_4$ Porous Electrodes ( <i>Adv. Mater.</i> 42/2015). <i>Advanced Materials</i> , 2015, 27, 6590-6590.	21.0	4
35	Quantitative phase-contrast confocal microscope. <i>Optics Express</i> , 2014, 22, 17830.	3.4	15
36	Chemical composition mapping with nanometre resolution by soft X-ray microscopy. <i>Nature Photonics</i> , 2014, 8, 765-769.	31.4	371

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37	Shapes and vorticities of superfluid helium nanodroplets. <i>Science</i> , 2014, 345, 906-909.	12.6	197
38	Serial time-resolved crystallography of photosystem II using a femtosecond X-ray laser. <i>Nature</i> , 2014, 513, 261-265.	27.8	403
39	Sensing the wavefront of x-ray free-electron lasers using aerosol spheres. <i>Optics Express</i> , 2013, 21, 12385.	3.4	28
40	Toward unsupervised single-shot diffractive imaging of heterogeneous particles using X-ray free-electron lasers. <i>Optics Express</i> , 2013, 21, 28729.	3.4	20
41	Augmented projections for ptychographic imaging. <i>Inverse Problems</i> , 2013, 29, 115009.	2.0	51
42	Mesoscale morphology of airborne core-shell nanoparticle clusters: x-ray laser coherent diffraction imaging. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2013, 46, 164033.	1.5	12
43	Development of coherent scattering and diffractive imaging and the COSMIC facility at the Advanced Light Source. <i>Journal of Physics: Conference Series</i> , 2013, 425, 192011.	0.4	9
44	Alternating direction methods for classical and ptychographic phase retrieval. <i>Inverse Problems</i> , 2012, 28, 115010.	2.0	130
45	Profiling structured beams using injected aerosols. <i>Proceedings of SPIE</i> , 2012, , .	0.8	1
46	Femtosecond free-electron laser x-ray diffraction data sets for algorithm development. <i>Optics Express</i> , 2012, 20, 4149.	3.4	56
47	Noise-robust coherent diffractive imaging with a single diffraction pattern. <i>Optics Express</i> , 2012, 20, 16650.	3.4	73
48	Time-resolved protein nanocrystallography using an X-ray free-electron laser. <i>Optics Express</i> , 2012, 20, 2706.	3.4	219
49	Femtosecond dark-field imaging with an X-ray free electron laser. <i>Optics Express</i> , 2012, 20, 13501.	3.4	38
50	Structure determination of Pt-coated Au dumbbells via fluctuation X-ray scattering. <i>Journal of Synchrotron Radiation</i> , 2012, 19, 695-700.	2.4	23
51	Lipidic phase membrane protein serial femtosecond crystallography. <i>Nature Methods</i> , 2012, 9, 263-265.	19.0	135
52	Fractal morphology, imaging and mass spectrometry of single aerosol particles in flight. <i>Nature</i> , 2012, 486, 513-517.	27.8	170
53	Self-terminating diffraction gates femtosecond X-ray nanocrystallography measurements. <i>Nature Photonics</i> , 2012, 6, 35-40.	31.4	292
54	X-ray Diffraction from Membrane Protein Nanocrystals. <i>Biophysical Journal</i> , 2011, 100, 198-206.	0.5	63

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55	Phasing of coherent femtosecond X-ray diffraction from size-varying nanocrystals. Optics Express, 2011, 19, 2866.	3.4	82
56	Radiation damage in protein serial femtosecond crystallography using an x-ray free-electron laser. Physical Review B, 2011, 84, 214111.	3.2	156
57	Single particle imaging with soft x-rays at the Linac Coherent Light Source. , 2011, , .		12
58	Single mimivirus particles intercepted and imaged with an X-ray laser. Nature, 2011, 470, 78-81.	27.8	790
59	Femtosecond X-ray protein nanocrystallography. Nature, 2011, 470, 73-77.	27.8	1,771
60	New directions in X-ray microscopy. Contemporary Physics, 2011, 52, 293-318.	1.8	99
61	Compressive auto-indexing in femtosecond nanocrystallography. Ultramicroscopy, 2011, 111, 807-811.	1.9	6
62	New Light on Disordered Ensembles: Structure Determination of One Particle from Scattering Fluctuations of Many Copies. Physical Review Letters, 2011, 106, 115501.	7.8	69
63	Short-pulse Laser Induced Transient Structure Formation and Ablation Studied with Time-resolved Coherent XUV-scattering. , 2010, , .		21
64	Aerosol Imaging with a Soft X-Ray Free Electron Laser. Aerosol Science and Technology, 2010, 44, i-vi.	3.1	40
65	Orientation determination for 3D single molecule diffraction imaging. , 2010, , .		3
66	Femtosecond diffractive imaging of biological cells. Journal of Physics B: Atomic, Molecular and Optical Physics, 2010, 43, 194015.	1.5	41
67	High-resolution x-ray diffraction microscopy of specifically labeled yeast cells. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 7235-7239.	7.1	121
68	Data preparation and evaluation techniques for x-ray diffraction microscopy. Optics Express, 2010, 18, 18598.	3.4	40
69	Cryptotomography: Reconstructing 3D Fourier Intensities from Randomly Oriented Single-Shot Diffraction Patterns. Physical Review Letters, 2010, 104, 225501.	7.8	94
70	Soft X-Ray Diffraction Microscopy of a Frozen Hydrated Yeast Cell. Physical Review Letters, 2009, 103, 198101.	7.8	137
71	Short-pulse Laser Induced Transient Structure Formation and Ablation Studied with Time-resolved Coherent XUV-scattering. Materials Research Society Symposia Proceedings, 2009, 1230, 1.	0.1	3
72	An assessment of the resolution limitation due to radiation-damage in X-ray diffraction microscopy. Journal of Electron Spectroscopy and Related Phenomena, 2009, 170, 4-12.	1.7	427

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73	Direct observation of the transfer of orbital angular momentum to metal particles from a focused circularly polarized Gaussian beam. <i>Optics Express</i> , 2009, 17, 23316.	3.4	64
74	Ab Initio Undersampled Phase Retrieval. <i>Microscopy and Microanalysis</i> , 2009, 15, 742-743.	0.4	0
75	Binary pseudo-random gratings and arrays for calibration of the modulation transfer function of surface profilometers: recent developments. <i>Proceedings of SPIE</i> , 2009, , .	0.8	7
76	Powder diffraction from a continuous microjet of submicrometer protein crystals. <i>Journal of Synchrotron Radiation</i> , 2008, 15, 593-599.	2.4	43
77	Ultrafast soft X-ray scattering and reference-enhanced diffractive imaging of weakly scattering nanoparticles. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2008, 166-167, 65-73.	1.7	16
78	Ultrafast single-shot diffraction imaging of nanoscale dynamics. <i>Nature Photonics</i> , 2008, 2, 415-419.	31.4	221
79	Massively parallel X-ray holography. <i>Nature Photonics</i> , 2008, 2, 560-563.	31.4	168
80	Single Particle X-ray Diffractive Imaging. <i>Nano Letters</i> , 2008, 8, 310-316.	9.1	229
81	Camera for coherent diffractive imaging and holography with a soft-x-ray free-electron laser. <i>Applied Optics</i> , 2008, 47, 1673.	2.1	34
82	Phase retrieval and saddle-point optimization. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2007, 24, 3289.	1.5	61
83	Femtosecond time-delay X-ray holography. <i>Nature</i> , 2007, 448, 676-679.	27.8	238
84	High-resolution ab initio three-dimensional x-ray diffraction microscopy. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2006, 23, 1179.	1.5	511
85	Femtosecond diffractive imaging with a soft-X-ray free-electron laser. <i>Nature Physics</i> , 2006, 2, 839-843.	16.7	910
86	Surface characterization of colossal magnetoresistive manganites $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$ using photoelectron spectroscopy. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2006, 153, 37-57.	1.7	12
87	X-ray holography: Atoms in 3D. <i>Journal of Alloys and Compounds</i> , 2005, 401, 92-98.	5.5	4
88	Holographic methods as local probes of the atomic order in solids. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2004, 59, 1523-1528.	2.9	5
89	SPE DEN: reconstructing single particles from their diffraction patterns. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2004, 60, 294-305.	0.3	20
90	Direct Observation of High-Temperature Polaronic Behavior in Colossal Magnetoresistive Manganites. <i>Physical Review Letters</i> , 2004, 92, 166401.	7.8	75

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91	Use of extended and prepared reference objects in experimental Fourier transform x-ray holography. Applied Physics Letters, 2004, 85, 2454-2456.	3.3	32
92	Correction of non-linearity effects in detectors for electron spectroscopy. Journal of Electron Spectroscopy and Related Phenomena, 2004, 141, 45-59.	1.7	28
93	Coherent X-ray diffractive imaging: applications and limitations. Optics Express, 2003, 11, 2344.	3.4	106
94	Comment on "X-ray Absorption Holography" Physical Review Letters, 2002, 89, 279601; author reply 279602.	7.8	4
95	Photoelectron and x-ray holography by contrast: enhancing image quality and dimensionality. Journal of Physics Condensed Matter, 2001, 13, 10517-10532.	1.8	26
96	Imaging light atoms by X-ray holography. Nature, 2000, 407, 38-38.	27.8	68
97	Direct 3D Imaging of Al <sub>70.4</sub> Pd <sub>21</sub> Mn <sub>8.6</sub> Quasicrystal Local Atomic Structure by X-ray Holography. Physical Review Letters, 2000, 85, 4723-4726.	7.8	56
98	X-ray interferometry of surfaces with Fresnel mirrors. Applied Optics, 2000, 39, 1633.	2.1	6
99	Three Dimensional Imaging of Atoms with Isotropic 0.5 Å... Resolution. Physical Review Letters, 1999, 82, 4847-4850.	7.8	115
100	Correlation of spin and orbital anisotropies with chemical order in Fe <sub>0.5</sub> Pd <sub>0.5</sub> alloy films using magnetic circular x-ray dichroism. Physical Review B, 1999, 59, 1105-1112.	3.2	79
101	Standing waves and Kossel line patterns in structure determination. Solid State Communications, 1998, 105, 685-687.	1.9	10
102	Doubly focusing crystal analyzer for x-ray fluorescence holography. , 1998, 3448, 224.		4
103	X-Ray Interferometry at ESRF Using Two Coherent Beams from Fresnel Mirrors. Journal of X-Ray Science and Technology, 1997, 7, 12-23.	1.0	16
104	Gauss-Schell Sources as Models for Synchrotron Radiation. Journal of Synchrotron Radiation, 1997, 4, 263-266.	2.4	44
105	Two-dimensional coherence measurements with Fresnel mirrors. Optical Engineering, 1996, 35, 3597.	1.0	2