

Anton Barty

List of Publications by Year in descending order

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129
papers

18,628
citations

17429

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12933

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134
docs citations

134
times ranked

10841
citing authors

#	ARTICLE	IF	CITATIONS
1	Femtosecond X-ray Fourier holography imaging of free-flying nanoparticles. <i>Nature Photonics</i> , 2018, 12, 150-153.	15.6	58
2	Supersaturation-controlled microcrystallization and visualization analysis for serial femtosecond crystallography. <i>Scientific Reports</i> , 2018, 8, 2541.	1.6	4
3	Femtosecond X-ray diffraction from an aerosolized beam of protein nanocrystals. <i>Journal of Applied Crystallography</i> , 2018, 51, 133-139.	1.9	18
4	Ultrafast nonthermal heating of water initiated by an X-ray Free-Electron Laser. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 5652-5657.	3.3	28
5	Femtosecond X-ray coherent diffraction of aligned amyloid fibrils on low background graphene. <i>Nature Communications</i> , 2018, 9, 1836.	5.8	34
6	Resolution extension by image summing in serial femtosecond crystallography of two-dimensional membrane-protein crystals. <i>IUCr</i> , 2018, 5, 103-117.	1.0	8
7	Structural enzymology using X-ray free electron lasers. <i>Structural Dynamics</i> , 2017, 4, 044003.	0.9	92
8	Atomic structure of granulin determined from native nanocrystalline granulovirus using an X-ray free-electron laser. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 2247-2252.	3.3	65
9	Diffraction data of core-shell nanoparticles from an X-ray free electron laser. <i>Scientific Data</i> , 2017, 4, 170048.	2.4	4
10	Flow-aligned, single-shot fiber diffraction using a femtosecond X-ray free-electron laser. <i>Cytoskeleton</i> , 2017, 74, 472-481.	1.0	12
11	Double-flow focused liquid injector for efficient serial femtosecond crystallography. <i>Scientific Reports</i> , 2017, 7, 44628.	1.6	90
12	Identification of Phosphorylation Codes for Arrestin Recruitment by G Protein-Coupled Receptors. <i>Cell</i> , 2017, 170, 457-469.e13.	13.5	344
13	From Macrocystals to Microcrystals: A Strategy for Membrane Protein Serial Crystallography. <i>Structure</i> , 2017, 25, 1461-1468.e2.	1.6	21
14	Coherent soft X-ray diffraction imaging of coliphage PR772 at the Linac coherent light source. <i>Scientific Data</i> , 2017, 4, 170079.	2.4	54
15	Structures of riboswitch RNA reaction states by mix-and-inject XFEL serial crystallography. <i>Nature</i> , 2017, 541, 242-246.	13.7	251
16	Post-sample aperture for low background diffraction experiments at X-ray free-electron lasers. <i>Journal of Synchrotron Radiation</i> , 2017, 24, 1296-1298.	1.0	8
17	Continuous diffraction of molecules and disordered molecular crystals. <i>Journal of Applied Crystallography</i> , 2017, 50, 1084-1103.	1.9	21
18	Experimental strategies for imaging bioparticles with femtosecond hard X-ray pulses. <i>IUCr</i> , 2017, 4, 251-262.	1.0	63

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19	Analysis of XFEL serial diffraction data from individual crystalline fibrils. IUCrJ, 2017, 4, 795-811.	1.0	16
20	Open data set of live cyanobacterial cells imaged using an X-ray laser. Scientific Data, 2016, 3, 160058.	2.4	7
21	<i>OnDA</i>: online data analysis and feedback for serial X-ray imaging. Journal of Applied Crystallography, 2016, 49, 1073-1080.	1.9	89
22	A data set from flash X-ray imaging of carboxysomes. Scientific Data, 2016, 3, 160061.	2.4	11
23	Single molecule imaging using X-ray free electron lasers. Current Opinion in Structural Biology, 2016, 40, 186-194.	2.6	14
24	Coherent diffraction of single Rice Dwarf virus particles using hard X-rays at the Linac Coherent Light Source. Scientific Data, 2016, 3, 160064.	2.4	64
25	Lipidic cubic phase injector is a viable crystal delivery system for time-resolved serial crystallography. Nature Communications, 2016, 7, 12314.	5.8	71
26	Single-shot diffraction data from the Mimivirus particle using an X-ray free-electron laser. Scientific Data, 2016, 3, 160060.	2.4	18
27	Femtosecond structural dynamics drives the trans/cis isomerization in photoactive yellow protein. Science, 2016, 352, 725-729.	6.0	348
28	Native phasing of x-ray free-electron laser data for a G protein-coupled receptor. Science Advances, 2016, 2, e1600292.	4.7	97
29	The room temperature crystal structure of a bacterial phytochrome determined by serial femtosecond crystallography. Scientific Reports, 2016, 6, 35279.	1.6	39
30	X-ray laser diffraction for structure determination of the rhodopsin-arrestin complex. Scientific Data, 2016, 3, 160021.	2.4	51
31	Serial femtosecond crystallography datasets from G protein-coupled receptors. Scientific Data, 2016, 3, 160057.	2.4	10
32	Macromolecular diffractive imaging using imperfect crystals. Nature, 2016, 530, 202-206.	13.7	123
33	Recent developments in <i>CrystFEL</i>. Journal of Applied Crystallography, 2016, 49, 680-689.	1.9	222
34	Direct Phasing of Finite Crystals Illuminated with a Free-Electron Laser. Physical Review X, 2015, 5, .	2.8	12
35	Electronic damage in S atoms in a native protein crystal induced by an intense X-ray free-electron laser pulse. Structural Dynamics, 2015, 2, 041703.	0.9	20
36	Towards phasing using high X-ray intensity. IUCrJ, 2015, 2, 627-634.	1.0	24

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37	Serial femtosecond crystallography of soluble proteins in lipidic cubic phase. <i>IUCr</i> , 2015, 2, 545-551.	1.0	61
38	The linac coherent light source single particle imaging road map. <i>Structural Dynamics</i> , 2015, 2, 041701.	0.9	178
39	Strongly aligned gas-phase molecules at free-electron lasers. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2015, 48, 204002.	0.6	28
40	Accurate determination of segmented X-ray detector geometry. <i>Optics Express</i> , 2015, 23, 28459.	1.7	69
41	Trace phase detection and strain characterization from serial X-ray free-electron laser crystallography of a Pr _{0.5} Ca _{0.5} MnO ₃ powder. <i>Powder Diffraction</i> , 2015, 30, S25-S30.	0.4	1
42	Ternary structure reveals mechanism of a membrane diacylglycerol kinase. <i>Nature Communications</i> , 2015, 6, 10140.	5.8	30
43	Imaging single cells in a beam of live cyanobacteria with an X-ray laser. <i>Nature Communications</i> , 2015, 6, 5704.	5.8	156
44	Structural basis for bifunctional peptide recognition at human μ -opioid receptor. <i>Nature Structural and Molecular Biology</i> , 2015, 22, 265-268.	3.6	151
45	Three-Dimensional Reconstruction of the Giant Mimivirus Particle with an X-Ray Free-Electron Laser. <i>Physical Review Letters</i> , 2015, 114, 098102.	2.9	284
46	Indications of radiation damage in ferredoxin microcrystals using high-intensity X-FEL beams. <i>Journal of Synchrotron Radiation</i> , 2015, 22, 225-238.	1.0	110
47	Effects of self-seeding and crystal post-selection on the quality of Monte Carlo-integrated SFX data. <i>Journal of Synchrotron Radiation</i> , 2015, 22, 644-652.	1.0	20
48	Anomalous Behavior of the Homogeneous Ice Nucleation Rate in α -No-Man TM s Land α . <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 2826-2832.	2.1	102
49	Crystal structure of rhodopsin bound to arrestin by femtosecond X-ray laser. <i>Nature</i> , 2015, 523, 561-567.	13.7	683
50	High numerical aperture multilayer Laue lenses. <i>Scientific Reports</i> , 2015, 5, 9892.	1.6	89
51	Ultrafast self-gating Bragg diffraction of exploding nanocrystals in an X-ray laser. <i>Optics Express</i> , 2015, 23, 1213.	1.7	29
52	<i>Cheetah</i> : software for high-throughput reduction and analysis of serial femtosecond X-ray diffraction data. <i>Journal of Applied Crystallography</i> , 2014, 47, 1118-1131.	1.9	348
53	Toward atomic resolution diffractive imaging of isolated molecules with X-ray free-electron lasers. <i>Faraday Discussions</i> , 2014, 171, 393-418.	1.6	29
54	Automated identification and classification of single particle serial femtosecond X-ray diffraction data. <i>Optics Express</i> , 2014, 22, 2497.	1.7	45

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55	Explosion dynamics of sucrose nanospheres monitored by time of flight spectrometry and coherent diffractive imaging at the split-and-delay beam line of the FLASH soft X-ray laser. <i>Optics Express</i> , 2014, 22, 28914.	1.7	13
56	Time-resolved serial crystallography captures high-resolution intermediates of photoactive yellow protein. <i>Science</i> , 2014, 346, 1242-1246.	6.0	418
57	Phasing coherently illuminated nanocrystals bounded by partial unit cells. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2014, 369, 20130331.	1.8	29
58	Mapping the continuous reciprocal space intensity distribution of X-ray serial crystallography. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2014, 369, 20130333.	1.8	29
59	Lipidic cubic phase injector facilitates membrane protein serial femtosecond crystallography. <i>Nature Communications</i> , 2014, 5, 3309.	5.8	505
60	High-throughput imaging of heterogeneous cell organelles with an X-ray laser. <i>Nature Photonics</i> , 2014, 8, 943-949.	15.6	156
61	7 Å... resolution in protein two-dimensional-crystal X-ray diffraction at Linac Coherent Light Source. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2014, 369, 20130500.	1.8	32
62	Visualizing a protein quake with time-resolved X-ray scattering at a free-electron laser. <i>Nature Methods</i> , 2014, 11, 923-926.	9.0	173
63	Ultrafast X-ray probing of water structure below the homogeneous ice nucleation temperature. <i>Nature</i> , 2014, 510, 381-384.	13.7	385
64	Serial time-resolved crystallography of photosystem II using a femtosecond X-ray laser. <i>Nature</i> , 2014, 513, 261-265.	13.7	403
65	Room-temperature macromolecular serial crystallography using synchrotron radiation. <i>IUCr</i> , 2014, 1, 204-212.	1.0	221
66	X-Ray Diffraction from Isolated and Strongly Aligned Gas-Phase Molecules with a Free-Electron Laser. <i>Physical Review Letters</i> , 2014, 112, .	2.9	217
67	Fixed-target protein serial microcrystallography with an x-ray free electron laser. <i>Scientific Reports</i> , 2014, 4, 6026.	1.6	169
68	Serial Femtosecond Crystallography of G Protein-Coupled Receptors. <i>Science</i> , 2013, 342, 1521-1524.	6.0	424
69	Structure of a photosynthetic reaction centre determined by serial femtosecond crystallography. <i>Nature Communications</i> , 2013, 4, 2911.	5.8	74
70	Natively Inhibited <i>Trypanosoma brucei</i> Cathepsin B Structure Determined by Using an X-ray Laser. <i>Science</i> , 2013, 339, 227-230.	6.0	393
71	Molecular Imaging Using X-Ray Free-Electron Lasers. <i>Annual Review of Physical Chemistry</i> , 2013, 64, 415-435.	4.8	156
72	Crystallographic data processing for free-electron laser sources. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2013, 69, 1231-1240.	2.5	122

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73	Sensing the wavefront of x-ray free-electron lasers using aerosol spheres. Optics Express, 2013, 21, 12385.	1.7	28
74	Toward unsupervised single-shot diffractive imaging of heterogeneous particles using X-ray free-electron lasers. Optics Express, 2013, 21, 28729.	1.7	20
75	Mesoscale morphology of airborne core-shell nanoparticle clusters: x-ray laser coherent diffraction imaging. Journal of Physics B: Atomic, Molecular and Optical Physics, 2013, 46, 164033.	0.6	12
76	Femtosecond free-electron laser x-ray diffraction data sets for algorithm development. Optics Express, 2012, 20, 4149.	1.7	56
77	Noise-robust coherent diffractive imaging with a single diffraction pattern. Optics Express, 2012, 20, 16650.	1.7	73
78	Time-resolved protein nanocrystallography using an X-ray free-electron laser. Optics Express, 2012, 20, 2706.	1.7	219
79	Femtosecond dark-field imaging with an X-ray free electron laser. Optics Express, 2012, 20, 13501.	1.7	38
80	CASSCFEL-ASG software suite. Computer Physics Communications, 2012, 183, 2207-2213.	3.0	65
81	Lipidic phase membrane protein serial femtosecond crystallography. Nature Methods, 2012, 9, 263-265.	9.0	135
82	Fractal morphology, imaging and mass spectrometry of single aerosol particles in flight. Nature, 2012, 486, 513-517.	13.7	170
83	New Avenues for Structure Determination of Membrane Proteins. Biophysical Journal, 2012, 102, 3a.	0.2	0
84	Self-terminating diffraction gates femtosecond X-ray nanocrystallography measurements. Nature Photonics, 2012, 6, 35-40.	15.6	292
85	Single-particle structure determination by correlations of snapshot X-ray diffraction patterns. Nature Communications, 2012, 3, 1276.	5.8	76
86	In vivo protein crystallization opens new routes in structural biology. Nature Methods, 2012, 9, 259-262.	9.0	193
87	High-Resolution Protein Structure Determination by Serial Femtosecond Crystallography. Science, 2012, 337, 362-364.	6.0	758
88	<i>CrystFEL</i>: a software suite for snapshot serial crystallography. Journal of Applied Crystallography, 2012, 45, 335-341.	1.9	410
89	Phasing of coherent femtosecond X-ray diffraction from size-varying nanocrystals. Optics Express, 2011, 19, 2866.	1.7	82
90	Unsupervised classification of single-particle X-ray diffraction snapshots by spectral clustering. Optics Express, 2011, 19, 16542.	1.7	91

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91	Radiation damage in protein serial femtosecond crystallography using an x-ray free-electron laser. <i>Physical Review B</i> , 2011, 84, 214111.	1.1	156
92	Single mimivirus particles intercepted and imaged with an X-ray laser. <i>Nature</i> , 2011, 470, 78-81.	13.7	790
93	Femtosecond X-ray protein nanocrystallography. <i>Nature</i> , 2011, 470, 73-77.	13.7	1,771
94	Structure-factor analysis of femtosecond microdiffraction patterns from protein nanocrystals. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2011, 67, 131-140.	0.3	128
95	Multipurpose modular experimental station for the DiProl beamline of Fermi@Elettra free electron laser. <i>Review of Scientific Instruments</i> , 2011, 82, 043711.	0.6	28
96	Single-shot femtosecond x-ray diffraction from randomly oriented ellipsoidal nanoparticles. <i>Physical Review Special Topics: Accelerators and Beams</i> , 2010, 13, .	1.8	13
97	Aerosol Imaging with a Soft X-Ray Free Electron Laser. <i>Aerosol Science and Technology</i> , 2010, 44, i-vi.	1.5	40
98	Femtosecond diffractive imaging of biological cells. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2010, 43, 194015.	0.6	41
99	Time-resolved imaging using x-ray free electron lasers. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2010, 43, 194014.	0.6	16
100	Publisher's Note: Cryptotomography: Reconstructing 3D Fourier Intensities from Randomly Oriented Single-Shot Diffraction Patterns [Phys. Rev. Lett.104, 225501 (2010)]. <i>Physical Review Letters</i> , 2010, 104, .	2.9	6
101	Cryptotomography: Reconstructing 3D Fourier Intensities from Randomly Oriented Single-Shot Diffraction Patterns. <i>Physical Review Letters</i> , 2010, 104, 225501.	2.9	94
102	Sacrificial Tamper Slows Down Sample Explosion in FLASH Diffraction Experiments. <i>Physical Review Letters</i> , 2010, 104, 064801.	2.9	59
103	Predicting the coherent X-ray wavefront focal properties at the Linac Coherent Light Source (LCLS) X-ray free electron laser. <i>Optics Express</i> , 2009, 17, 15508.	1.7	62
104	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.	0.8	16
105	Ultrafast single-shot diffraction imaging of nanoscale dynamics. <i>Nature Photonics</i> , 2008, 2, 415-419.	15.6	221
106	Massively parallel X-ray holography. <i>Nature Photonics</i> , 2008, 2, 560-563.	15.6	168
107	Single Particle X-ray Diffractive Imaging. <i>Nano Letters</i> , 2008, 8, 310-316.	4.5	229
108	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

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109	Three-Dimensional Coherent X-Ray Diffraction Imaging of a Ceramic Nanofoam: Determination of Structural Deformation Mechanisms. <i>Physical Review Letters</i> , 2008, 101, 055501.	2.9	106
110	Validation of radiographic simulation codes including x-ray phase effects for millimeter-size objects with micrometer structures. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2007, 24, 169.	0.8	8
111	Femtosecond time-delay X-ray holography. <i>Nature</i> , 2007, 448, 676-679.	13.7	238
112	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.	0.8	511
113	Femtosecond diffractive imaging with a soft-X-ray free-electron laser. <i>Nature Physics</i> , 2006, 2, 839-843.	6.5	910
114	Actinic inspection of extreme ultraviolet programmed multilayer defects and cross-comparison measurements. <i>Journal of Vacuum Science & Technology B</i> , 2006, 24, 2824.	1.3	28
115	Quantitative characterization of inertial confinement fusion capsules using phase contrast enhanced x-ray imaging. <i>Journal of Applied Physics</i> , 2005, 97, 063103.	1.1	56
116	X-ray imaging of cryogenic deuterium-tritium layers in a beryllium shell. <i>Journal of Applied Physics</i> , 2005, 98, 103105.	1.1	37
117	Damped and thermal motion of laser-aligned hydrated macromolecule beams for diffraction. <i>Journal of Chemical Physics</i> , 2005, 123, 244304.	1.2	20
118	Repair of phase defects in extreme-ultraviolet lithography mask blanks. <i>Journal of Applied Physics</i> , 2004, 96, 6812-6821.	1.1	9
119	Quantitative phase-amplitude microscopy. III. The effects of noise. <i>Journal of Microscopy</i> , 2004, 214, 51-61.	0.8	182
120	Repairing amplitude defects in multilayer-coated extreme-ultraviolet lithography reticles by use of a focused ion beam. <i>Applied Optics</i> , 2004, 43, 6545.	2.1	3
121	Testing extreme ultraviolet optics with visible-light and extreme ultraviolet interferometry. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2002, 20, 2834.	1.6	17
122	Refractive-index profiling of optical fibers with axial symmetry by use of quantitative phase microscopy. <i>Optics Letters</i> , 2002, 27, 2061.	1.7	89
123	Quantitative phase-amplitude microscopy I: optical microscopy. <i>Journal of Microscopy</i> , 2002, 206, 194-203.	0.8	181
124	The holographic twin image problem: a deterministic phase solution. <i>Optics Communications</i> , 2000, 183, 7-14.	1.0	22
125	Quantitative phase tomography. <i>Optics Communications</i> , 2000, 175, 329-336.	1.0	133
126	Quantitative phase-sensitive imaging in a transmission electron microscope. <i>Ultramicroscopy</i> , 2000, 83, 67-73.	0.8	180

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127	Noninterferometric quantitative phase imaging with soft x rays. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2000, 17, 1732.	0.8	43
128	Sub-wavelength characterisation of optical focal structures. Optics Communications, 1998, 145, 9-14.	1.0	14
129	Quantitative optical phase microscopy. Optics Letters, 1998, 23, 817.	1.7	500