

Marco Cammarata

List of Publications by Year in descending order

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115
papers

6,351
citations

57758

44
h-index

69250

77
g-index

119
all docs

119
docs citations

119
times ranked

7282
citing authors

#	ARTICLE	IF	CITATIONS
1	Artificial Electro-Optical Neuron Integrating Hot Electrons in a Mott Insulator. <i>Physical Review Applied</i> , 2022, 17, .	3.8	1
2	Shifting photo-stationary light-induced excited spin state trapping equilibrium towards higher temperature by increasing light fluence. <i>Chemical Physics Letters</i> , 2022, 791, 139395.	2.6	1
3	Dynamical limits for the molecular switching in a photoexcited material revealed by X-ray diffraction. <i>Communications Physics</i> , 2022, 5, .	5.3	3
4	Charge transfer driven by ultrafast spin transition in a CoFe Prussian blue analogue. <i>Nature Chemistry</i> , 2021, 13, 10-14.	13.6	96
5	Out-of-equilibrium lattice response to photo-induced charge-transfer in a MnFe Prussian blue analogue. <i>Journal of Materials Chemistry C</i> , 2021, 9, 6773-6780.	5.5	9
6	Strain wave pathway to semiconductor-to-metal transition revealed by time-resolved X-ray powder diffraction. <i>Nature Communications</i> , 2021, 12, 1239.	12.8	29
7	Interplays of electron and nuclear motions along CO dissociation trajectory in myoglobin revealed by ultrafast X-rays and quantum dynamics calculations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	10
8	Mechanism and dynamics of fatty acid photodecarboxylase. <i>Science</i> , 2021, 372, .	12.6	93
9	Ultrafast coherent motion and helix rearrangement of homodimeric hemoglobin visualized with femtosecond X-ray solution scattering. <i>Nature Communications</i> , 2021, 12, 3677.	12.8	25
10	Structural dynamics probed by X-ray pulses from synchrotrons and XFELs. <i>Comptes Rendus Physique</i> , 2021, 22, 75-94.	0.9	2
11	Femtosecond electronic structure response to high intensity XFEL pulses probed by iron X-ray emission spectroscopy. <i>Scientific Reports</i> , 2020, 10, 16837.	3.3	13
12	Photoswitchable 11 nm CsCoFe Prussian Blue Analogue Nanocrystals with High Relaxation Temperature. <i>Inorganic Chemistry</i> , 2020, 59, 13153-13161.	4.0	24
13	Photoswitching mechanism of a fluorescent protein revealed by time-resolved crystallography and transient absorption spectroscopy. <i>Nature Communications</i> , 2020, 11, 741.	12.8	56
14	Photoselective MLCT to d-d pathways for light-induced excited spin state trapping. <i>Journal of Chemical Physics</i> , 2019, 151, 171101.	3.0	10
15	Single Laser Shot Photoinduced Phase Transition of Rubidium Manganese Hexacyanoferrate Investigated by X-ray Diffraction. <i>European Journal of Inorganic Chemistry</i> , 2019, 2019, 3121-3121.	2.0	1
16	MHz data collection of a microcrystalline mixture of different jack bean proteins. <i>Scientific Data</i> , 2019, 6, 18.	5.3	5
17	Single Laser Shot Photoinduced Phase Transition of Rubidium Manganese Hexacyanoferrate Investigated by X-ray Diffraction. <i>European Journal of Inorganic Chemistry</i> , 2019, 2019, 3142-3147.	2.0	10
18	Light-induced structural changes in a full-length cyanobacterial phytochrome probed by time-resolved X-ray scattering. <i>Communications Biology</i> , 2019, 2, 1.	4.4	611

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19	Lattice phonon modes of the spin crossover crystal [Fe(phen) ₂ (NCS) ₂] studied by THz, IR, Raman spectroscopies and DFT calculations. <i>European Physical Journal B</i> , 2019, 92, 1.	1.5	47
20	Experimental station Bernina at SwissFEL: condensed matter physics on femtosecond time scales investigated by X-ray diffraction and spectroscopic methods. <i>Journal of Synchrotron Radiation</i> , 2019, 26, 874-886.	2.4	19
21	Electronic and Structural Dynamics During the Switching of the Photomagnetic Complex [Fe(L ₂₂₂ N ₅)(CN) ₂]. <i>Chemistry - A European Journal</i> , 2018, 24, 5064-5069.	3.3	13
22	Chromophore twisting in the excited state of a photoswitchable fluorescent protein captured by time-resolved serial femtosecond crystallography. <i>Nature Chemistry</i> , 2018, 10, 31-37.	13.6	152
23	Probing Transient Photoinduced Charge Transfer in Prussian Blue Analogues with Time-Resolved XANES and Optical Spectroscopy. <i>European Journal of Inorganic Chemistry</i> , 2018, 2018, 272-277.	2.0	24
24	Dynamic multiple-scattering treatment of X-ray absorption: Parameterization of a new molecular dynamics force field for myoglobin. <i>Structural Dynamics</i> , 2018, 5, 054101.	2.3	5
25	Frontispiece: Disentangling Ultrafast Electronic and Structural Dynamics with X-Ray Lasers. <i>Chemistry - A European Journal</i> , 2018, 24, .	3.3	0
26	Disentangling Ultrafast Electronic and Structural Dynamics with X-Ray Lasers. <i>Chemistry - A European Journal</i> , 2018, 24, 15696-15705.	3.3	8
27	Tuning and Tracking of Coherent Shear Waves in Molecular Films. <i>ACS Omega</i> , 2018, 3, 9929-9933.	3.5	4
28	Megahertz data collection from protein microcrystals at an X-ray free-electron laser. <i>Nature Communications</i> , 2018, 9, 3487.	12.8	89
29	Understanding elastically driven cooperativity in molecular photomagnetic materials. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2018, 74, e401-e401.	0.1	0
30	Multiscale real-time XRD probing of the semiconductor-to-metal ultrafast phase transition in Ti ₃ O ₅ nanocrystals. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2018, 74, e402-e402.	0.1	0
31	Comparison of structural dynamics and coherence of d-d and MLCT light-induced spin state trapping. <i>Chemical Science</i> , 2017, 8, 4978-4986.	7.4	43
32	Coherent structural trapping through wave packet dispersion during photoinduced spin state switching. <i>Nature Communications</i> , 2017, 8, 15342.	12.8	149
33	Activation of coherent lattice phonon following ultrafast molecular spin-state photo-switching: A molecule-to-lattice energy transfer. <i>Structural Dynamics</i> , 2016, 3, 023605.	2.3	28
34	Femtosecond Structural Dynamics of Proteins. <i>Synchrotron Radiation News</i> , 2016, 29, 19-23.	0.8	0
35	Serial Femtosecond Crystallography and Ultrafast Absorption Spectroscopy of the Photoswitchable Fluorescent Protein IrisFP. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 882-887.	4.6	43
36	Observing Solvation Dynamics with Simultaneous Femtosecond X-ray Emission Spectroscopy and X-ray Scattering. <i>Journal of Physical Chemistry B</i> , 2016, 120, 1158-1168.	2.6	85

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37	Time-resolved serial femtosecond crystallography on photoswitchable fluorescent proteins. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2016, 72, s39-s39.	0.1	0
38	Simulations of single-pulse Laue diffraction from proteins with radiation from synchrotron and XFEL sources. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2016, 72, s142-s142.	0.1	0
39	Observing heme doming in myoglobin with femtosecond X-ray absorption spectroscopy. <i>Structural Dynamics</i> , 2015, 2, 041713.	2.3	45
40	Ultrafast Light-Induced Spin-State Trapping Photophysics Investigated in Fe(phen) ₂ (NCS) ₂ Spin-Crossover Crystal. <i>Accounts of Chemical Research</i> , 2015, 48, 774-781.	15.6	85
41	Ultrafast myoglobin structural dynamics observed with an X-ray free-electron laser. <i>Nature Communications</i> , 2015, 6, 6772.	12.8	157
42	The creation of large-volume, gradient-free warm dense matter with an x-ray free-electron laser. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	45
43	The X-ray Pump-Probe instrument at the Linac Coherent Light Source. <i>Journal of Synchrotron Radiation</i> , 2015, 22, 503-507.	2.4	159
44	Using synchrotrons and XFELs for time-resolved X-ray crystallography and solution scattering experiments on biomolecules. <i>Current Opinion in Structural Biology</i> , 2015, 35, 41-48.	5.7	97
45	La révolution X-FEL: des lasers Å rayons X pour sonder la matière. , 2015, , 44-49.	0.1	0
46	Absolute pulse energy measurements of soft x-rays at the Linac Coherent Light Source. <i>Optics Express</i> , 2014, 22, 21214.	3.4	61
47	Sequential Activation of Molecular Breathing and Bending during Spin-Crossover Photoswitching Revealed by Femtosecond Optical and X-Ray Absorption Spectroscopy. <i>Physical Review Letters</i> , 2014, 113, 227402.	7.8	115
48	Evidence for a glassy state in strongly driven carbon. <i>Scientific Reports</i> , 2014, 4, 5214.	3.3	28
49	Electron Kinetics in Femtosecond X-Ray Irradiated SiO ₂ . <i>Contributions To Plasma Physics</i> , 2013, 53, 347-354.	1.1	27
50	Impacting materials by light and seeing their structural dynamics. <i>European Physical Journal: Special Topics</i> , 2013, 222, 1077-1092.	2.6	4
51	Impact of laser on bismuth thin-films. <i>European Physical Journal: Special Topics</i> , 2013, 222, 1277-1285.	2.6	12
52	Introducing a standard method for experimental determination of the solvent response in laser pump, X-ray probe time-resolved wide-angle X-ray scattering experiments on systems in solution. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 15003-15016.	2.8	62
53	Fourier-transform inelastic X-ray scattering from time- and momentum-dependent phonon-phonon correlations. <i>Nature Physics</i> , 2013, 9, 790-794.	16.7	149
54	Femtosecond X-ray Absorption Spectroscopy at a Hard X-ray Free Electron Laser: Application to Spin Crossover Dynamics. <i>Journal of Physical Chemistry A</i> , 2013, 117, 735-740.	2.5	183

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55	Achieving few-femtosecond time-sorting at hard X-ray free-electron lasers. <i>Nature Photonics</i> , 2013, 7, 215-218.	31.4	323
56	Synchronizing optics and X-rays. <i>Nature Photonics</i> , 2013, 7, 256-256.	31.4	1
57	Filming the Birth of Molecules and Accompanying Solvent Rearrangement. <i>Journal of the American Chemical Society</i> , 2013, 135, 3255-3261.	13.7	59
58	Single shot speckle and coherence analysis of the hard X-ray free electron laser LCLS. <i>Optics Express</i> , 2013, 21, 24647.	3.4	37
59	Femtosecond optical/hard X-ray timing diagnostics at an FEL: implementation and performance. <i>Proceedings of SPIE</i> , 2013, , .	0.8	14
60	Experimental Measurements of Ultra-Thin Bragg Crystals for LCLS Beam-Sharing Operation. <i>Journal of Physics: Conference Series</i> , 2013, 425, 052002.	0.4	4
61	Design and operation of a hard x-ray transmissive single-shot spectrometer at LCLS. <i>Journal of Physics: Conference Series</i> , 2013, 425, 052033.	0.4	9
62	X-ray / Optical Sum Frequency Generation. , 2013, , .		0
63	Plasma switch as a temporal overlap tool for pump-probe experiments at FEL facilities. <i>Journal of Instrumentation</i> , 2012, 7, P08007-P08007.	1.2	3
64	A hard x-ray transmissive single-shot spectrometer for FEL sources. , 2012, , .		5
65	Ultra-thin Bragg crystals for LCLS beam-sharing operation. <i>Proceedings of SPIE</i> , 2012, , .	0.8	4
66	Single-shot analysis of hard x-ray laser radiation using a noninvasive grating spectrometer. <i>Optics Letters</i> , 2012, 37, 5073.	3.3	33
67	A single-shot transmissive spectrometer for hard x-ray free electron lasers. <i>Applied Physics Letters</i> , 2012, 101, .	3.3	129
68	High Contrast X-ray Speckle from Atomic-Scale Order in Liquids and Glasses. <i>Physical Review Letters</i> , 2012, 109, 185502.	7.8	97
69	Single Shot Spatial and Temporal Coherence Properties of the SLAC Linac Coherent Light Source in the Hard X-Ray Regime. <i>Physical Review Letters</i> , 2012, 108, 024801.	7.8	115
70	The Monod-Wyman-Changeux allosteric model accounts for the quaternary transition dynamics in wild type and a recombinant mutant human hemoglobin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 14894-14899.	7.1	33
71	Probing in cell protein structural changes with time-resolved X-ray scattering. <i>Soft Matter</i> , 2012, 8, 6434.	2.7	12
72	Tracking Atomic Positions in Molecular Reactions by Picosecond X-ray Scattering at the ESRF. <i>Synchrotron Radiation News</i> , 2012, 25, 25-31.	0.8	3

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73	X-ray and optical wave mixing. <i>Nature</i> , 2012, 488, 603-608.	27.8	199
74	Ultrafast Photovoltaic Response in Ferroelectric Nanolayers. <i>Physical Review Letters</i> , 2012, 108, 087601.	7.8	150
75	Exploring the wavefront of hard X-ray free-electron laser radiation. <i>Nature Communications</i> , 2012, 3, 947.	12.8	76
76	100â€¦Picosecond Diffraction Catches Structural Transients of Laserâ€¦Pulse Triggered Switching in a Spinâ€¦Crossover Crystal. <i>Chemistry - A European Journal</i> , 2012, 18, 2051-2055.	3.3	50
77	The Short-Lived Signaling State of the Photoactive Yellow Protein Photoreceptor Revealed by Combined Structural Probes. <i>Journal of the American Chemical Society</i> , 2011, 133, 9395-9404.	13.7	83
78	Ultrafast Structural Dynamics of the Photocleavage of Protein Hybrid Nanoparticles. <i>ACS Nano</i> , 2011, 5, 3788-3794.	14.6	45
79	Time-Resolved WAXS Reveals Accelerated Conformational Changes in Iodoretinal-Substituted Proteorhodopsin. <i>Biophysical Journal</i> , 2011, 101, 1345-1353.	0.5	60
80	Nanofocusing of hard X-ray free electron laser pulses using diamond based Fresnel zone plates. <i>Scientific Reports</i> , 2011, 1, 57.	3.3	126
81	Spectral encoding of x-ray/optical relative delay. <i>Optics Express</i> , 2011, 19, 21855.	3.4	119
82	Spectroscopic studies of hard x-ray free-electron laser-heated foils at 10^{16} W/cm ² irradiances. <i>Proceedings of SPIE</i> , 2011, , .	0.8	1
83	A single-shot intensity-position monitor for hard x-ray FEL sources. <i>Proceedings of SPIE</i> , 2011, , .	0.8	34
84	Measuring femtosecond structural dynamics at a hard X-ray laser: challenges and successes. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2011, 67, C108-C108.	0.3	0
85	Photolysis of Br ₂ in CCl ₄ studied by time-resolved X-ray scattering. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2010, 66, 252-260.	0.3	26
86	Rapid readout detector captures protein time-resolved WAXS. <i>Nature Methods</i> , 2010, 7, 775-776.	19.0	36
87	Structural Dynamics of Light-Driven Proton Pumps. <i>Biophysical Journal</i> , 2010, 98, 226a.	0.5	0
88	Ultrafast Potential Energy Surface Softening of One-Dimensional Organic Conductors Revealed by Picosecond Time-Resolved Laue Crystallography. <i>Journal of Physical Chemistry A</i> , 2010, 114, 7677-7681.	2.5	9
89	Unveiling the Timescale of the Râ€¦T Transition in Human Hemoglobin. <i>Journal of Molecular Biology</i> , 2010, 400, 951-962.	4.2	51
90	Light-Induced Structural Changes in a Photosynthetic Reaction Center Caught by Laue Diffraction. <i>Science</i> , 2010, 328, 630-633.	12.6	103

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91	Photo-Induced Pyridine Substitution in <i>cis</i> -[Ru(bpy) ₂ (py) ₂]Cl ₂ : A Snapshot by Time-Resolved X-ray Solution Scattering. <i>Inorganic Chemistry</i> , 2010, 49, 11240-11248.	4.0	41
92	Structure of a short-lived excited state trinuclear Ag-Pt-Pt complex in aqueous solution by time resolved X-ray scattering. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 6921.	2.8	18
93	Lipidic sponge phase crystallization of photosynthetic reaction centres. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2010, 66, s13-s13.	0.3	0
94	Light-induced structural changes in photosynthetic reaction centres. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2010, 66, s104-s104.	0.3	0
95	Chopper system for time resolved experiments with synchrotron radiation. <i>Review of Scientific Instruments</i> , 2009, 80, 015101.	1.3	106
96	Structural Dynamics of Light-Driven Proton Pumps. <i>Structure</i> , 2009, 17, 1265-1275.	3.3	118
97	Structural Tracking of a Bimolecular Reaction in Solution by Time-Resolved X-Ray Scattering. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 4180-4184.	13.8	43
98	Time-Resolved X-ray Scattering of an Electronically Excited State in Solution. Structure of the ³ A _{2u} State of Tetrakis- ¹ / ₄ -pyrophosphitodiplatinate(II). <i>Journal of the American Chemical Society</i> , 2009, 131, 502-508.	13.7	118
99	Structural kinetics in protein-coated gold nanoparticles probed by time-resolved x-ray scattering. <i>Springer Series in Chemical Physics</i> , 2009, , 134-136.	0.2	2
100	Capturing Transient Solute Structures in Solution by Pulsed X-ray Diffraction. <i>Springer Series in Chemical Physics</i> , 2009, , 131-133.	0.2	0
101	Protein dynamics probed by time-resolved X-ray scattering at the ESRF. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2009, 65, s35-s35.	0.3	0
102	Transient X-ray Diffraction Reveals Global and Major Reaction Pathways for the Photolysis of Iodoform in Solution. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 1047-1050.	13.8	53
103	Tracking the structural dynamics of proteins in solution using time-resolved wide-angle X-ray scattering. <i>Nature Methods</i> , 2008, 5, 881-886.	19.0	245
104	Capturing Transient Structures in the Elimination Reaction of Haloalkane in Solution by Transient X-ray Diffraction. <i>Journal of the American Chemical Society</i> , 2008, 130, 5834-5835.	13.7	54
105	Time-resolved X-ray scattering of an electronically excited state in metal complexes in solution. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2008, 64, C140-C140.	0.3	0
106	Picosecond Diffraction at the ESRF: How Far Have We Come and Where Are We Going?. <i>AIP Conference Proceedings</i> , 2007, , .	0.4	6
107	Tracking molecular motions in solution. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2007, 63, s104-s104.	0.3	0
108	Spatiotemporal reaction kinetics of an ultrafast photoreaction pathway visualized by time-resolved liquid x-ray diffraction. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 9410-9415.	7.1	64

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109	Impulsive solvent heating probed by picosecond x-ray diffraction. <i>Journal of Chemical Physics</i> , 2006, 124, 124504.	3.0	102
110	Spectral broadening of the Soret band in myoglobin: an interpretation by the full spectrum of low-frequency modes from a normal modes analysis. <i>European Biophysics Journal</i> , 2005, 34, 881-889.	2.2	4
111	Spectroscopic markers of the T \rightarrow R quaternary transition in human hemoglobin. <i>Biophysical Chemistry</i> , 2005, 114, 27-33.	2.8	9
112	Structural Determination of a Transient Isomer of CH2I2 by Picosecond X-Ray Diffraction. <i>Physical Review Letters</i> , 2005, 94, .	7.8	93
113	Ultrafast X-ray Diffraction of Transient Molecular Structures in Solution. <i>Science</i> , 2005, 309, 1223-1227.	12.6	230
114	Structure and dynamics of water confined in silica hydrogels: X-ray scattering and dielectric spectroscopy studies. <i>European Physical Journal E</i> , 2003, 12, 63-66.	1.6	37
115	Out-of-equilibrium dynamics driven by photoinduced charge transfer in CsCoFe Prussian blue analogue nanocrystals. <i>Faraday Discussions</i> , 0, 237, 224-236.	3.2	5