

Roberto Alonso Mori

List of Publications by Year in descending order

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113
papers

9,766
citations

36303

51
h-index

37204

96
g-index

116
all docs

116
docs citations

116
times ranked

11532
citing authors

#	ARTICLE	IF	CITATIONS
1	Identification of Highly Active Fe Sites in (Ni,Fe)OOH for Electrocatalytic Water Splitting. Journal of the American Chemical Society, 2015, 137, 1305-1313.	13.7	2,018
2	Structures of the intermediates of Kokâ€™s photosynthetic water oxidation clock. Nature, 2018, 563, 421-425.	27.8	386
3	Tracking excited-state charge and spin dynamics in iron coordination complexes. Nature, 2014, 509, 345-348.	27.8	382
4	Simultaneous Femtosecond X-ray Spectroscopy and Diffraction of Photosystem II at Room Temperature. Science, 2013, 340, 491-495.	12.6	378
5	Structure of photosystem II and substrate binding at room temperature. Nature, 2016, 540, 453-457.	27.8	323
6	Architecture of the synaptotagminâ€™SNARE machinery for neuronal exocytosis. Nature, 2015, 525, 62-67.	27.8	268
7	Taking snapshots of photosynthetic water oxidation using femtosecond X-ray diffraction and spectroscopy. Nature Communications, 2014, 5, 4371.	12.8	206
8	Nanoflow electrospinning serial femtosecond crystallography. Acta Crystallographica Section D: Biological Crystallography, 2012, 68, 1584-1587.	2.5	167
9	The X-ray Pumpâ€™Probe instrument at the Linacâ€™Coherent Light Source. Journal of Synchrotron Radiation, 2015, 22, 503-507.	2.4	159
10	Drop-on-demand sample delivery for studying biocatalysts in action at X-ray free-electron lasers. Nature Methods, 2017, 14, 443-449.	19.0	150
11	Untangling the sequence of events during the S ₂ â†’ S ₃ transition in photosystem II and implications for the water oxidation mechanism. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 12624-12635.	7.1	149
12	Room temperature femtosecond X-ray diffraction of photosystem II microcrystals. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 9721-9726.	7.1	144
13	Mapping the conformational landscape of a dynamic enzyme by multitemperature and XFEL crystallography. ELife, 2015, 4, .	6.0	143
14	Accurate macromolecular structures using minimal measurements from X-ray free-electron lasers. Nature Methods, 2014, 11, 545-548.	19.0	140
15	Femtosecond response of polyatomic molecules to ultra-intense hard X-rays. Nature, 2017, 546, 129-132.	27.8	139
16	A seven-crystal Johann-type hard x-ray spectrometer at the Stanford Synchrotron Radiation Lightsource. Review of Scientific Instruments, 2013, 84, 053102.	1.3	132
17	A multi-crystal wavelength dispersive x-ray spectrometer. Review of Scientific Instruments, 2012, 83, 073114.	1.3	130
18	Reflections on hard X-ray photon-in/photon-out spectroscopy for electronic structure studies. Journal of Electron Spectroscopy and Related Phenomena, 2013, 188, 17-25.	1.7	128

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19	Goniometer-based femtosecond crystallography with X-ray free electron lasers. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17122-17127.	7.1	122
20	Ultrafast energy- and momentum-resolved dynamics of magnetic correlations in the photo-doped Mott insulator Sr ₂ IrO ₄ . Nature Materials, 2016, 15, 601-605.	27.5	120
21	Energy-dispersive X-ray emission spectroscopy using an X-ray free-electron laser in a shot-by-shot mode. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 19103-19107.	7.1	113
22	Indications of radiation damage in ferredoxin microcrystals using high-intensity X-FEL beams. Journal of Synchrotron Radiation, 2015, 22, 225-238.	2.4	110
23	Metalloprotein entatic control of ligand-metal bonds quantified by ultrafast x-ray spectroscopy. Science, 2017, 356, 1276-1280.	12.6	109
24	Matter under extreme conditions experiments at the Linac Coherent Light Source. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 092001.	1.5	107
25	High-speed fixed-target serial virus crystallography. Nature Methods, 2017, 14, 805-810.	19.0	106
26	Electrochemical Oxidation of Size-Selected Pt Nanoparticles Studied Using in Situ High-Energy-Resolution X-ray Absorption Spectroscopy. ACS Catalysis, 2012, 2, 2371-2376.	11.2	105
27	Manipulating charge transfer excited state relaxation and spin crossover in iron coordination complexes with ligand substitution. Chemical Science, 2017, 8, 515-523.	7.4	102
28	Charge transfer driven by ultrafast spin transition in a CoFe Prussian blue analogue. Nature Chemistry, 2021, 13, 10-14.	13.6	96
29	Visualization of dynamic polaronic strain fields in hybrid lead halide perovskites. Nature Materials, 2021, 20, 618-623.	27.5	96
30	Electronic Structure of Sulfur Studied by X-ray Absorption and Emission Spectroscopy. Analytical Chemistry, 2009, 81, 6516-6525.	6.5	93
31	Five-element Johann-type x-ray emission spectrometer with a single-photon-counting pixel detector. Review of Scientific Instruments, 2011, 82, 065107.	1.3	93
32	Finding intersections between electronic excited state potential energy surfaces with simultaneous ultrafast X-ray scattering and spectroscopy. Chemical Science, 2019, 10, 5749-5760.	7.4	90
33	On the chemical state of Co oxide electrocatalysts during alkaline water splitting. Physical Chemistry Chemical Physics, 2013, 15, 17460.	2.8	89
34	Acoustic Injectors for Drop-On-Demand Serial Femtosecond Crystallography. Structure, 2016, 24, 631-640.	3.3	88
35	Femtosecond X-Ray Scattering Study of Ultrafast Photoinduced Structural Dynamics in Solvated $\left[\text{Co} \left(\text{terpy} \right) \right]^{2+}$ Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 92 Td (mathvariant="bold">terpy</math>	7.8	86
36	Observing Solvation Dynamics with Simultaneous Femtosecond X-ray Emission Spectroscopy and X-ray Scattering. Journal of Physical Chemistry B, 2016, 120, 1158-1168.	2.6	85

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37	Vibrational wavepacket dynamics in Fe carbene photosensitizer determined with femtosecond X-ray emission and scattering. <i>Nature Communications</i> , 2020, 11, 634.	12.8	75
38	Structural dynamics in the water and proton channels of photosystem II during the S2 to S3 transition. <i>Nature Communications</i> , 2021, 12, 6531.	12.8	73
39	Fixed target combined with spectral mapping: approaching 100% hit rates for serial crystallography. <i>Acta Crystallographica Section D: Structural Biology</i> , 2016, 72, 944-955.	2.3	71
40	Structure, Redox Chemistry, and Interfacial Alloy Formation in Monolayer and Multilayer Cu/Au(111) Model Catalysts for CO ₂ Electroreduction. <i>Journal of Physical Chemistry C</i> , 2014, 118, 7954-7961.	3.1	68
41	L-Edge X-ray Absorption Spectroscopy of Dilute Systems Relevant to Metalloproteins Using an X-ray Free-Electron Laser. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 3641-3647.	4.6	64
42	Polarized XANES Monitors Femtosecond Structural Evolution of Photoexcited Vitamin B ₁₂ . <i>Journal of the American Chemical Society</i> , 2017, 139, 1894-1899.	13.7	64
43	Experimental and Computational X-ray Emission Spectroscopy as a Direct Probe of Protonation States in Oxo-Bridged Mn ^{IV} Dimers Relevant to Redox-Active Metalloproteins. <i>Inorganic Chemistry</i> , 2013, 52, 12915-12922.	4.0	62
44	High-density grids for efficient data collection from multiple crystals. <i>Acta Crystallographica Section D: Structural Biology</i> , 2016, 72, 2-11.	2.3	62
45	Coherent X-rays reveal the influence of cage effects on ultrafast water dynamics. <i>Nature Communications</i> , 2018, 9, 1917.	12.8	59
46	Direct observation of coherent femtosecond solvent reorganization coupled to intramolecular electron transfer. <i>Nature Chemistry</i> , 2021, 13, 343-349.	13.6	59
47	Sulfur-Metal Orbital Hybridization in Sulfur-Bearing Compounds Studied by X-ray Emission Spectroscopy. <i>Inorganic Chemistry</i> , 2010, 49, 6468-6473.	4.0	56
48	Resonant Inelastic X-ray Scattering on Ferrous and Ferric Bis-imidazole Porphyrin and Cytochrome <i>c</i> : Nature and Role of the Axial Methionine-Fe Bond. <i>Journal of the American Chemical Society</i> , 2014, 136, 18087-18099.	13.7	56
49	Mix-and-inject XFEL crystallography reveals gated conformational dynamics during enzyme catalysis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 25634-25640.	7.1	56
50	Effect of alkalis on the Fe oxidation state and local environment in peralkaline rhyolitic glasses. <i>American Mineralogist</i> , 2012, 97, 468-475.	1.9	55
51	Performance of a beam-multiplexing diamond crystal monochromator at the Linac Coherent Light Source. <i>Review of Scientific Instruments</i> , 2014, 85, 063106.	1.3	55
52	The X-ray Correlation Spectroscopy instrument at the Linac Coherent Light Source. <i>Journal of Synchrotron Radiation</i> , 2015, 22, 508-513.	2.4	54
53	Solvent control of charge transfer excited state relaxation pathways in [Fe(2,2'-bipyridine)(CN) ₄] ²⁺ . <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 4238-4249.	2.8	52
54	Stimulated X-Ray Emission Spectroscopy in Transition Metal Complexes. <i>Physical Review Letters</i> , 2018, 120, 133203.	7.8	48

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55	Synchrotron imaging reveals bone healing and remodelling strategies in extinct and extant vertebrates. <i>Journal of the Royal Society Interface</i> , 2014, 11, 20140277.	3.4	47
56	Simultaneous detection of electronic structure changes from two elements of a bifunctional catalyst using wavelength-dispersive X-ray emission spectroscopy and in situ electrochemistry. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 8901-8912.	2.8	45
57	Elemental characterisation of melanin in feathers via synchrotron X-ray imaging and absorption spectroscopy. <i>Scientific Reports</i> , 2016, 6, 34002.	3.3	44
58	Ligand manipulation of charge transfer excited state relaxation and spin crossover in $[\text{Fe}(\text{2,2}'\text{-bipyridine})_2(\text{CN})_2]$. <i>Structural Dynamics</i> , 2017, 4, 044030.	2.3	41
59	Hot Branching Dynamics in a Light-Harvesting Iron Carbene Complex Revealed by Ultrafast X-ray Emission Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 364-372.	13.8	41
60	High-Resolution XFEL Structure of the Soluble Methane Monooxygenase Hydroxylase Complex with its Regulatory Component at Ambient Temperature in Two Oxidation States. <i>Journal of the American Chemical Society</i> , 2020, 142, 14249-14266.	13.7	41
61	No observable conformational changes in PSII. <i>Nature</i> , 2016, 533, E1-E2.	27.8	40
62	Soft X-ray spectroscopy with transition-edge sensors at Stanford Synchrotron Radiation Lightsource beamline 10-1. <i>Review of Scientific Instruments</i> , 2019, 90, 113101.	1.3	40
63	All-diamond optical assemblies for a beam-multiplexing X-ray monochromator at the Linac Coherent Light Source. <i>Journal of Applied Crystallography</i> , 2014, 47, 1329-1336.	4.5	39
64	Structural changes correlated with magnetic spin state isomorphism in the S_{2-} state of the Mn_4CaO_5 cluster in the oxygen-evolving complex of photosystem II. <i>Chemical Science</i> , 2016, 7, 5236-5248.	7.4	39
65	X-ray Emission Spectroscopy as an <i>in Situ</i> Diagnostic Tool for X-ray Crystallography of Metalloproteins Using an X-ray Free-Electron Laser. <i>Biochemistry</i> , 2018, 57, 4629-4637.	2.5	39
66	The Macromolecular Femtosecond Crystallography Instrument at the Linac Coherent Light Source. <i>Journal of Synchrotron Radiation</i> , 2019, 26, 346-357.	2.4	37
67	Leaf metallome preserved over 50 million years. <i>Metalomics</i> , 2014, 6, 774-782.	2.4	35
68	Photon-in photon-out hard X-ray spectroscopy at the Linac Coherent Light Source. <i>Journal of Synchrotron Radiation</i> , 2015, 22, 612-620.	2.4	35
69	Soft x-ray absorption spectroscopy of metalloproteins and high-valent metal-complexes at room temperature using free-electron lasers. <i>Structural Dynamics</i> , 2017, 4, 054307.	2.3	34
70	Ultrafast X-ray Absorption Near Edge Structure Reveals Ballistic Excited State Structural Dynamics. <i>Journal of Physical Chemistry A</i> , 2018, 122, 4963-4971.	2.5	34
71	Separation of Two-Electron Photoexcited Atomic Processes near the Inner-Shell Threshold. <i>Physical Review Letters</i> , 2009, 102, 143001.	7.8	32
72	Pheomelanin pigment remnants mapped in fossils of an extinct mammal. <i>Nature Communications</i> , 2019, 10, 2250.	12.8	30

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73	Relativistic and resonant effects in the ionization of heavy atoms by ultra-intense hard X-rays. <i>Nature Communications</i> , 2018, 9, 4200.	12.8	29
74	The mapping and differentiation of biological and environmental elemental signatures in the fossil remains of a 50 million year old bird. <i>Journal of Analytical Atomic Spectrometry</i> , 2015, 30, 627-634.	3.0	28
75	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.	7.1	28
76	In situ X-ray Raman spectroscopy of LiBH ₄ . <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 5581.	2.8	27
77	A versatile Johansson-type tender x-ray emission spectrometer. <i>Review of Scientific Instruments</i> , 2020, 91, 033101.	1.3	26
78	The Photoactive Excited State of the B ₁₂ -Based Photoreceptor CarH. <i>Journal of Physical Chemistry B</i> , 2020, 124, 10732-10738.	2.6	25
79	Methods development for diffraction and spectroscopy studies of metalloenzymes at X-ray free-electron lasers. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2014, 369, 20130590.	4.0	23
80	Core-level nonlinear spectroscopy triggered by stochastic X-ray pulses. <i>Nature Communications</i> , 2019, 10, 4761.	12.8	23
81	X-ray free-electron laser studies reveal correlated motion during isopenicillin <i>N</i> synthase catalysis. <i>Science Advances</i> , 2021, 7, .	10.3	23
82	Resolving structures of transition metal complex reaction intermediates with femtosecond EXAFS. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 2660-2666.	2.8	21
83	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.	2.4	20
84	Demonstration of simultaneous experiments using thin crystal multiplexing at the Linac Coherent Light Source. <i>Journal of Synchrotron Radiation</i> , 2015, 22, 626-633.	2.4	20
85	Observation of Seeded Mn K _L ² Stimulated X-Ray Emission Using Two-Color X-Ray Free-Electron Laser Pulses. <i>Physical Review Letters</i> , 2020, 125, 037404.	7.8	20
86	X-ray absorption spectroscopy using a self-seeded soft X-ray free-electron laser. <i>Optics Express</i> , 2016, 24, 22469.	3.4	19
87	Towards characterization of photo-excited electron transfer and catalysis in natural and artificial systems using XFELs. <i>Faraday Discussions</i> , 2016, 194, 621-638.	3.2	19
88	Separate measurement of the 5f _{5/2} and 5f _{7/2} unoccupied density of states of UO ₂ . <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2019, 232, 100-104.	1.7	19
89	Photoreversible interconversion of a phytochrome photosensory module in the crystalline state. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 300-307.	7.1	19
90	Laser-induced transient magnons in Sr ₃ Ir ₂ O ₇ throughout the Brillouin zone. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	19

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91	Focus characterization at an X-ray free-electron laser by coherent scattering and speckle analysis. <i>Journal of Synchrotron Radiation</i> , 2015, 22, 599-605.	2.4	18
92	The Mn \rightarrow Ca photosynthetic water-oxidation catalyst studied by simultaneous X-ray spectroscopy and crystallography using an X-ray free-electron laser. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2014, 369, 20130324.	4.0	17
93	Ultrafast XANES Monitors Femtosecond Sequential Structural Evolution in Photoexcited Coenzyme B ₁₂ . <i>Journal of Physical Chemistry B</i> , 2020, 124, 199-209.	2.6	17
94	Short-lived metal-centered excited state initiates iron-methionine photodissociation in ferrous cytochrome c. <i>Nature Communications</i> , 2021, 12, 1086.	12.8	17
95	XANES and EXAFS of dilute solutions of transition metals at XFELs. <i>Journal of Synchrotron Radiation</i> , 2019, 26, 1716-1724.	2.4	16
96	Excited state charge distribution and bond expansion of ferrous complexes observed with femtosecond valence-to-core x-ray emission spectroscopy. <i>Journal of Chemical Physics</i> , 2020, 152, 074203.	3.0	15
97	Bioturbating animals control the mobility of redox-sensitive trace elements in organic-rich mudstone. <i>Geology</i> , 2015, 43, 1007-1010.	4.4	14
98	ePix100 camera: Use and applications at LCLS. <i>AIP Conference Proceedings</i> , 2016, , .	0.4	14
99	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
100	A high-throughput energy-dispersive tender X-ray spectrometer for shot-to-shot sulfur measurements. <i>Journal of Synchrotron Radiation</i> , 2019, 26, 629-634.	2.4	11
101	Antivitamins B ₁₂ in a Microdrop: The Excited-State Structure of a Precious Sample Using Transient Polarized X-ray Absorption Near-Edge Structure. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 5484-5489.	4.6	10
102	Effects of x-ray free-electron laser pulse intensity on the Mn K $\beta_{1,3}$ x-ray emission spectrum in photosystem II—A case study for metalloprotein crystals and solutions. <i>Structural Dynamics</i> , 2021, 8, 064302.	2.3	10
103	Femtosecond X-ray Spectroscopy Directly Quantifies Transient Excited-State Mixed Valency. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 378-386.	4.6	9
104	Diagram, valence-to-core, and hypersatellite K $\beta_{1,3}$ X-ray transitions in metallic chromium. <i>X-Ray Spectrometry</i> , 2019, 48, 351-359.	1.4	6
105	Pulse Energy and Pulse Duration Effects in the Ionization and Fragmentation of Iodomethane by Ultraintense Hard X Rays. <i>Physical Review Letters</i> , 2021, 127, 093202.	7.8	6
106	XFEL serial crystallography reveals the room temperature structure of methyl-coenzyme M reductase. <i>Journal of Inorganic Biochemistry</i> , 2022, 230, 111768.	3.5	6
107	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
108	Resonant X-ray emission spectroscopy from broadband stochastic pulses at an X-ray free electron laser. <i>Communications Chemistry</i> , 2021, 4, .	4.5	4

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109	Generation of intense phase-stable femtosecond hard X-ray pulse pairs. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2119616119.	7.1	4
110	Goniometer-based femtosecond X-ray diffraction of mutant 30S ribosomal subunit crystals. Structural Dynamics, 2015, 2, 041706.	2.3	1
111	Sample Preparation and Data Collection for High-Speed Fixed-Target Serial Femtosecond Crystallography. Protocol Exchange, 0, , .	0.3	1
112	X-Ray Spectroscopy with XFELs. , 2018, , 377-399.		1
113	Analytic von Hamos geometry optimization and calibration. , 2021, , .		0