Junko Yano

List of Publications by Year
in descending order

121	13,151	28274	22832
papers	citations	55 h-index	112 g-index

124	124	124	14369
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Where Water Is Oxidized to Dioxygen: Structure of the Photosynthetic Mn4Ca Cluster. Science, 2006, 314, 821-825.	12.6	782
2	Structure and Valency of a Cobaltâ˜Phosphate Water Oxidation Catalyst Determined by in Situ X-ray Spectroscopy. Journal of the American Chemical Society, 2010, 132, 13692-13701.	13.7	649
3	X-ray damage to the Mn4Ca complex in single crystals of photosystem II: A case study for metalloprotein crystallography. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 12047-12052.	7.1	585
4	Mn₄Ca Cluster in Photosynthesis: Where and How Water is Oxidized to Dioxygen. Chemical Reviews, 2014, 114, 4175-4205.	47.7	574
5	Electrodeposited Cobalt-Sulfide Catalyst for Electrochemical and Photoelectrochemical Hydrogen Generation from Water. Journal of the American Chemical Society, 2013, 135, 17699-17702.	13.7	540
6	In Situ X-ray Absorption Spectroscopy Investigation of a Bifunctional Manganese Oxide Catalyst with High Activity for Electrochemical Water Oxidation and Oxygen Reduction. Journal of the American Chemical Society, 2013, 135, 8525-8534.	13.7	478
7	Structures of the intermediates of Kokâ€™s photosynthetic water oxidation clock. Nature, 2018, 563, 421-425.	27.8	386
8	Simultaneous Femtosecond X-ray Spectroscopy and Diffraction of Photosystem II at Room Temperature. Science, 2013, 340, 491-495.	12.6	378
9	Subsurface oxide plays a critical role in CO ₂ activation by Cu(111) surfaces to form chemisorbed CO ₂ , the first step in reduction of CO ₂. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 6706-6711.	7.1	363
10	Electronic Structure of Monoclinic BiVO₄. Chemistry of Materials, 2014, 26, 5365-5373.	6.7	356
11	Signature of Metallic Behavior in the Metalâ€“Organic Frameworks M₃(hexaiminobenzene)₂ (M = Ni, Cu). Journal of the American Chemical Society, 2017, 139, 13608-13611.	13.7	324
12	Structure of photosystem II and substrate binding at room temperature. Nature, 2016, 540, 453-457.	27.8	323
13	Redox-inactive metals modulate the reduction potential in heterometallic manganeseâ€“oxido clusters. Nature Chemistry, 2013, 5, 293-299.	13.6	289
14	X-ray absorption spectroscopy. Photosynthesis Research, 2009, 102, 241-254.	2.9	285
15	Unravelling the electrochemical double layer by direct probing of the solid/liquid interface. Nature Communications, 2016, 7, 12695.	12.8	267
16	Synthetic model of the asymmetric [Mn ₃ CaO ₄] cubane core of the oxygen-evolving complex of photosystem II. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 2257-2262.	7.1	259
17	Understanding the Oxygen Evolution Reaction Mechanism on CoO_x using Operando Ambient-Pressure X-ray Photoelectron Spectroscopy. Journal of the American Chemical Society, 2017, 139, 8960-8970.	13.7	241
18	A multifunctional biphasic water splitting catalyst tailored for integration with high-performance semiconductor photoanodes. Nature Materials, 2017, 16, 335-341.	27.5	217

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19	Universal Surface Engineering of Transition Metals for Superior Electrocatalytic Hydrogen Evolution in Neutral Water. Journal of the American Chemical Society, 2017, 139, 12283-12290.	13.7	207
20	Taking snapshots of photosynthetic water oxidation using femtosecond X-ray diffraction and spectroscopy. Nature Communications, 2014, 5, 4371.	12.8	206
21	Efficient and Sustained Photoelectrochemical Water Oxidation by Cobalt Oxide/Silicon Photoanodes with Nanotextured Interfaces. Journal of the American Chemical Society, 2014, 136, 6191-6194.	13.7	204
22	The Electronic Structure of Mn in Oxides, Coordination Complexes, and the Oxygen-Evolving Complex of Photosystem II Studied by Resonant Inelastic X-ray Scattering. Journal of the American Chemical Society, 2004, 126, 9946-9959.	13.7	177
23	Structural changes in the Mn₄Ca cluster and the mechanism of photosynthetic water splitting. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 1879-1884.	7.1	174
24	Oxidation State and Surface Reconstruction of Cu under CO₂ Reduction Conditions from In Situ X-ray Characterization. Journal of the American Chemical Society, 2021, 143, 588-592.	13.7	172
25	Nanoflow electrospinning serial femtosecond crystallography. Acta Crystallographica Section D: Biological Crystallography, 2012, 68, 1584-1587.	2.5	167
26	Mechanistic Evidence for Ligand-Centered Electrocatalytic Oxygen Reduction with the Conductive MOF Ni₃(hexaiminotriphenylene)₂. ACS Catalysis, 2017, 7, 7726-7731.	11.2	164
27	An Operando Investigation of (Niâ€“Feâ€“Coâ€“Ce)O_x System as Highly Efficient Electrocatalyst for Oxygen Evolution Reaction. ACS Catalysis, 2017, 7, 1248-1258.	11.2	156
28	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
29	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
30	Structural Changes of the Oxygen-evolving Complex in Photosystem II during the Catalytic Cycle. Journal of Biological Chemistry, 2013, 288, 22607-22620.	3.4	145
31	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
32	Where Water Is Oxidized to Dioxygen: Structure of the Photosynthetic Mn₄Ca Cluster from X-ray Spectroscopy. Inorganic Chemistry, 2008, 47, 1711-1726.	4.0	143
33	Accurate macromolecular structures using minimal measurements from X-ray free-electron lasers. Nature Methods, 2014, 11, 545-548.	19.0	140
34	X-ray spectroscopy of the photosynthetic oxygen-evolving complex. Coordination Chemistry Reviews, 2008, 252, 318-335.	18.8	133
35	A multi-crystal wavelength dispersive x-ray spectrometer. Review of Scientific Instruments, 2012, 83, 073114.	1.3	130
36	Operando Spectroscopic Analysis of CoP Films Electrocatalyzing the Hydrogen-Evolution Reaction. Journal of the American Chemical Society, 2017, 139, 12927-12930.	13.7	127

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37	High-spin Mnâ€“oxo complexes and their relevance to the oxygen-evolving complex within photosystem II. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 5319-5324.	7.1	123
38	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
39	Concentric-flow electrokinetic injector enables serial crystallography of ribosome and photosystem II. Nature Methods, 2016, 13, 59-62.	19.0	103
40	Rutile Alloys in the Mnâ€“Sbâ€“O System Stabilize Mn³⁺ To Enable Oxygen Evolution in Strong Acid. ACS Catalysis, 2018, 8, 10938-10948.	11.2	97
41	Effect of oxygen deficiency on the excited state kinetics of WO₃ and implications for photocatalysis. Chemical Science, 2019, 10, 5667-5677.	7.4	97
42	Graphite-Conjugated Pyrazines as Molecularly Tunable Heterogeneous Electrocatalysts. Journal of the American Chemical Society, 2015, 137, 10926-10929.	13.7	95
43	Random forest machine learning models for interpretable X-ray absorption near-edge structure spectrum-property relationships. Npj Computational Materials, 2020, 6, .	8.7	94
44	Acoustic Injectors for Drop-On-Demand Serial Femtosecond Crystallography. Structure, 2016, 24, 631-640.	3.3	88
45	Multiphase Nanostructure of a Quinary Metal Oxide Electrocatalyst Reveals a New Direction for OER Electrocatalyst Design. Advanced Energy Materials, 2015, 5, 1402307.	19.5	85
46	Investigation and mitigation of degradation mechanisms in Cu2O photoelectrodes for CO2 reduction to ethylene. Nature Energy, 2021, 6, 1124-1132.	39.5	85
47	Metalâ€“Ligand Cooperativity via Exchange Coupling Promotes Iron- Catalyzed Electrochemical CO₂ Reduction at Low Overpotentials. Journal of the American Chemical Society, 2020, 142, 20489-20501.	13.7	77
48	Structural dynamics in the water and proton channels of photosystem II during the S2 to S3 transition. Nature Communications, 2021, 12, 6531.	12.8	73
49	L-Edge X-ray Absorption Spectroscopy of Dilute Systems Relevant to Metalloproteins Using an X-ray Free-Electron Laser. Journal of Physical Chemistry Letters, 2013, 4, 3641-3647.	4.6	64
50	Dramatic differences in carbon dioxide adsorption and initial steps of reduction between silver and copper. Nature Communications, 2019, 10, 1875.	12.8	63
51	High-density grids for efficient data collection from multiple crystals. Acta Crystallographica Section D: Structural Biology, 2016, 72, 2-11.	2.3	62
52	Structural insights into the light-driven auto-assembly process of the water-oxidizing Mn4CaO5-cluster in photosystem II. ELife, 2017, 6, .	6.0	62
53	Probing the oxidation state of transition metal complexes: a case study on how charge and spin densities determine Mn L-edge X-ray absorption energies. Chemical Science, 2018, 9, 6813-6829.	7.4	60
54	Using X-ray free-electron lasers for spectroscopy of molecular catalysts and metalloenzymes. Nature Reviews Physics, 2021, 3, 264-282.	26.6	60

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55	Electronic Structural Changes of Mn in the Oxygen-Evolving Complex of Photosystem II during the Catalytic Cycle. Inorganic Chemistry, 2013, 52, 5642-5644.	4.0	57
56	In situ/Operando studies of electrocatalysts using hard X-ray spectroscopy. Journal of Electron Spectroscopy and Related Phenomena, 2017, 221, 18-27.	1.7	53
57	Probing the Surface of Platinum during the Hydrogen Evolution Reaction in Alkaline Electrolyte. Journal of Physical Chemistry B, 2018, 122, 864-870.	2.6	50
58	Improving signal strength in serial crystallography with DIALS geometry refinement. Acta Crystallographica Section D: Structural Biology, 2018, 74, 877-894.	2.3	49
59	Stimulated X-Ray Emission Spectroscopy in Transition Metal Complexes. Physical Review Letters, 2018, 120, 133203.	7.8	48
60	Simultaneous detection of electronic structure changes from two elements of a bifunctional catalyst using wavelength-dispersive X-ray emission spectroscopy and in situ electrochemistry. Physical Chemistry Chemical Physics, 2015, 17, 8901-8912.	2.8	45
61	CuBi₂O₄: Electronic Structure, Optical Properties, and Photoelectrochemical Performance Limitations of the Photocathode. Chemistry of Materials, 2021, 33, 934-945.	6.7	45
62	High-Resolution XFEL Structure of the Soluble Methane Monooxygenase Hydroxylase Complex with its Regulatory Component at Ambient Temperature in Two Oxidation States. Journal of the American Chemical Society, 2020, 142, 14249-14266.	13.7	41
63	Role of oxido incorporation and ligand lability in expanding redox accessibility of structurally related Mn4 clusters. Chemical Science, 2013, 4, 3986.	7.4	40
64	No observable conformational changes in PSII. Nature, 2016, 533, E1-E2.	27.8	40
65	Reversible Interlayer Sliding and Conductivity Changes in Adaptive Tetrathiafulvalene-Based Covalent Organic Frameworks. ACS Applied Materials & Interfaces, 2020, 12, 19054-19061.	8.0	40
66	Structural changes correlated with magnetic spin state isomorphism in the S₂ state of the Mn₄CaO₅ cluster in the oxygen-evolving complex of photosystem II. Chemical Science, 2016, 7, 5236-5248.	7.4	39
67	X-ray Emission Spectroscopy as an in Situ Diagnostic Tool for X-ray Crystallography of Metalloproteins Using an X-ray Free-Electron Laser. Biochemistry, 2018, 57, 4629-4637.	2.5	39
68	Electrochemical flow cell enabling operando probing of electrocatalyst surfaces by X-ray spectroscopy and diffraction. Physical Chemistry Chemical Physics, 2019, 21, 5402-5408.	2.8	38
69	Metalloprotein structures at ambient conditions and in real-time: biological crystallography and spectroscopy using X-ray free electron lasers. Current Opinion in Structural Biology, 2015, 34, 87-98.	5.7	34
70	Soft x-ray absorption spectroscopy of metalloproteins and high-valent metal-complexes at room temperature using free-electron lasers. Structural Dynamics, 2017, 4, 054307.	2.3	34
71	Tetranuclear [Mn^{III}Mn₃^{IV}O₄] Complexes as Spectroscopic Models of the S₂ State of the Oxygen Evolving Complex in Photosystem II. Journal of the American Chemical Society, 2018, 140, 17175-17187.	13.7	34
72	An on-demand, drop-on-drop method for studying enzyme catalysis by serial crystallography. Nature Communications, 2021, 12, 4461.	12.8	34

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73	Direct Determination of Absolute Absorption Cross Sections at the L-Edge of Dilute Mn Complexes in Solution Using a Transmission Flatjet. Inorganic Chemistry, 2018, 57, 5449-5462.	4.0	32
74	Improvements in serial femtosecond crystallography of photosystem II by optimizing crystal uniformity using microseeding procedures. Structural Dynamics, 2015, 2, .	2.3	30
75	Iron detection and remediation with a functionalized porous polymer applied to environmental water samples. Chemical Science, 2019, 10, 6651-6660.	7.4	30
76	Structural isomers of the S₂ state in photosystem II: do they exist at room temperature and are they important for function?. Physiologia Plantarum, 2019, 166, 60-72.	5.2	30
77	The case for data science in experimental chemistry: examples and recommendations. Nature Reviews Chemistry, 2022, 6, 357-370.	30.2	29
78	Stabilizing the Meniscus for Operando Characterization of Platinum During the Electrolyte-Consuming Alkaline Oxygen Evolution Reaction. Topics in Catalysis, 2018, 61, 2152-2160.	2.8	28
79	Methods development for diffraction and spectroscopy studies of metalloenzymes at X-ray free-electron lasers. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130590.	4.0	23
80	Determining Atomic-Scale Structure and Composition of Organo-Lead Halide Perovskites by Combining High-Resolution X-ray Absorption Spectroscopy and First-Principles Calculations. ACS Energy Letters, 2017, 2, 1183-1189.	17.4	23
81	Accelerated Oxygen Atom Transfer and Câ˜H Bond Oxygenation by Remote Redox Changes in Fe₃Mnâ€Iodosobenzene Adducts. Angewandte Chemie - International Edition, 2017, 56, 4772-4776.	13.8	23
82	X-ray-induced sample damage at the Mn L-edge: a case study for soft X-ray spectroscopy of transition metal complexes in solution. Physical Chemistry Chemical Physics, 2018, 20, 16817-16827.	2.8	23
83	X-ray free-electron laser studies reveal correlated motion during isopenicillin N synthase catalysis. Science Advances, 2021, 7, .	10.3	23
84	S = 3 Ground State for a Tetranuclear Mn^{IV}₄O₄ Complex Mimicking the S₃ State of the Oxygen-Evolving Complex. Journal of the American Chemical Society, 2020, 142, 3753-3761.	13.7	22
85	New reflections on hard X-ray photon-in/photon-out spectroscopy. Nanoscale, 2020, 12, 16270-16284.	5.6	21
86	Stability and Activity of Cobalt Antimonate for Oxygen Reduction in Strong Acid. ACS Energy Letters, 2022, 7, 993-1000.	17.4	21
87	Observation of Seeded Mn KÎ² Stimulated X-Ray Emission Using Two-Color X-Ray Free-Electron Laser Pulses. Physical Review Letters, 2020, 125, 037404.	7.8	20
88	X-ray absorption spectroscopy using a self-seeded soft X-ray free-electron laser. Optics Express, 2016, 24, 22469.	3.4	19
89	Initial Steps in Forming the Electrodeâ€“Electrolyte Interface: H2O Adsorption and Complex Formation on the Ag(111) Surface from Combining Quantum Mechanics Calculations and Ambient Pressure X-ray Photoelectron Spectroscopy. Journal of the American Chemical Society, 2019, 141, 6946-6954.	13.7	19
90	Photoreversible interconversion of a phytochrome photosensory module in the crystalline state. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 300-307.	7.1	19

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91	Synergy between a Silverâ€“Copper Surface Alloy Composition and Carbon Dioxide Adsorption and Activation. ACS Applied Materials & Interfaces, 2020, 12, 25374-25382.	8.0	19
92	Cr L-Edge X-ray Absorption Spectroscopy of Cr^{III}(acac)₃ in Solution with Measured and Calculated Absolute Absorption Cross Sections. Journal of Physical Chemistry B, 2018, 122, 7375-7384.	2.6	18
93	The Mn ₄ Ca photosynthetic water-oxidation catalyst studied by simultaneous X-ray spectroscopy and crystallography using an X-ray free-electron laser. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130324.	4.0	17
94	XANES and EXAFS of dilute solutions of transition metals at XFELs. Journal of Synchrotron Radiation, 2019, 26, 1716-1724.	2.4	16
95	Combinatorial Discovery of Lanthanumâ€“Tantalum Oxynitride Solar Light Absorbers with Dilute Nitrogen for Solar Fuel Applications. ACS Combinatorial Science, 2018, 20, 26-34.	3.8	15
96	Molecular Level Insight into Enhanced nâ€Type Transport in Solutionâ€Printed Hybrid Thermoelectrics. Advanced Energy Materials, 2019, 9, 1803469.	19.5	14
97	Towards the spatial resolution of metalloprotein charge states by detailed modeling of XFEL crystallographic diffraction. Acta Crystallographica Section D: Structural Biology, 2020, 76, 176-192.	2.3	14
98	Mixed-Valent Diiron Î¼-Carbyne, Î¼-Hydride Complexes: Implications for Nitrogenase. Journal of the American Chemical Society, 2020, 142, 18795-18813.	13.7	13
99	Mesoscopic to Macroscopic Electron Transfer by Hopping in a Crystal Network of Cytochromes. Journal of the American Chemical Society, 2020, 142, 10459-10467.	13.7	13
100	Operando X-ray absorption spectroscopy of hyperfine Î²-FeOOH nanorods modified with amorphous Ni(OH)2 under electrocatalytic water oxidation conditions. Chemical Communications, 2020, 56, 5158-5161.	4.1	12
101	Tracing the incorporation of the â€œninth sulfurâ€•into the nitrogenase cofactor precursor with selenite and tellurite. Nature Chemistry, 2021, 13, 1228-1234.	13.6	12
102	Dynamics and Hysteresis of Hydrogen Intercalation and Deintercalation in Palladium Electrodes: A Multimodal In Situ X-ray Diffraction, Coulometry, and Computational Study. Chemistry of Materials, 2021, 33, 5872-5884.	6.7	11
103	Room temperature XFEL crystallography reveals asymmetry in the vicinity of the two phylloquinones in photosystem I. Scientific Reports, 2021, 11, 21787.	3.3	11
104	Artificial Iron Proteins: Modeling the Active Sites in Non-Heme Dioxygenases. Inorganic Chemistry, 2020, 59, 6000-6009.	4.0	10
105	Effects of x-ray free-electron laser pulse intensity on the Mn KÎ²_{1,3} x-ray emission spectrum in photosystem IIâ€”A case study for metalloprotein crystals and solutions. Structural Dynamics, 2021, 8, 064302.	2.3	10
106	Optimizing Crystal Size of Photosystem II by Macroseeding: Toward Neutron Protein Crystallography. Crystal Growth and Design, 2018, 18, 85-94.	3.0	9
107	Beyond integration: modeling every pixel to obtain better structure factors from stills. IUCrJ, 2020, 7, 1151-1167.	2.2	8
108	Reply to Wang et al.: Clear evidence of binding of Ox to the oxygen-evolving complex of photosystem II is best observed in the omit map. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, e2102342118.	7.1	7

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109	Band Edge Energy Tuning through Electronic Character Hybridization in Ternary Metal Vanadates. Chemistry of Materials, 2021, 33, 7242-7253.	6.7	7
110	XFEL serial crystallography reveals the room temperature structure of methyl-coenzyme M reductase. Journal of Inorganic Biochemistry, 2022, 230, 111768.	3.5	6
111	Addressing solar photochemistry durability with an amorphous nickel antimonate photoanode. Cell Reports Physical Science, 2022, 3, 100959.	5.6	6
112	N-Heterocyclic Linkages Are Produced from Condensation of Amidines onto Graphitic Carbon. Chemistry of Materials, 2020, 32, 8512-8521.	6.7	4
113	Resonant X-ray emission spectroscopy from broadband stochastic pulses at an X-ray free electron laser. Communications Chemistry, 2021, 4, .	4.5	4
114	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
115	Accelerated Oxygen Atom Transfer and Câ˜H Bond Oxygenation by Remote Redox Changes in Fe 3 Mnâ€Iodosobenzene Adducts. Angewandte Chemie, 2017, 129, 4850-4854.	2.0	3
116	Droplet On Tape: Protocol. Protocol Exchange, 0, , .	0.3	3
117	Carbon dioxide adsorption and activation on gallium phosphide surface monitored by ambient pressure x-ray photoelectron spectroscopy. Journal Physics D: Applied Physics, 2021, 54, 234002.	2.8	2
118	Photosynthesis | Photosystem II: Water Oxidation, Overview. , 2021, , 229-235.		1
119	X-Ray Spectroscopy with XFELs. , 2018, , 377-399.		1
120	Characterization of Chemically Modified TiO₂ Synthesized via Sustainable Superoxidation of Ti. Journal of Physical Chemistry C, 2022, 126, 6223-6230.	3.1	1
121	Hybrid Thermoelectrics: Molecular Level Insight into Enhanced nâ€Type Transport in Solutionâ€Printed Hybrid Thermoelectrics (Adv. Energy Mater. 13/2019). Advanced Energy Materials, 2019, 9, 1970041.	19.5	0