Flora Meilleur

List of Publications by Year
in descending order

69 papers	1,764 citations	257357 24 h-index	302012 39 g-index
76 all docs	76 docs citations	76 times ranked	1920 citing authors

#	Article	IF	Citations
1	Refinement of macromolecular structures against neutron data withSHELXL2013. Journal of Applied Crystallography, 2014, 47, 462-466.	1.9	152
2	The P132H mutation in the main protease of Omicron SARS-CoV-2 decreases thermal stability without compromising catalysis or small-molecule drug inhibition. Cell Research, 2022, 32, 498-500.	5.7	85
3	Neutron protein crystallography: A complementary tool for locating hydrogens in proteins. Archives of Biochemistry and Biophysics, 2016, 602, 48-60.	1.4	83
4	Oxygen Activation at the Active Site of a Fungal Lytic Polysaccharide Monooxygenase. Angewandte Chemie - International Edition, 2017, 56, 767-770.	7.2	78
5	Quantum model of catalysis based on a mobile proton revealed by subatomic x-ray and neutron diffraction studies of h-aldose reductase. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 1844-1848.	3.3	74
6	The IMAGINE instrument: first neutron protein structure and new capabilities for neutron macromolecular crystallography. Acta Crystallographica Section D: Biological Crystallography, 2013, 69, 2157-2160.	2.5	73
7	Expression, purification, assay, and crystal structure of perdeuterated human arginase I. Archives of Biochemistry and Biophysics, 2007, 465, 82-89.	1.4	65
8	High-resolution neutron protein crystallography with radically small crystal volumes: application of perdeuteration to human aldose reductase. Acta Crystallographica Section D: Biological Crystallography, 2005, 61, 1413-1417.	2.5	61
9	Deuterium Labeling for Neutron Structure-Function-Dynamics Analysis. Methods in Molecular Biology, 2009, 544, 281-292.	0.4	55
10	New sources and instrumentation for neutrons in biology. Chemical Physics, 2008, 345, 133-151.	0.9	53
11	Neutron scattering in the biological sciences: progress and prospects. Acta Crystallographica Section D: Structural Biology, 2018, 74, 1129-1168.	1.1	47
12	Structural Stability and Dynamics of Hydrogenated and Perdeuterated Cytochrome P450cam (CYP101)â€. Biochemistry, 2004, 43, 8744-8753.	1.2	46
13	Neutron Crystal Structure of RAS GTPase Puts in Question the Protonation State of the GTP Î³-Phosphate. Journal of Biological Chemistry, 2015, 290, 31025-31036.	1.6	44
14	Open Conformation of Ezrin Bound to Phosphatidylinositol 4,5-Bisphosphate and to F-actin Revealed by Neutron Scattering. Journal of Biological Chemistry, 2012, 287, 37119-37133.	1.6	43
15	A suite-level review of the neutron single-crystal diffraction instruments at Oak Ridge National Laboratory. Review of Scientific Instruments, 2018, 89, 092802.	0.6	43
16	Unambiguous determination of H-atom positions: comparing results from neutron and high-resolution X-ray crystallography. Acta Crystallographica Section D: Biological Crystallography, 2010, 66, 558-567.	2.5	40
17	Production and X-ray crystallographic analysis of fully deuterated cytochrome P450cam. Acta Crystallographica Section D: Biological Crystallography, 2005, 61, 539-544.	2.5	29
18	A quasi-Laue neutron crystallographic study of d-xylose isomerase. European Biophysics Journal, 2006, 35, 601-609.	1.2	28

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19	Comparison of hydrogen determination with X-ray and neutron crystallography in a human aldose reductaseâ€“inhibitor complex. European Biophysics Journal, 2006, 35, 577-583.	1.2	27
20	Scattering functions of Platonic solids. Journal of Applied Crystallography, 2011, 44, 545-557.	1.9	26
21	Rapid visualization of hydrogen positions in protein neutron crystallographic structures. Acta Crystallographica Section D: Biological Crystallography, 2012, 68, 35-41.	2.5	26
22	Structural investigation of cellobiose dehydrogenase IIA: Insights from small angle scattering into intra- and intermolecular electron transfer mechanisms. Biochimica Et Biophysica Acta - General Subjects, 2018, 1862, 1031-1039.	1.1	26
23	The Neutron Macromolecular Crystallography Instruments at Oak Ridge National Laboratory: Advances, Challenges, and Opportunities. Crystals, 2018, 8, 388.	1.0	26
24	Modulating Enzyme Activity by Altering Protein Dynamics with Solvent. Biochemistry, 2018, 57, 4263-4275.	1.2	26
25	Neutron Laue macromolecular crystallography. European Biophysics Journal, 2006, 35, 611-620.	1.2	25
26	The Structure of Sindbis Virus Produced from Vertebrate and Invertebrate Hosts as Determined by Small-Angle Neutron Scattering. Journal of Virology, 2010, 84, 5270-5276.	1.5	25
27	IMAGINE: neutrons reveal enzyme chemistry. Acta Crystallographica Section D: Structural Biology, 2018, 74, 778-786.	1.1	25
28	The mechanisms of catalysis and ligand binding for the SARS-CoV-2 NSP3 macrodomain from neutron and x-ray diffraction at room temperature. Science Advances, 2022, 8, .	4.7	24
29	Neutron protein crystallography at ultra-low (<15â€…K) temperatures. Journal of Applied Crystallography, 2012, 45, 686-692.	1.9	23
30	Crystal structures of wildâ€type Trichoderma reesei Cel7A catalytic domain in open and closed states. FEBS Letters, 2016, 590, 4429-4438.	1.3	23
31	Interplay of Intrinsic and Environmental Effects on the Magnetic Properties of Free Radicals Issuing from H-Atom Addition to Cytosine. Journal of the American Chemical Society, 2001, 123, 7113-7117.	6.6	22
32	IMAGINE: The neutron protein crystallography beamline at the high flux isotope reactor. Methods in Enzymology, 2020, 634, 69-85.	0.4	21
33	Next-generation diamond cell and applications to single-crystal neutron diffraction. Review of Scientific Instruments, 2018, 89, 092902.	0.6	20
34	Characterization of image plates for neutron diffraction. Journal of Applied Crystallography, 2009, 42, 749-757.	1.9	19
35	Structural studies of Neurospora crassa LPMO9D and redox partner CDHIIA using neutron crystallography and small-angle scattering. Carbohydrate Research, 2017, 448, 200-204.	1.1	19
36	Neutron crystallographic studies of T4 lysozyme at cryogenic temperature. Protein Science, 2017, 26, 2098-2104.	3.1	19

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37	Neutron Scattering Techniques and Applications in Structural Biology. Current Protocols in Protein Science, 2013, 72, Unit17.16.	2.8	18
38	Neutron structure of the cyclic glucose-bound xylose isomerase E186Q mutant. Acta Crystallographica Section D: Biological Crystallography, 2014, 70, 414-420.	2.5	17
39	A preliminary neutron diffraction study of rasburicase, a recombinant urate oxidase enzyme, complexed with 8-azaxanthin. Acta Crystallographica Section F: Structural Biology Communications, 2006, 62, 306-309.	0.7	16
40	Redox-Promoting Protein Motions in Rubredoxin. Journal of Physical Chemistry B, 2011, 115, 8925-8936.	1.2	14
41	Crystallization of a fungal lytic polysaccharide monooxygenase expressed from glycoengineeredPichia pastorisfor X-ray and neutron diffraction. Acta Crystallographica Section F, Structural Biology Communications, 2017, 73, 70-78.	0.4	14
42	An extended N-H bond, driven by a conserved second-order interaction, orients the flavin N5 orbital in cholesterol oxidase. Scientific Reports, 2017, 7, 40517.	1.6	14
43	Preliminary neutron crystallographic analysis of selectively CH₃-protonated deuterated rubredoxin fromPyrococcus furiosus. Acta Crystallographica Section F: Structural Biology Communications, 2008, 64, 537-540.	0.7	13
44	Conformational Changes in Sindbis Virus Induced by Decreased pH Are Revealed by Small-Angle Neutron Scattering. Journal of Virology, 2012, 86, 1982-1987.	1.5	13
45	Neutron structure of the T26H mutant of T4 phage lysozyme provides insight into the catalytic activity of the mutant enzyme and how it differs from that of wild type. Protein Science, 2017, 26, 1953-1963.	3.1	13
46	Optimizing crystal volume for neutron diffraction: D-xylose isomerase. European Biophysics Journal, 2006, 35, 621-632.	1.2	12
47	New insight into the structure of RNA in red clover necrotic mosaic virus and the role of divalent cations revealed by small-angle neutron scattering. Archives of Virology, 2013, 158, 1661-1669.	0.9	10
48	Metalloprotein catalysis: structural and mechanistic insights into oxidoreductases from neutron protein crystallography. Acta Crystallographica Section D: Structural Biology, 2021, 77, 1251-1269.	1.1	10
49	Production and characterization of recombinant perdeuterated cholesterol oxidase. Analytical Biochemistry, 2015, 485, 102-108.	1.1	9
50	Oxygen Activation at the Active Site of a Fungal Lytic Polysaccharide Monooxygenase. Angewandte Chemie, 2017, 129, 785-788.	1.6	9
51	Preliminary neutron diffraction studies ofEscherichia colidihydrofolate reductase bound to the anticancer drug methotrexate. Acta Crystallographica Section D: Biological Crystallography, 2005, 61, 574-579.	2.5	8
52	Dynamic nuclear polarization enhanced neutron crystallography: Amplifying hydrogen in biological crystals. Methods in Enzymology, 2020, 634, 153-175.	0.4	8
53	Crystal structure and thermal expansion of a CsCe2Cl7 scintillator. Journal of Solid State Chemistry, 2015, 227, 142-149.	1.4	6
54	Neutron Crystallography Data Collection and Processing for Modelling Hydrogen Atoms in Protein Structures. Journal of Visualized Experiments, 2020, , .	0.2	6

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55	A beginnerâ€™s guide to neutron macromolecular crystallography. Biochemist, 2020, 42, 16-20.	0.2	6
56	A prototype system for dynamically polarized neutron protein crystallography. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 940, 430-434.	0.7	5
57	Preliminary results of neutron and X-ray diffraction data collection on a lytic polysaccharide monooxygenase under reduced and acidic conditions. Acta Crystallographica Section F, Structural Biology Communications, 2021, 77, 128-133.	0.4	4
58	Crystallization and preliminary X-ray diffraction analysis of red clover necrotic mosaic virus. Acta Crystallographica Section F: Structural Biology Communications, 2010, 66, 1458-1462.	0.7	3
59	Titration of ionizable groups in proteins using multiple neutron data sets from a single crystal: application to the small GTPase Ras. Acta Crystallographica Section F, Structural Biology Communications, 2019, 75, 111-115.	0.4	3
60	Neutron and X-ray analysis of the Fennaâ€“Matthewsâ€“Olson photosynthetic antenna complex from Prosthecochloris aestuarii. Acta Crystallographica Section F, Structural Biology Communications, 2019, 75, 171-175.	0.4	3
61	Crystallization and preliminary X-ray diffraction analysis ofHypocrea jecorinaCel7A in two new crystal forms. Acta Crystallographica Section F, Structural Biology Communications, 2014, 70, 773-776.	0.4	2
62	Dynamically polarized samples for neutron protein crystallography at the Spallation Neutron Source. Journal of Physics: Conference Series, 2016, 746, 012008.	0.3	2
63	Third School on the Applications of Neutron Scattering Techniques in Structural Biology, Oak Ridge, TN. Neutron News, 2013, 24, 4-4.	0.1	1
64	ORNL hosts first virtual HANDS workshop. Neutron News, 2020, 31, 11-12.	0.1	1
65	ORNL hosts the participants of the 4thNeutrons in Structural Biology Workshop and the IMAGINE single crystal neutron diffractometer first external users. Neutron News, 2014, 25, 12-12.	0.1	0
66	Innentitelbild: Oxygen Activation at the Active Site of a Fungal Lytic Polysaccharide Monooxygenase (Angew. Chem. 3/2017). Angewandte Chemie, 2017, 129, 674-674.	1.6	0
67	Characterization of biomass-degrading enzymes using neutron diffraction and scattering. Neutron News, 2021, 32, 13-14.	0.1	0
68	Neutron Crystal Structure of Ras GTPase sets New Paradigm for GTP Hydrolysis. FASEB Journal, 2015, 29, 893.7.	0.2	0
69	Teaching and Education highlighted. Journal of Applied Crystallography, 2022, 55, 215-217.	1.9	0