

Antoine Royant

List of Publications by Year in descending order

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74
papers

6,584
citations

101384

36
h-index

85405

71
g-index

86
all docs

86
docs citations

86
times ranked

8480
citing authors

#	ARTICLE	IF	CITATIONS
1	mScarlet: a bright monomeric red fluorescent protein for cellular imaging. <i>Nature Methods</i> , 2017, 14, 53-56.	9.0	838
2	Mammalian Expression of Infrared Fluorescent Proteins Engineered from a Bacterial Phytochrome. <i>Science</i> , 2009, 324, 804-807.	6.0	638
3	Structure-guided evolution of cyan fluorescent proteins towards a quantum yield of 93%. <i>Nature Communications</i> , 2012, 3, 751.	5.8	626
4	Protein, lipid and water organization in bacteriorhodopsin crystals: a molecular view of the purple membrane at 1.9 Å... resolution. <i>Structure</i> , 1999, 7, 909-917.	1.6	431
5	A three-dimensional movie of structural changes in bacteriorhodopsin. <i>Science</i> , 2016, 354, 1552-1557.	6.0	350
6	High-resolution X-ray structure of an early intermediate in the bacteriorhodopsin photocycle. <i>Nature</i> , 1999, 401, 822-826.	13.7	332
7	X-ray structure of sensory rhodopsin II at 2.1-Å resolution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2001, 98, 10131-10136.	3.3	280
8	Helix deformation is coupled to vectorial proton transport in the photocycle of bacteriorhodopsin. <i>Nature</i> , 2000, 406, 645-648.	13.7	238
9	Bacteriorhodopsin: a high-resolution structural view of vectorial proton transport. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2002, 1565, 144-167.	1.4	204
10	An improved monomeric infrared fluorescent protein for neuronal and tumour brain imaging. <i>Nature Communications</i> , 2014, 5, 3626.	5.8	142
11	Advances in kinetic protein crystallography. <i>Current Opinion in Structural Biology</i> , 2005, 15, 538-547.	2.6	121
12	Snapshots of Enzymatic Baeyer-Villiger Catalysis. <i>Journal of Biological Chemistry</i> , 2011, 286, 29284-29291.	1.6	116
13	Stabilizing role of glutamic acid 222 in the structure of Enhanced Green Fluorescent Protein. <i>Journal of Structural Biology</i> , 2011, 174, 385-390.	1.3	113
14	Structural Determinants of Spectral Tuning in Retinal Proteins Bacteriorhodopsin vs Sensory Rhodopsin II#. <i>Journal of Physical Chemistry B</i> , 2001, 105, 10124-10131.	1.2	111
15	Intrinsic Dynamics in ECFP and Cerulean Control Fluorescence Quantum Yield. <i>Biochemistry</i> , 2009, 48, 10038-10046.	1.2	110
16	Crystal structure of plant light-harvesting complex shows the active, energy-transmitting state. <i>EMBO Journal</i> , 2009, 28, 298-306.	3.5	108
17	Structural and Electronic Snapshots during the Transition from a Cu(II) to Cu(I) Metal Center of a Lytic Polysaccharide Monooxygenase by X-ray Photoreduction. <i>Journal of Biological Chemistry</i> , 2014, 289, 18782-18792.	1.6	99
18	Bacteriorhodopsin: Would the real structural intermediates please stand up?. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2015, 1850, 536-553.	1.1	97

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19	Mechanism and dynamics of fatty acid photodecarboxylase. <i>Science</i> , 2021, 372, .	6.0	93
20	Structure of Superoxide Reductase Bound to Ferrocyanide and Active Site Expansion upon X-Ray-Induced Photo-Reduction. <i>Structure</i> , 2004, 12, 1729-1740.	1.6	91
21	Deformation of Helix C in the Low Temperature L-intermediate of Bacteriorhodopsin. <i>Journal of Biological Chemistry</i> , 2004, 279, 2147-2158.	1.6	72
22	Molecular mechanism of light-driven sodium pumping. <i>Nature Communications</i> , 2020, 11, 2137.	5.8	67
23	Structure of a fluorescent protein from <i>Aequorea victoria</i> bearing the obligate-monomer mutation A206K. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2012, 68, 878-882.	0.7	63
24	<i>In crystallo</i> optical spectroscopy (<i>OS</i>) as a complementary tool on the macromolecular crystallography beamlines of the ESRF. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2015, 71, 15-26.	2.5	63
25	Precision Optogenetic Tool for Selective Single- and Multiple-Cell Ablation in a Live Animal Model System. <i>Cell Chemical Biology</i> , 2017, 24, 110-119.	2.5	58
26	Advances in spectroscopic methods for biological crystals. 1. Fluorescence lifetime measurements. <i>Journal of Applied Crystallography</i> , 2007, 40, 1105-1112.	1.9	57
27	Detergent-free membrane protein crystallization. <i>FEBS Letters</i> , 1999, 457, 205-208.	1.3	51
28	Early Structural Rearrangements in the Photocycle of an Integral Membrane Sensory Receptor. <i>Structure</i> , 2002, 10, 473-482.	1.6	51
29	Advances in spectroscopic methods for biological crystals. 2. Raman spectroscopy. <i>Journal of Applied Crystallography</i> , 2007, 40, 1113-1122.	1.9	48
30	Ultrafast structural changes within a photosynthetic reaction centre. <i>Nature</i> , 2021, 589, 310-314.	13.7	47
31	Direct Evidence for a Peroxide Intermediate and a Reactive Enzyme-Substrate-Dioxygen Configuration in a Cofactor-free Oxidase. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 13710-13714.	7.2	43
32	Serial Femtosecond Crystallography and Ultrafast Absorption Spectroscopy of the Photoswitchable Fluorescent Protein IrisFP. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 882-887.	2.1	43
33	Specific radiation damage is a lesser concern at room temperature. <i>IUCr</i> , 2019, 6, 665-680.	1.0	42
34	Structural analysis of the bright monomeric yellow-green fluorescent protein mNeonGreen obtained by directed evolution. <i>Acta Crystallographica Section D: Structural Biology</i> , 2016, 72, 1298-1307.	1.1	41
35	Tracking the route of molecular oxygen in O ₂ -tolerant membrane-bound [NiFe] hydrogenase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E2229-E2237.	3.3	41
36	Use of a 'caged' analogue to study the traffic of choline within acetylcholinesterase by kinetic crystallography. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2007, 63, 1115-1128.	2.5	40

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37	X-ray radiation-induced damage in DNA monitored by online Raman. <i>Journal of Synchrotron Radiation</i> , 2007, 14, 99-108.	1.0	40
38	Aequorea's secrets revealed: New fluorescent proteins with unique properties for bioimaging and biosensing. <i>PLoS Biology</i> , 2020, 18, e3000936.	2.6	40
39	Tailing miniSOG: structural bases of the complex photophysics of a flavin-binding singlet oxygen photosensitizing protein. <i>Scientific Reports</i> , 2019, 9, 2428.	1.6	37
40	Raman-Assisted Crystallography Suggests a Mechanism of X-Ray-Induced Disulfide Radical Formation and Reparation. <i>Structure</i> , 2010, 18, 1410-1419.	1.6	35
41	The Upgrade Programme for the Structural Biology beamlines at the European Synchrotron Radiation Facility – High throughput sample evaluation and automation. <i>Journal of Physics: Conference Series</i> , 2013, 425, 012001.	0.3	35
42	Temperature Derivative Fluorescence Spectroscopy as a Tool to Study Dynamical Changes in Protein Crystals. <i>Biophysical Journal</i> , 2004, 86, 3176-3185.	0.2	34
43	The status of the macromolecular crystallography beamlines at the European Synchrotron Radiation Facility. <i>European Physical Journal Plus</i> , 2015, 130, 1.	1.2	31
44	Structural basis for sensory rhodopsin function. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2002, 1565, 196-205.	1.4	28
45	Rational design of a monomeric and photostable far-red fluorescent protein for fluorescence imaging <i>in vivo</i> . <i>Protein Science</i> , 2016, 25, 308-315.	3.1	27
46	Spectroscopic Characterization of Bacteriorhodopsin's L-Intermediate in 3D Crystals Cooled to 170 K. <i>Photochemistry and Photobiology</i> , 2001, 74, 794.	1.3	26
47	Gas-sensitive biological crystals processed in pressurized oxygen and krypton atmospheres: deciphering gas channels in proteins using a novel 'soak-and-freeze' methodology. <i>Journal of Applied Crystallography</i> , 2016, 49, 1478-1487.	1.9	25
48	Structural Determinants of Improved Fluorescence in a Family of Bacteriophytochrome-Based Infrared Fluorescent Proteins: Insights from Continuum Electrostatic Calculations and Molecular Dynamics Simulations. <i>Biochemistry</i> , 2016, 55, 4263-4274.	1.2	24
49	Serial crystallography captures dynamic control of sequential electron and proton transfer events in a flavoenzyme. <i>Nature Chemistry</i> , 2022, 14, 677-685.	6.6	24
50	Simultaneous Measurements of Solvent Dynamics and Functional Kinetics in a Light-Activated Enzyme. <i>Biophysical Journal</i> , 2009, 96, 1902-1910.	0.2	23
51	ID30A-3 (MASSIF-3) – a beamline for macromolecular crystallography at the ESRF with a small intense beam. <i>Journal of Synchrotron Radiation</i> , 2020, 27, 844-851.	1.0	23
52	Bistable Photoswitch Allows <i>in Vivo</i> Control of Hematopoiesis. <i>ACS Central Science</i> , 2022, 8, 57-66.	5.3	18
53	Raman-assisted crystallography of biomolecules at the synchrotron: Instrumentation, methods and applications. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2011, 1814, 750-759.	1.1	17
54	Lysine relay mechanism coordinates intermediate transfer in vitamin B6 biosynthesis. <i>Nature Chemical Biology</i> , 2017, 13, 290-294.	3.9	16

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55	Characterization of a bacterial copper-dependent lytic polysaccharide monooxygenase with an unusual second coordination sphere. <i>FEBS Journal</i> , 2020, 287, 3298-3314.	2.2	16
56	Chromophore Isomer Stabilization Is Critical to the Efficient Fluorescence of Cyan Fluorescent Proteins. <i>Biochemistry</i> , 2017, 56, 6418-6422.	1.2	12
57	Millisecond time-resolved serial oscillation crystallography of a blue-light photoreceptor at a synchrotron. <i>IUCr</i> , 2020, 7, 728-736.	1.0	12
58	Structural Characterization of Bacterioferritin from <i>Blastochloris viridis</i> . <i>PLoS ONE</i> , 2012, 7, e46992.	1.1	11
59	Riboflavin-binding proteins for singlet oxygen production. <i>Photochemical and Photobiological Sciences</i> , 2022, 21, 1545-1555.	1.6	10
60	Nanoparticle Surface-Enhanced Raman Scattering of Bacteriorhodopsin Stabilized by Amphipol A8-35. <i>Journal of Membrane Biology</i> , 2014, 247, 971-980.	1.0	8
61	Detection and characterization of merohedral twinning in two protein crystals: bacteriorhodopsin and p67phox. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2002, 58, 784-791.	2.5	7
62	Alteration of fluorescent protein spectroscopic properties upon cryoprotection. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2012, 68, 1578-1583.	2.5	6
63	An enzymatic activation of formaldehyde for nucleotide methylation. <i>Nature Communications</i> , 2021, 12, 4542.	5.8	6
64	Online Raman spectroscopy for structural biology on beamline ID29 of the ESRF. <i>Journal of Structural Biology</i> , 2017, 200, 124-127.	1.3	4
65	Dynamics of a family of cyan fluorescent proteins probed by incoherent neutron scattering. <i>Journal of the Royal Society Interface</i> , 2019, 16, 20180848.	1.5	4
66	Structures of a human blood group glycosyltransferase in complex with a photo-activatable UDP-Gal derivative reveal two different binding conformations. <i>Acta Crystallographica Section F, Structural Biology Communications</i> , 2014, 70, 1015-1021.	0.4	3
67	Cyan fluorescent proteins derived from mNeonGreen. <i>Protein Engineering, Design and Selection</i> , 2022, 35, .	1.0	3
68	Laser-Triggered Single Molecular Gating Motions of the KcsA Potassium Channels Recorded in a Sub-Millisecond Time Resolution. <i>Biophysical Journal</i> , 2012, 102, 37a.	0.2	1
69	In-house UV radiation-damage-induced phasing of selenomethionine-labeled protein structures. <i>Journal of Structural Biology</i> , 2013, 181, 89-94.	1.3	1
70	Structure Solution of the Fluorescent Protein Cerulean Using MeshAndCollect. <i>Journal of Visualized Experiments</i> , 2019, .	0.2	1
71	Spectroscopic Characterization of Bacteriorhodopsin's L-intermediate in 3D Crystals Cooled to 170 K. <i>Photochemistry and Photobiology</i> , 2007, 74, 794-804.	1.3	0
72	Experimental Determination of Transition Dipole Moment Directions in Representative Fluorescent Proteins. <i>Biophysical Journal</i> , 2015, 108, 327a.	0.2	0

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73	Experimental Determination of Single- and Two-Photon Excitation Transition Moments in Representative Fluorescent Proteins. <i>Biophysical Journal</i> , 2016, 110, 493a.	0.2	0
74	Trapping and structural characterisation of a covalent intermediate in vitamin B ₆ biosynthesis catalysed by the Pdx1 PLP synthase. <i>RSC Chemical Biology</i> , 2022, 3, 227-230.	2.0	0