Anthony Watts

List of Publications by Year in descending order

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110 papers	5,138 citations	81900 39 h-index	95266 68 g-index
117 all docs	117 docs citations	117 times ranked	5780 citing authors

#	Article	IF	Citations
1	Two states of a light-sensitive membrane protein captured at room temperature using thin-film sample mounts. Acta Crystallographica Section D: Structural Biology, 2022, 78, 52-58.	2.3	2
2	In vivo observation of amyloid-like fibrils produced under stress. International Journal of Biological Macromolecules, 2022, 199, 42-50.	7.5	2
3	Detergent-free solubilisation & purification of a G protein coupled receptor using a polymethacrylate polymer. Biochimica Et Biophysica Acta - Biomembranes, 2021, 1863, 183441.	2.6	13
4	Structures of the archaerhodopsin-3 transporter reveal that disordering of internal water networks underpins receptor sensitization. Nature Communications, 2021, 12, 629.	12.8	22
5	Detergent-free Lipodisq Nanoparticles Facilitate High-Resolution Mass Spectrometry of Folded Integral Membrane Proteins. Nano Letters, 2021, 21, 2824-2831.	9.1	29
6	Translational Biophysics â€“ 20th IUPAB Congress Session Commentary. Biophysical Reviews, 2021, 13, 875-877.	3.2	1
7	Dynamic Coupling of Tyrosine 185 with the Bacteriorhodopsin Photocycle, as Revealed by Chemical Shifts, Assisted AF-QM/MM Calculations and Molecular Dynamic Simulations. International Journal of Molecular Sciences, 2021, 22, 13587.	4.1	1
8	Detergent-free extraction of a functional low-expressing GPCR from a human cell line. Biochimica Et Biophysica Acta - Biomembranes, 2020, 1862, 183152.	2.6	34
9	Lipid nanoparticle technologies for the study of G protein-coupled receptors in lipid environments. Biophysical Reviews, 2020, 12, 1287-1302.	3.2	27
10	Conformational dynamics of a G proteinâ€“coupled receptor helix 8 in lipid membranes. Science Advances, 2020, 6, eaav8207.	10.3	24
11	Conformational flexibility of GRASPs and their constituent PDZ subdomains reveals structural basis of their promiscuous interactome. FEBS Journal, 2020, 287, 3255-3272.	4.7	10
12	Physicochemical Characterization, Toxicity and In Vivo Biodistribution Studies of a Discoidal, Lipid-Based Drug Delivery Vehicle: Lipodisq Nanoparticles Containing Doxorubicin. Journal of Biomedical Nanotechnology, 2020, 16, 419-431.	1.1	8
13	Exploring Conformational Transitions and Free-Energy Profiles of Proton-Coupled Oligopeptide Transporters. Journal of Chemical Theory and Computation, 2019, 15, 6433-6443.	5.3	4
14	Lipodisqs for eukaryote lipidomics with retention of viability: Sensitivity and resistance to Leucobacter infection linked to C.elegans cuticle composition. Chemistry and Physics of Lipids, 2019, 222, 51-58.	3.2	14
15	From polymer chemistry to structural biology: The development of SMA and related amphipathic polymers for membrane protein extraction and solubilisation. Chemistry and Physics of Lipids, 2019, 221, 167-175.	3.2	39
16	Nanodiscâ€Targeted STD NMR Spectroscopy Reveals Atomic Details of Ligand Binding to Lipid Environments. ChemBioChem, 2018, 19, 1022-1025.	2.6	5
17	Dynamic tuneable G protein-coupled receptor monomer-dimer populations. Nature Communications, 2018, 9, 1710.	12.8	92
18	Tuneable poration: host defense peptides as sequence probes for antimicrobial mechanisms. Scientific Reports, 2018, 8, 14926.	3.3	24

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19	In Situ Study of the Function of Bacterioruberin in the Dualâ€Chromophore Photoreceptor Archaerhodopsinâ€4. Angewandte Chemie - International Edition, 2018, 57, 8937-8941.	13.8	4
20	Functional roles of tyrosine 185 during the bacteriorhodopsin photocycle as revealed by in situ spectroscopic studies. Biochimica Et Biophysica Acta - Bioenergetics, 2018, 1859, 1006-1014.	1.0	9
21	In Situ Study of the Function of Bacterioruberin in the Dualâ€Chromophore Photoreceptor Archaerhodopsinâ€4. Angewandte Chemie, 2018, 130, 9075-9079.	2.0	2
22	Engineering monolayer poration for rapid exfoliation of microbial membranes. Chemical Science, 2017, 8, 1105-1115.	7.4	35
23	Function of Tyr185 in Stabilizing the Isomerization Equilibrium of the Retinal Chromophore in the Bacteriorhodopsin Ground State. Biophysical Journal, 2016, 110, 377a.	0.5	1
24	Dynamic Nuclear Polarization enhanced NMR at 187 GHz/284 MHz using an Extended Interaction Klystron amplifier. Journal of Magnetic Resonance, 2016, 265, 77-82.	2.1	25
25	Mediation mechanism of tyrosine 185 on the retinal isomerization equilibrium and the proton release channel in the seven-transmembrane receptor bacteriorhodopsin. Biochimica Et Biophysica Acta - Bioenergetics, 2016, 1857, 1786-1795.	1.0	6
26	Interaction of lipids with the neurotensin receptor 1. Biochimica Et Biophysica Acta - Biomembranes, 2016, 1858, 1278-1287.	2.6	15
27	Reconstitution of Membrane Proteins. Methods in Enzymology, 2015, 556, 405-424.	1.0	27
28	Novel expression and characterization of a light driven proton pump archaerhodopsin 4 in a Halobacterium salinarum strain. Biochimica Et Biophysica Acta - Bioenergetics, 2015, 1847, 390-398.	1.0	14
29	Gating Topology of the Proton-Coupled Oligopeptide Symporters. Structure, 2015, 23, 290-301.	3.3	98
30	13C- and 1H-detection under fast MAS for the study of poorly available proteins: application to sub-milligram quantities of a 7 trans-membrane protein. Journal of Biomolecular NMR, 2015, 62, 17-23.	2.8	16
31	Lipid modulation of early G protein-coupled receptor signalling events. Biochimica Et Biophysica Acta - Biomembranes, 2015, 1848, 2889-2897.	2.6	47
32	Solid-State Nuclear Magnetic Resonance Spectroscopy for Membrane Protein Structure Determination. Methods in Molecular Biology, 2015, 1261, 331-347.	0.9	16
33	Kinetics of the early events of GPCR signalling. FEBS Letters, 2014, 588, 4701-4707.	2.8	15
34	A detergent-free strategy for the reconstitution of active enzyme complexes from native biological membranes into nanoscale discs. BMC Biotechnology, 2013, 13, 41.	3.3	118
35	Lipid-Dependent GPCR Dimerization. Methods in Cell Biology, 2013, 117, 341-357.	1.1	14
36	Helical membrane protein conformations and their environment. European Biophysics Journal, 2013, 42, 731-755.	2.2	55

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37	Microscale thermophoresis quantifies biomolecular interactions under previously challenging conditions. Methods, 2013, 59, 301-315.	3.8	501
38	G-protein-coupled receptor structure, ligand binding and activation as studied by solid-state NMR spectroscopy. Biochemical Journal, 2013, 450, 443-457.	3.7	37
39	Detergent-Free Incorporation of a Seven-Transmembrane Receptor Protein into Nanosized Bilayer Lipodisq Particles for Functional and Biophysical Studies. Nano Letters, 2012, 12, 4687-4692.	9.1	170
40	The role of cholesterol on the activity and stability of neurotensin receptor 1. Biochimica Et Biophysica Acta - Biomembranes, 2012, 1818, 2228-2233.	2.6	62
41	Contributions of fluorescence techniques to understanding G protein-coupled receptor dimerisation. Biophysical Reviews, 2012, 4, 291-298.	3.2	14
42	Molecular Scale Conductance Photoswitching in Engineered Bacteriorhodopsin. Nano Letters, 2012, 12, 899-903.	9.1	24
43	Enhanced Photocurrent in Engineered Bacteriorhodopsin Monolayer. Journal of Physical Chemistry B, 2012, 116, 683-689.	2.6	29
44	Detergentâ€Free Formation and Physicochemical Characterization of Nanosized Lipidâ€“Polymer Complexes: Lipodisq. Angewandte Chemie - International Edition, 2012, 51, 4653-4657.	13.8	166
45	Engineered Bacteriorhodopsin: A Molecular Scale Potential Switch. Chemistry - A European Journal, 2012, 18, 5632-5636.	3.3	12
46	Regulation of G protein-coupled receptors by palmitoylation and cholesterol. BMC Biology, 2012, 10, 27.	3.8	58
47	DNA-Templated Protein Arrays for Single-Molecule Imaging. Nano Letters, 2011, 11, 657-660.	9.1	99
48	Bilayer-Mediated Clustering and Functional Interaction of MscL Channels. Biophysical Journal, 2011, 100, 1252-1260.	0.5	87
49	Solution- and solid-state NMR studies of GPCRs and their ligands. Biochimica Et Biophysica Acta - Biomembranes, 2011, 1808, 1462-1475.	2.6	39
50	Uncovering the intimate relationship between lipids, cholesterol and GPCR activation. Current Opinion in Structural Biology, 2011, 21, 802-807.	5.7	219
51	Recent contributions from solid-state NMR to the understanding of membrane protein structure and function. Current Opinion in Chemical Biology, 2011, 15, 690-695.	6.1	49
52	The Conformation of Bacteriorhodopsin Loops in Purple Membranes Resolved by Solidâ€state MASâ€...NMR Spectroscopy. Angewandte Chemie - International Edition, 2011, 50, 8432-8435.	13.8	34
53	Solidâ€state NMR and simulation studies of equinatoxin II Nâ€terminus interaction with lipid bilayers. Proteins: Structure, Function and Bioinformatics, 2010, 78, 858-872.	2.6	17
54	Heterologous high yield expression and purification of neurotensin and its functional fragment in Escherichia coli. Protein Expression and Purification, 2010, 74, 65-68.	1.3	9

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55	Improved yield of a ligand-binding GPCR expressed in E. coli for structural studies. Protein Expression and Purification, 2009, 64, 32-38.	1.3	27
56	Constitutive Dimerization of the G-Protein Coupled Receptor, Neurotensin Receptor 1, Reconstituted into Phospholipid Bilayers. Biophysical Journal, 2009, 96, 964-973.	0.5	67
57	Enantioselective Syntheses of Î±-Fmoc-Pbf-[2-¹³C]-<scp>l</scp>-arginine and Fmoc-[1,3-¹³C₂]-<scp>l</scp>-proline and Incorporation into the Neurotensin Receptor 1 Ligand, NT_{8â¯13}. Journal of Organic Chemistry, 2009, 74, 8980-8987.	3.2	6
58	Advances towards resonance assignments for uniformlyâ€”13C, 15N enriched bacteriorhodopsin at 18.8ÂT in purple membranes. Journal of Biomolecular NMR, 2008, 41, 1-4.	2.8	19
59	Applications of REDOR for Distance Measurements in Biological Solids. Annual Reports on NMR Spectroscopy, 2006, 60, 191-228.	1.5	19
60	Differential Stiffness and Lipid Mobility in the Leaflets of Purple Membranes. Biophysical Journal, 2006, 90, 2075-2085.	0.5	56
61	Functionally Relevant Coupled Dynamic Profile of Bacteriorhodopsin and Lipids in Purple Membranesâ€. Biochemistry, 2006, 45, 4304-4313.	2.5	21
62	2P167 Probing the bound conformation of Acetylcholinesterase (AChE) inhibitor at the binding site(34.) Tj ETQq0 0 0 rgBT /Overlock 10 2006, 46, S337.	0.1	0
63	Direct analysis of a GPCR-agonist interaction by surface plasmon resonance. European Biophysics Journal, 2006, 35, 709-712.	2.2	37
64	Solid-state NMR in drug design and discovery for membrane-embedded targets. Nature Reviews Drug Discovery, 2005, 4, 555-568.	46.4	113
65	Structural and orientational constraints of bacteriorhodopsin in purple membranes determined by oriented-sample solid-state NMR spectroscopy. Journal of Structural Biology, 2005, 149, 7-16.	2.8	58
66	Membrane Protein Structure Determination Using Solid-State NMR. , 2004, 278, 403-474.		20
67	A review of oxygen-17 solid-state NMR of organic materialsâ€”towards biological applications. Solid State Nuclear Magnetic Resonance, 2004, 26, 215-235.	2.3	99
68	2H{19F} REDOR for distance measurements in biological solids using a double resonance spectrometer. Journal of Magnetic Resonance, 2004, 166, 1-10.	2.1	13
69	The Ring of the Rhodopsin Chromophore in a Hydrophobic Activation Switch Within the Binding Pocket. Journal of Molecular Biology, 2004, 343, 719-730.	4.2	50
70	Identifying Anisotropic Constraints in Multiply Labeled Bacteriorhodopsin by 15N MAOSS NMR: A General Approach to Structural Studies of Membrane Proteins. Biophysical Journal, 2004, 86, 1610-1617.	0.5	31
71	Interfacial Anchor Properties of Tryptophan Residues in Transmembrane Peptides Can Dominate over Hydrophobic Matching Effects in Peptideâ¯Lipid Interactionsâ€. Biochemistry, 2003, 42, 5341-5348.	2.5	251
72	Effects of the Eukaryotic Pore-Forming Cytolysin Equinatoxin II on Lipid Membranes and the Role of Sphingomyelin. Biophysical Journal, 2003, 84, 2382-2392.	0.5	67

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73	Direct studies of ligand-receptor interactions and ion channel blocking (Review). Molecular Membrane Biology, 2002, 19, 267-275.	2.0	17
74	Electrostatic peptideâ€“lipid interactions of amyloid-Î² peptide and pentalysine with membrane surfaces monitored by 31P MAS NMR. Physical Chemistry Chemical Physics, 2001, 3, 2904-2910.	2.8	52
75	A Model of Reversible Inhibitors in the Gastric H+/K+-ATPase Binding Site Determined by Rotational Echo Double Resonance NMR. Journal of Biological Chemistry, 2001, 276, 43197-43204.	3.4	33
76	Structure and dynamics of lipid-associated states of apocytochrome c. FEBS Journal, 2000, 267, 1390-1396.	0.2	14
77	Observations of light-induced structural changes of retinal within rhodopsin. Nature, 2000, 405, 810-813.	27.8	134
78	31P-CP-MAS NMR studies on TPP+bound to the ion-coupled multidrug transport protein EmrE. FEBS Letters, 2000, 480, 127-131.	2.8	21
79	NMR of drugs and ligands bound to membrane receptors. Current Opinion in Biotechnology, 1999, 10, 48-53.	6.6	64
80	Membrane protein structure determination by solid state NMR. Natural Product Reports, 1999, 16, 419-423.	10.3	22
81	Structural Information on a Membrane Transport Protein from Nuclear Magnetic Resonance Spectroscopy Using Sequence-Selective Nitroxide Labelingâ€. Biochemistry, 1999, 38, 9634-9639.	2.5	28
82	Binding Properties of the Stilbene Disulfonate Sites on Human Erythrocyte AE1:Â Kinetic, Thermodynamic, and Solid State Deuterium NMR Analysesâ€. Biochemistry, 1999, 38, 11172-11179.	2.5	10
83	Folding of Apocytochromecin Lipid Micelles:Â Formation of Î±-Helix Precedes Membrane Insertionâ€. Biochemistry, 1999, 38, 9758-9767.	2.5	45
84	Expression of isotopically labelled membrane transport proteins. Biochemical Society Transactions, 1999, 27, A150-A150.	3.4	0
85	Folding of apocytochrome c induced by the interaction with negatively charged lipid micelles proceeds via a collapsed intermediate state. Protein Science, 1999, 8, 381-393.	7.6	11
86	Solid-state NMR approaches for studying the interaction of peptides and proteins with membranes. BBA - Biomembranes, 1998, 1376, 297-318.	8.0	81
87	Ultracentrifugation studies on the transmembrane domain of the human erythrocyte anion transporter Band 3 in the detergent C 12 E 8. European Biophysics Journal, 1998, 27, 651-655.	2.2	16
88	Photoreceptor rhodopsin: structural and conformational study of its chromophore 11-cis retinal in oriented membranes by deuterium solid state NMR. FEBS Letters, 1998, 422, 201-204.	2.8	55
89	General Model for Lipid-Mediated Two-Dimensional Array Formation of Membrane Proteins: Application to Bacteriorhodopsin. Biophysical Journal, 1998, 75, 1180-1188.	0.5	31
90	The conformation of an inhibitor bound to the gastric proton pump. FEBS Letters, 1997, 410, 269-274.	2.8	38

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91	Effect of cholesterol on rhodopsin stability in disk membranes. BBA - Proteins and Proteomics, 1996, 1297, 77-82.	2.1	56
92	Spin label and 2H-NMR studies on the interaction of melanotropic peptides with lipid bilayers. European Biophysics Journal, 1996, 24, 251-9.	2.2	21
93	Re-orientation of retinal in the M-photointermediate of bacteriorhodopsin. Nature Structural and Molecular Biology, 1995, 2, 190-192.	8.2	64
94	Membrane protein structure: the contribution and potential of novel solid state NMR approaches (Review). Molecular Membrane Biology, 1995, 12, 233-246.	2.0	47
95	Effect of the C-terminal proline repeats on ordered packing of squid rhodopsin and its mobility in membranes. FEBS Letters, 1995, 359, 45-49.	2.8	16
96	High-resolution, non-crystallographic structural studies of large integral membrane proteins. Biochemical Society Transactions, 1994, 22, 801-805.	3.4	2
97	Lipid-Induced Modulation of the Protein Packing in Two-Dimensional Crystals of Bacteriorhodopsin. Journal of Structural Biology, 1993, 110, 196-204.	2.8	28
98	The essential role of specific Halobacterium halobium polar lipids in 2D-array formation of bacteriorhodopsin. Biochimica Et Biophysica Acta - Biomembranes, 1992, 1108, 21-30.	2.6	71
99	The effect of temperature and protein content on the dispersive properties of bacteriorhodopsin from H. halobium in reconstituted DMPC complexes free of endogenous purple membrane lipids: A freeze-fracture electron microscopy study. Biochimica Et Biophysica Acta - Biomembranes, 1989, 980, 117-126.	2.6	43
100	Weak interaction of spectrin with phosphatidylcholine-phosphatidylserine multilayers: A2H and31P NMR study. FEBS Letters, 1989, 244, 217-222.	2.8	44
101	The interaction of amino-deuteromethylated melittin with phospholipid membranes studied by deuterium NMR. FEBS Letters, 1987, 218, 173-177.	2.8	13
102	Protein-lipid interactions at membrane surfaces: a deuterium and phosphorus nuclear magnetic resonance study of the interaction between bovine rhodopsin and the bilayer head groups of dimyristoylphosphatidylcholine. Biochemistry, 1986, 25, 4818-4825.	2.5	19
103	Spin-label studies of lipid-protein interactions in sodium-potassium ATPase membranes from rectal glands of Squalus acanthias. Biochemistry, 1985, 24, 1386-1393.	2.5	78
104	An Electron-Spin-Resonance Spin-Label Study of the Interaction of Purified Mojave Toxin with Synaptosomal Membranes from Rat Brain. FEBS Journal, 1983, 131, 559-565.	0.2	18
105	Magnetic-resonance studies of vertebrate rod outer segments. Biochemical Society Transactions, 1983, 11, 674-676.	3.4	0
106	Interactions between phospholipid head groups at membrane interfaces: a deuterium and phosphorus NMR and spin-label ESR study. Biochemistry, 1982, 21, 6446-6452.	2.5	55
107	Proteinâ€“lipid interactions: do the spectroscopists now agree?. Nature, 1981, 294, 512-513.	27.8	27
108	Rhodopsin-lipid associations in bovine rod outer segment membranes. Identification of immobilized lipid by spin-labels. Biochemistry, 1979, 18, 5006-5013.	2.5	170

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109	Control of the structure and fluidity of phosphatidylglycerol bilayers by pH titration. Biochimica Et Biophysica Acta - Biomembranes, 1978, 510, 63-74.	2.6	211
110	Chapter 13. Recent Developments in Biomolecular Solid-State NMR. RSC Biomolecular Sciences, 0, , 318-334.	0.4	0