Robert Scott Prosser

List of Publications by Citations

71 papers	5,344 citations	30 h-index	73 g-index
80 ext. papers	6,058 ext. citations	10.4 avg, IF	5.53 L-index

#	Paper	IF	Citations
71	The dynamic process of β2-adrenergic receptor activation. *Cell*, **2013**, 152, 532-42	56.2	589
70	Structural Insights into the Dynamic Process of β2-Adrenergic Receptor Signaling. *Cell*, **2015**, 161, 1101-1111	56.2	409
69	Ligand-specific regulation of the extracellular surface of a G-protein-coupled receptor. *Nature*, **2010**, 463, 108-12	50.4	393
68	Size-Tunable, Ultrasmall NaGdF4Nanoparticles: Insights into Their T1MRI Contrast Enhancement. *Chemistry of Materials*, **2011**, 23, 3714-3722	9.6	368
67	Bicelles: a model membrane system for all seasons?. *Structure*, **1998**, 6, 1227-34	5.2	303
66	Current applications of bicelles in NMR studies of membrane-associated amphiphiles and proteins. *Biochemistry*, **2006**, 45, 8453-65	3.2	208
65	Allosteric nanobodies reveal the dynamic range and diverse mechanisms of G-protein-coupled receptor activation. *Nature*, **2016**, 535, 448-52	50.4	205
64	Activation of the A2A adenosine G-protein-coupled receptor by conformational selection. *Nature*, **2016**, 533, 265-8	50.4	202
63	Isotropic solutions of phospholipid bicelles: a new membrane mimetic for high-resolution NMR studies of polypeptides. *Journal of Biomolecular NMR*, **1997**, 9, 329-35	3	197
62	Magnetically Aligned Membrane Model Systems with Positive Order Parameter: Switching the Sign of Szz with Paramagnetic Ions. *Journal of the American Chemical Society*, **1996**, 118, 269-270	16.4	189
61	Current applications of 19F NMR to studies of protein structure and dynamics. *Progress in Nuclear Magnetic Resonance Spectroscopy*, **2012**, 62, 1-33	10.4	186
60	Magnetically aligned phospholipid bilayers with positive ordering: a new model membrane system. *Biophysical Journal*, **1998**, 74, 2405-18	2.9	166
59	The role of ligands on the equilibria between functional states of a G protein-coupled receptor. *Journal of the American Chemical Society*, **2013**, 135, 9465-74	16.4	128
58	SANS Study of the Structural Phases of Magnetically Alignable Lanthanide-Doped Phospholipid Mixtures. *Langmuir*, **2001**, 17, 2629-2638	4	114
57	The role of dimer asymmetry and protomer dynamics in enzyme catalysis. *Science*, **2017**, 355,	33.3	113
56	SANS study on the effect of lanthanide ions and charged lipids on the morphology of phospholipid mixtures. Small-angle neutron scattering. *Biophysical Journal*, **2002**, 82, 2487-98	2.9	106
55	Use of a Novel Aqueous Liquid Crystalline Medium for High-Resolution NMR of Macromolecules in Solution. *Journal of the American Chemical Society*, **1998**, 120, 11010-11011	16.4	106

54	Polymer-Stabilized Lanthanide Fluoride Nanoparticle Aggregates as Contrast Agents for Magnetic Resonance Imaging and Computed Tomography. *Chemistry of Materials*, **2010**, 22, 4728-4739	9.6	104
53	Structure-based approach to the photocontrol of protein folding. *Journal of the American Chemical Society*, **2009**, 131, 2283-9	16.4	93
52	Oxygen as a paramagnetic probe of membrane protein structure by cysteine mutagenesis and (19)F NMR spectroscopy. *Journal of the American Chemical Society*, **2002**, 124, 1778-81	16.4	85
51	Mechanistic insights into allosteric regulation of the A adenosine G protein-coupled receptor by physiological cations. *Nature Communications*, **2018**, 9, 1372	17.4	81
50	Novel chelate-induced magnetic alignment of biological membranes. *Biophysical Journal*, **1998**, 75, 2163-9	2.9	77
49	Role of detergents in conformational exchange of a G protein-coupled receptor. *Journal of Biological Chemistry*, **2012**, 287, 36305-11	5.4	75
48	Topology of an outer-membrane enzyme: Measuring oxygen and water contacts in solution NMR studies of PagP. *Journal of the American Chemical Society*, **2006**, 128, 8256-64	16.4	49
47	Determination of membrane immersion depth with O(2): a high-pressure (19)F NMR study. *Biophysical Journal*, **2001**, 80, 1406-16	2.9	49
46	Probing the transition state ensemble of a protein folding reaction by pressure-dependent NMR relaxation dispersion. *Journal of the American Chemical Society*, **2006**, 128, 5262-9	16.4	41
45	19F NMR studies of solvent exposure and peptide binding to an SH3 domain. *Biochimica Et Biophysica Acta - General Subjects*, **2007**, 1770, 221-30	4	40
44	A comparison of chemical shift sensitivity of trifluoromethyl tags: optimizing resolution in □F NMR studies of proteins. *Journal of Biomolecular NMR*, **2015**, 62, 97-103	3	38
43	Approaches for the measurement of solvent exposure in proteins by 19F NMR. *Journal of Biomolecular NMR*, **2009**, 45, 255-64	3	38
42	A combined NMR and molecular dynamics study of the transmembrane solubility and diffusion rate profile of dioxygen in lipid bilayers. *Biochemistry*, **2006**, 45, 10719-28	3.2	35
41	Lysine methylation strategies for characterizing protein conformations by NMR. *Journal of Biomolecular NMR*, **2012**, 54, 199-209	3	30
40	Tryptophan solvent exposure in folded and unfolded states of an SH3 domain by 19F and 1H NMR. *Biochemistry*, **2006**, 45, 14120-8	3.2	30
39	Delineating the conformational landscape of the adenosine A receptor during G protein coupling. *Cell*, **2021**, 184, 1884-1894.e14	56.2	30
38	Oxygen as a paramagnetic probe of clustering and solvent exposure in folded and unfolded states of an SH3 domain. *Journal of the American Chemical Society*, **2007**, 129, 1826-35	16.4	27
37	Hydration and packing along the folding pathway of SH3 domains by pressure-dependent NMR. *Biochemistry*, **2006**, 45, 4711-9	3.2	27

36	In Situ Reconstitution of the Adenosine A Receptor in Spontaneously Formed Synthetic Liposomes. *Journal of the American Chemical Society*, **2017**, 139, 3607-3610	16.4	26
35	The measurement of immersion depth and topology of membrane proteins by solution state NMR. *Biochimica Et Biophysica Acta - Biomembranes*, **2007**, 1768, 3044-51	3.8	26
34	A solution NMR approach to the measurement of amphiphile immersion depth and orientation in membrane model systems. *Journal of the American Chemical Society*, **2009**, 131, 6452-9	16.4	25
33	Dynamic equilibria between monomeric and oligomeric misfolded states of the mammalian prion protein measured by 19F NMR. *Journal of the American Chemical Society*, **2013**, 135, 10533-41	16.4	23
32	Conformational selection and functional dynamics of calmodulin: a (19)F nuclear magnetic resonance study. *Biochemistry*, **2014**, 53, 5727-36	3.2	22
31	A mutagenesis-free approach to assignment of (19)F NMR resonances in biosynthetically labeled proteins. *Journal of the American Chemical Society*, **2009**, 131, 2054-5	16.4	21
30	Detergent- and phospholipid-based reconstitution systems have differential effects on constitutive activity of G-protein-coupled receptors. *Journal of Biological Chemistry*, **2019**, 294, 13218-13223	5.4	19
29	Dioxygen transmembrane distributions and partitioning thermodynamics in lipid bilayers and micelles. *Biochemistry*, **2011**, 50, 3975-83	3.2	19
28	An NMR study of the origin of dioxygen-induced spin-lattice relaxation enhancement and chemical shift perturbation. *Journal of Magnetic Resonance*, **2004**, 171, 225-32	3	19
27	Site-Specific Labeling of Protein Lysine Residues and N-Terminal Amino Groups with Indoles and Indole-Derivatives. *Bioconjugate Chemistry*, **2015**, 26, 2376-83	6.3	17
26	Optimizing □□F NMR protein spectroscopy by fractional biosynthetic labeling. *Journal of Biomolecular NMR*, **2010**, 48, 113-21	3	17
25	□□F NMR studies of a desolvated near-native protein folding intermediate. *Biochemistry*, **2013**, 52, 5780-9	3.2	16
24	Substrate-Based Allosteric Regulation of a Homodimeric Enzyme. *Journal of the American Chemical Society*, **2019**, 141, 11540-11556	16.4	13
23	Activation processes in ligand-activated G protein-coupled receptors: A case study of the adenosine A receptor. *BioEssays*, **2017**, 39, 1700072	4.1	13
22	Approaches to the assignment of (19)F resonances from 3-fluorophenylalanine labeled calmodulin using solution state NMR. *Journal of Biomolecular NMR*, **2010**, 47, 113-23	3	13
21	Understanding Protein Function Through an Ensemble Description: Characterization of Functional States by F NMR. *Methods in Enzymology*, **2019**, 615, 103-130	1.7	13
20	Quantitative Detection of PEGylated Biomacromolecules in Biological Fluids by NMR. *Analytical Chemistry*, **2016**, 88, 3730-8	7.8	11
19	Topology and immersion depth of an integral membrane protein by paramagnetic rates from dissolved oxygen. *Journal of Biomolecular NMR*, **2011**, 51, 173-83	3	11

18	Molecular oxygen as a paramagnetic NMR probe of protein solvent exposure and topology. *Concepts in Magnetic Resonance Part A: Bridging Education and Research*, **2008**, 32A, 239-253	0.6	11
17	Temperature and pressure based NMR studies of detergent micelle phase equilibria. *Journal of Physical Chemistry B*, **2014**, 118, 5698-706	3.4	8
16	Shell versus Core Dy3+ Contributions to NMR Water Relaxation in Sodium Lanthanide Fluoride Core-Shell Nanoparticles. An Investigation Using O-17 and H-1 NMR. *Journal of Physical Chemistry C* , **2017**, 121, 17552-17558	3.8	8
15	Effect of juxtamembrane tryptophans on the immersion depth of Synaptobrevin, an integral vesicle membrane protein. *Biochimica Et Biophysica Acta - Biomembranes*, **2012**, 1818, 2994-9	3.8	8
14	Effects of a polar amino acid substitution on helix formation and aggregate size along the detergent-induced peptide folding pathway. *Biochimica Et Biophysica Acta - Biomembranes*, **2013**, 1828, 373-81	3.8	8
13	Nuts and Bolts of CF3 and CH 3 NMR Toward the Understanding of Conformational Exchange of GPCRs. *Methods in Molecular Biology*, **2015**, 1335, 39-51	1.4	7
12	Advances in the study of GPCRs by F NMR. *Current Opinion in Structural Biology*, **2021**, 69, 169-176	8.1	7
11	High-Efficiency Expression of Yeast-Derived G-Protein Coupled Receptors and F Labeling for Dynamical Studies. *Methods in Molecular Biology*, **2018**, 1688, 407-421	1.4	6
10	Allosteric modulation of the adenosine A receptor by cholesterol.. *ELife*, **2022**, 11,	8.9	5
9	Ligand modulation of the conformational dynamics of the A adenosine receptor revealed by single-molecule fluorescence. *Scientific Reports*, **2021**, 11, 5910	4.9	5
8	Direct quantitative C-filtered H magnetic resonance imaging of PEGylated biomacromolecules in vivo. *Magnetic Resonance in Medicine*, **2017**, 77, 1553-1561	4.4	3
7	Utilizing tagged paramagnetic shift reagents to monitor protein dynamics by NMR. *Biochimica Et Biophysica Acta - Proteins and Proteomics*, **2017**, 1865, 1555-1563	4	3
6	Structures and Dynamics of Native-State Transmembrane Protein Targets and Bound Lipids. *Membranes*, **2021**, 11,	3.8	3
5	Allosteric regulation of the nickel-responsive NikR transcription factor from Helicobacter pylori. *Journal of Biological Chemistry*, **2021**, 296, 100069	5.4	3
4	Qualitative and Quantitative Assessment of Biodiesel Derived from Microalgae. *Journal of Chemical Education*, **2020**, 97, 3791-3796	2.4	2
3	New pipelines for novel allosteric GPCR modulators. *Biophysical Journal*, **2014**, 107, 287-288	2.9	1
2	NMR-based approaches to the study of GPCRs and GPCR-ligand interactions **2020**, 65-80		0
1	Tailor-made GPCRs. *Nature Chemical Biology*, **2020**, 16, 5-6	11.7	