

Charles R Sanders

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134
papers

5,710
citations

37
h-index

73
g-index

147
ext. papers

6,561
ext. citations

6.8
avg, IF

5.81
L-index

#	Paper	IF	Citations
134	Characterization of magnetically orientable bilayers in mixtures of dihexanoylphosphatidylcholine and dimyristoylphosphatidylcholine by solid-state NMR. <i>Biochemistry</i> , 1992 , 31, 8898-905	3.2	426
133	The amyloid precursor protein has a flexible transmembrane domain and binds cholesterol. <i>Science</i> , 2012 , 336, 1168-71	33.3	351
132	Magnetically-oriented phospholipid micelles as a tool for the study of membrane-associated molecules. <i>Progress in Nuclear Magnetic Resonance Spectroscopy</i> , 1994 , 26, 421-444	10.4	347
131	Bicelles: a model membrane system for all seasons?. <i>Structure</i> , 1998 , 6, 1227-34	5.2	303
130	Reconstitution of membrane proteins into lipid-rich bilayered mixed micelles for NMR studies. <i>Biochemistry</i> , 1995 , 34, 4030-40	3.2	301
129	Disease-related misassembly of membrane proteins. <i>Annual Review of Biophysics and Biomolecular Structure</i> , 2004 , 33, 25-51		209
128	Solution NMR of membrane proteins: practice and challenges. <i>Magnetic Resonance in Chemistry</i> , 2006 , 44 Spec No, S24-40	2.1	193
127	Solution nuclear magnetic resonance structure of membrane-integral diacylglycerol kinase. <i>Science</i> , 2009 , 324, 1726-9	33.3	188
126	Structure of KCNE1 and implications for how it modulates the KCNQ1 potassium channel. <i>Biochemistry</i> , 2008 , 47, 7999-8006	3.2	164
125	Structural studies of the transmembrane C-terminal domain of the amyloid precursor protein (APP): does APP function as a cholesterol sensor?. <i>Biochemistry</i> , 2008 , 47, 9428-46	3.2	137
124	Recent Advances in the Application of Solution NMR Spectroscopy to Multi-Span Integral Membrane Proteins. <i>Progress in Nuclear Magnetic Resonance Spectroscopy</i> , 2009 , 55, 335-360	10.4	132
123	Direct binding of cholesterol to the amyloid precursor protein: An important interaction in lipid-Alzheimer's disease relationships?. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2010 , 1801, 975-82	5	110
122	On choosing a detergent for solution NMR studies of membrane proteins. <i>Journal of Biomolecular NMR</i> , 1998 , 11, 381-6	3	103
121	Folding and Misfolding of Human Membrane Proteins in Health and Disease: From Single Molecules to Cellular Proteostasis. <i>Chemical Reviews</i> , 2019 , 119, 5537-5606	68.1	93
120	Cholesterol as a co-solvent and a ligand for membrane proteins. <i>Protein Science</i> , 2014 , 23, 1-22	6.3	91
119	Functionality of a membrane protein in bicelles. <i>Analytical Biochemistry</i> , 2000 , 284, 327-33	3.1	89
118	Misfolding of membrane proteins in health and disease: the lady or the tiger?. <i>Current Opinion in Structural Biology</i> , 2000 , 10, 438-42	8.1	85

117	Competition between homodimerization and cholesterol binding to the C99 domain of the amyloid precursor protein. <i>Biochemistry</i> , 2013 , 52, 5051-64	3.2	84
116	Structural models for the KCNQ1 voltage-gated potassium channel. <i>Biochemistry</i> , 2007 , 46, 14141-52	3.2	82
115	Reconstitutive refolding of diacylglycerol kinase, an integral membrane protein. <i>Biochemistry</i> , 1999 , 38, 16373-82	3.2	78
114	French swimwear for membrane proteins. <i>ChemBioChem</i> , 2004 , 5, 423-6	3.8	74
113	Mutations of peripheral myelin protein 22 result in defective trafficking through mechanisms which may be common to diseases involving tetraspan membrane proteins. <i>Biochemistry</i> , 2001 , 40, 9453-9	3.2	64
112	Tolerance to changes in membrane lipid composition as a selected trait of membrane proteins. <i>Biochemistry</i> , 2011 , 50, 7858-67	3.2	63
111	Amphipols can support the activity of a membrane enzyme. <i>Journal of the American Chemical Society</i> , 2002 , 124, 11594-5	16.4	61
110	The backbone dynamics of the amyloid precursor protein transmembrane helix provides a rationale for the sequential cleavage mechanism of B-secretase. <i>Journal of the American Chemical Society</i> , 2013 , 135, 1317-29	16.4	57
109	Kinetic study of folding and misfolding of diacylglycerol kinase in model membranes. <i>Biochemistry</i> , 2001 , 40, 8971-80	3.2	57
108	Preparation, functional characterization, and NMR studies of human KCNE1, a voltage-gated potassium channel accessory subunit associated with deafness and long QT syndrome. <i>Biochemistry</i> , 2007 , 46, 11459-72	3.2	56
107	Structural and Molecular Determinants of Membrane Binding by the HIV-1 Matrix Protein. <i>Journal of Molecular Biology</i> , 2016 , 428, 1637-55	6.5	55
106	Prokaryotic diacylglycerol kinase and undecaprenol kinase. <i>Annual Review of Biophysics</i> , 2012 , 41, 81-101	11.1	52
105	Use of amphipathic polymers to deliver a membrane protein to lipid bilayers. <i>FEBS Letters</i> , 2001 , 501, 115-20	3.8	52
104	Orientation and dynamics of .beta.-dodecyl glucopyranoside in phospholipid bilayers by oriented sample NMR and order matrix analysis. <i>Journal of the American Chemical Society</i> , 1991 , 113, 1987-1996	16.4	46
103	Destabilizing mutations promote membrane protein misfolding. <i>Biochemistry</i> , 2004 , 43, 19-25	3.2	43
102	High-Throughput Functional Evaluation of KCNQ1 Decrypts Variants of Unknown Significance. <i>Circulation Genomic and Precision Medicine</i> , 2018 , 11, e002345	5.2	40
101	Impact of bilayer lipid composition on the structure and topology of the transmembrane amyloid precursor C99 protein. <i>Journal of the American Chemical Society</i> , 2014 , 136, 4093-6	16.4	39
100	A unified hydrophobicity scale for multispan membrane proteins. <i>Proteins: Structure, Function and Bioinformatics</i> , 2009 , 76, 13-29	4.2	39

99	Nonspecificity of binding of gamma-secretase modulators to the amyloid precursor protein. <i>Biochemistry</i> , 2009 , 48, 11837-9	3.2	39
98	Mechanism of adenylate kinase. Is there a relationship between local substrate dynamics, local binding energy, and the catalytic mechanism?. <i>Biochemistry</i> , 1989 , 28, 9028-43	3.2	39
97	Mechanisms of KCNQ1 channel dysfunction in long QT syndrome involving voltage sensor domain mutations. <i>Science Advances</i> , 2018 , 4, eaar2631	14.3	37
96	Structural investigation of the transmembrane domain of KCNE1 in proteoliposomes. <i>Biochemistry</i> , 2014 , 53, 6392-401	3.2	37
95	Bicelles at low concentrations. <i>Molecular Pharmaceutics</i> , 2012 , 9, 752-61	5.6	37
94	Structural basis for KCNE3 modulation of potassium recycling in epithelia. <i>Science Advances</i> , 2016 , 2, e1501228	14.3	32
93	Documentation of an Imperative To Improve Methods for Predicting Membrane Protein Stability. <i>Biochemistry</i> , 2016 , 55, 5002-9	3.2	31
92	Functional delivery of a membrane protein into oocyte membranes using bicelles. <i>Biochemistry</i> , 2010 , 49, 653-5	3.2	31
91	Lysophospholipid micelles sustain the stability and catalytic activity of diacylglycerol kinase in the absence of lipids. <i>Biochemistry</i> , 2010 , 49, 7089-99	3.2	31
90	Peripheral myelin protein 22 alters membrane architecture. <i>Science Advances</i> , 2017 , 3, e1700220	14.3	30
89	Structural basis for the Trembler-J phenotype of Charcot-Marie-Tooth disease. <i>Structure</i> , 2011 , 19, 1160-92	9.2	30
88	Conformational Stability and Pathogenic Misfolding of the Integral Membrane Protein PMP22. <i>Journal of the American Chemical Society</i> , 2015 , 137, 8758-68	16.4	29
87	Headgroup orientations of alkyl glycosides at a lipid bilayer interface. <i>Journal of the American Chemical Society</i> , 1992 , 114, 7096-7107	16.4	29
86	The safety dance: biophysics of membrane protein folding and misfolding in a cellular context. <i>Quarterly Reviews of Biophysics</i> , 2015 , 48, 1-34	7	28
85	Structural and biochemical differences between the Notch and the amyloid precursor protein transmembrane domains. <i>Science Advances</i> , 2017 , 3, e1602794	14.3	27
84	Purification and structural study of the voltage-sensor domain of the human KCNQ1 potassium ion channel. <i>Biochemistry</i> , 2014 , 53, 2032-42	3.2	27
83	Reversible folding of human peripheral myelin protein 22, a tetraspan membrane protein. <i>Biochemistry</i> , 2013 , 52, 3229-41	3.2	27
82	Cross-talk between integrins alpha1beta1 and alpha2beta1 in renal epithelial cells. <i>Experimental Cell Research</i> , 2008 , 314, 3593-604	4.2	27

81	Backbone Hydrogen Bond Strengths Can Vary Widely in Transmembrane Helices. <i>Journal of the American Chemical Society</i> , 2017 , 139, 10742-10749	16.4	25
80	Regulation of KCNQ/Kv7 family voltage-gated K channels by lipids. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2017 , 1859, 586-597	3.8	25
79	Working model for the structural basis for KCNE1 modulation of the KCNQ1 potassium channel. <i>Current Opinion in Structural Biology</i> , 2011 , 21, 283-91	8.1	25
78	Bolaamphiphile-class surfactants can stabilize and support the function of solubilized integral membrane proteins. <i>Biochemistry</i> , 2009 , 48, 11606-8	3.2	25
77	Reconstitution of KCNE1 into lipid bilayers: comparing the structural, dynamic, and activity differences in micelle and vesicle environments. <i>Biochemistry</i> , 2011 , 50, 10851-9	3.2	23
76	The peripheral neuropathy-linked Trembler and Trembler-J mutant forms of peripheral myelin protein 22 are folding-destabilized. <i>Biochemistry</i> , 2008 , 47, 10620-9	3.2	23
75	Conformationally specific misfolding of an integral membrane protein. <i>Biochemistry</i> , 2001 , 40, 5111-8	3.2	23
74	Personalized biochemistry and biophysics. <i>Biochemistry</i> , 2015 , 54, 2551-9	3.2	22
73	Solution NMR approaches for establishing specificity of weak heterodimerization of membrane proteins. <i>Journal of the American Chemical Society</i> , 2011 , 133, 20571-80	16.4	22
72	Implications of the differing roles of the α and β transmembrane and cytoplasmic domains for integrin function. <i>ELife</i> , 2016 , 5,	8.9	22
71	Predicting the Functional Impact of KCNQ1 Variants of Unknown Significance. <i>Circulation: Cardiovascular Genetics</i> , 2017 , 10,		20
70	NSAID-based β secretase modulators do not bind to the amyloid- β polypeptide. <i>Biochemistry</i> , 2011 , 50, 10328-42	3.2	20
69	Enhancing integrin α inserted (I) domain affinity to ligand potentiates integrin α β -mediated down-regulation of collagen synthesis. <i>Journal of Biological Chemistry</i> , 2012 , 287, 35139-35152	5.4	20
68	Probing Structural Dynamics and Topology of the KCNE1 Membrane Protein in Lipid Bilayers via Site-Directed Spin Labeling and Electron Paramagnetic Resonance Spectroscopy. <i>Biochemistry</i> , 2015 , 54, 6402-12	3.2	19
67	Distinct subdomains of the KCNQ1 S6 segment determine channel modulation by different KCNE subunits. <i>Journal of General Physiology</i> , 2009 , 134, 207-17	3.4	19
66	Purification and initiation of structural characterization of human peripheral myelin protein 22, an integral membrane protein linked to peripheral neuropathies. <i>Biochemistry</i> , 2007 , 46, 11185-95	3.2	19
65	KCNQ1/KCNE1 assembly, co-translation not required. <i>Channels</i> , 2010 , 4, 108-14	3	17
64	Peripheral myelin protein 22 preferentially partitions into ordered phase membrane domains. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 14168-14177	11.5	16

63	The homology model of PMP22 suggests mutations resulting in peripheral neuropathy disrupt transmembrane helix packing. <i>Biochemistry</i> , 2014 , 53, 6139-41	3.2	16
62	Influence of Pathogenic Mutations on the Energetics of Translocon-Mediated Bilayer Integration of Transmembrane Helices. <i>Journal of Membrane Biology</i> , 2015 , 248, 371-81	2.3	16
61	Irreversible misfolding of diacylglycerol kinase is independent of aggregation and occurs prior to trimerization and membrane association. <i>Biochemistry</i> , 2006 , 45, 10072-84	3.2	16
60	A critical residue in the folding pathway of an integral membrane protein. <i>Biochemistry</i> , 2002 , 41, 9021-5	3.2	16
59	Structure and physiological function of the human KCNQ1 channel voltage sensor intermediate state. <i>ELife</i> , 2020 , 9,	8.9	15
58	Topologically Diverse Human Membrane Proteins Partition to Liquid-Disordered Domains in Phase-Separated Lipid Vesicles. <i>Biochemistry</i> , 2016 , 55, 985-8	3.2	14
57	Notch Transmembrane Domain: Secondary Structure and Topology. <i>Biochemistry</i> , 2015 , 54, 3565-8	3.2	14
56	The vexing complexity of the amyloidogenic pathway. <i>Protein Science</i> , 2019 , 28, 1177-1193	6.3	13
55	Thiol modification of diacylglycerol kinase: dependence upon site membrane disposition and reagent hydrophobicity. <i>FEBS Letters</i> , 2000 , 472, 225-9	3.8	13
54	Upgraded molecular models of the human KCNQ1 potassium channel. <i>PLoS ONE</i> , 2019 , 14, e0220415	3.7	13
53	Transthyretin Suppresses Amyloid- β Secretion by Interfering with Processing of the Amyloid- β Protein Precursor. <i>Journal of Alzheimer's Disease</i> , 2016 , 52, 1263-75	4.3	13
52	Membrane properties that shape the evolution of membrane enzymes. <i>Current Opinion in Structural Biology</i> , 2018 , 51, 80-91	8.1	12
51	Reciprocal modulation between amyloid precursor protein and synaptic membrane cholesterol revealed by live cell imaging. <i>Neurobiology of Disease</i> , 2019 , 127, 449-461	7.5	11
50	Structures Illuminate Cardiac Ion Channel Functions in Health and in Long QT Syndrome. <i>Frontiers in Pharmacology</i> , 2020 , 11, 550	5.6	11
49	Structural Dynamics of 15-Lipoxygenase-2 via Hydrogen-Deuterium Exchange. <i>Biochemistry</i> , 2017 , 56, 5065-5074	3.2	11
48	Protein structure aids predicting functional perturbation of missense variants in and. <i>Computational and Structural Biotechnology Journal</i> , 2019 , 17, 206-214	6.8	10
47	Bicelles Rich in both Sphingolipids and Cholesterol and Their Use in Studies of Membrane Proteins. <i>Journal of the American Chemical Society</i> , 2020 , 142, 12715-12729	16.4	10
46	An allosteric mechanism for drug block of the human cardiac potassium channel KCNQ1. <i>Molecular Pharmacology</i> , 2013 , 83, 481-9	4.3	10

45	Phenology of disease-linked proteins. <i>Human Mutation</i> , 2005 , 25, 90-7	4.7	10
44	Peripheral myelin protein 22 modulates store-operated calcium channel activity, providing insights into Charcot-Marie-Tooth disease etiology. <i>Journal of Biological Chemistry</i> , 2019 , 294, 12054-12065	5.4	9
43	Development of electron spin echo envelope modulation spectroscopy to probe the secondary structure of recombinant membrane proteins in a lipid bilayer. <i>Protein Science</i> , 2015 , 24, 1707-13	6.3	9
42	A unified structural model of the mammalian translocator protein (TSPO). <i>Journal of Biomolecular NMR</i> , 2019 , 73, 347-364	3	8
41	Bexarotene Binds to the Amyloid Precursor Protein Transmembrane Domain, Alters Its β -Helical Conformation, and Inhibits β -Secretase Nonselectively in Liposomes. <i>ACS Chemical Neuroscience</i> , 2018 , 9, 1702-1713	5.7	8
40	De novo designed transmembrane peptides activating the β_1 integrin. <i>Protein Engineering, Design and Selection</i> , 2018 , 31, 181-190	1.9	8
39	β_1 integrin NPXY motifs regulate kidney collecting-duct development and maintenance by induced-fit interactions with cytosolic proteins. <i>Molecular and Cellular Biology</i> , 2012 , 32, 4080-91	4.8	8
38	Probing the Dynamics and Structural Topology of the Reconstituted Human KCNQ1 Voltage Sensor Domain (Q1-VSD) in Lipid Bilayers Using Electron Paramagnetic Resonance Spectroscopy. <i>Biochemistry</i> , 2019 , 58, 965-973	3.2	8
37	Dodecyl- β -melibioside Detergent Micelles as a Medium for Membrane Proteins. <i>Biochemistry</i> , 2017 , 56, 5481-5484	3.2	7
36	Talin regulates integrin α -dependent and α -independent cell functions in ureteric bud development. <i>Development (Cambridge)</i> , 2017 , 144, 4148-4158	6.6	7
35	LCP1 preferentially binds clasped $\alpha_5\beta_1$ integrin and attenuates leukocyte adhesion under flow. <i>Journal of Cell Science</i> , 2018 , 131,	5.3	7
34	Influence of Arrestin on the Photodecay of Bovine Rhodopsin. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 13555-60	16.4	6
33	A pH-Mediated Topological Switch within the N-Terminal Domain of Human Caveolin-3. <i>Biophysical Journal</i> , 2016 , 110, 2475-2485	2.9	5
32	Development and Application of Bicelles for Use in Biological NMR and Other Biophysical Studies 2008 , 233-239		5
31	Allosteric mechanism for KCNE1 modulation of KCNQ1 potassium channel activation. <i>ELife</i> , 2020 , 9,	8.9	5
30	Direct relationship between increased expression and mistrafficking of the Charcot-Marie-Tooth-associated protein PMP22. <i>Journal of Biological Chemistry</i> , 2020 , 295, 11963-11970	5.4	5
29	Visiting order on membrane proteins by using nanotechnology. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 6502-3	11.5	4
28	Mechanism of adenylate kinase. 3. Use of deuterium NMR to show lack of correlation between local substrate dynamics and local binding energy. <i>Journal of the American Chemical Society</i> , 1988 , 110, 3323-3324	16.4	4

27	Collision-Induced Unfolding Differentiates Functional Variants of the KCNQ1 Voltage Sensor Domain. <i>Journal of the American Society for Mass Spectrometry</i> , 2020 , 31, 2348-2355	3.5	4
26	Perplexing new insight into the dynamics of the EmrE transporter. <i>Journal of General Physiology</i> , 2015 , 146, 441-4	3.4	3
25	Ion mobility-mass spectrometry reveals the role of peripheral myelin protein dimers in peripheral neuropathy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	3
24	Structural determinants of cholesterol recognition in helical integral membrane proteins. <i>Biophysical Journal</i> , 2021 , 120, 1592-1604	2.9	3
23	Genetic intolerance analysis as a tool for protein science. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2020 , 1862, 183058	3.8	3
22	Recombinant SARS-CoV-2 envelope protein traffics to the trans-Golgi network following amphipol-mediated delivery into human cells. <i>Journal of Biological Chemistry</i> , 2021 , 297, 100940	5.4	3
21	How ßsecretase hits a moving target. <i>ELife</i> , 2016 , 5,	8.9	2
20	Disease-linked supertrafficking of a potassium channel. <i>Journal of Biological Chemistry</i> , 2021 , 296, 1004234	3.4	2
19	The C99 domain of the amyloid precursor protein resides in the disordered membrane phase. <i>Journal of Biological Chemistry</i> , 2021 , 296, 100652	5.4	2
18	Compendium of causative genes and their encoded proteins for common monogenic disorders. <i>Protein Science</i> , 2021 ,	6.3	2
17	Biophysical characterization of interactions between the C-termini of peripheral nerve claudins and the PDZ domain of zonula occludens. <i>Biochemical and Biophysical Research Communications</i> , 2015 , 459, 87-93	3.4	1
16	Life During Wartime: A Personal Recollection of the Circa 1990 Prestegard Lab and Its Contributions to Membrane Biophysics. <i>Journal of Membrane Biology</i> , 2019 , 252, 541-548	2.3	1
15	A Model for the Signal Initiation Complex Between Arrestin-3 and the Src Family Kinase Fgr.. <i>Journal of Molecular Biology</i> , 2021 , 434, 167400	6.5	1
14	Peripheral Myelin Protein 22 Preferentially Partitions into Ordered Phase Membrane Domains		1
13	High Throughput Functional Evaluation of KCNQ1 Decrypts Variants of Unknown Significance		1
12	Disruption of the integrin-linked kinase (ILK) pseudokinase domain affects kidney development in mice. <i>Journal of Biological Chemistry</i> , 2021 , 296, 100361	5.4	1
11	Glycosylation limits forward trafficking of the tetraspan membrane protein PMP22. <i>Journal of Biological Chemistry</i> , 2021 , 296, 100719	5.4	1
10	High-Content Imaging Platform to Discover Chemical Modulators of Plasma Membrane Rafts.. <i>ACS Central Science</i> , 2022 , 8, 370-378	16.8	1

9	Verteporfin is a Substrate-Selective β -Secretase Inhibitor that Binds the Amyloid Precursor Protein Transmembrane Domain.. <i>Journal of Biological Chemistry</i> , 2022 , 101792	5.4	1
8	NMR resonance assignments and secondary structure of a mutant form of the human KCNE1 channel accessory protein that exhibits KCNE3-like function. <i>Biomolecular NMR Assignments</i> , 2019 , 13, 143-147	0.7	0
7	The transmembrane amyloid precursor C99 protein exhibits non-specific interaction with tau. <i>Biochemical and Biophysical Research Communications</i> , 2021 , 576, 48-52	3.4	0
6	Predicting the functional impact of KCNQ1 variants with artificial neural networks.. <i>PLoS Computational Biology</i> , 2022 , 18, e1010038	5	0
5	Investigating Structural Dynamics of KCNE3 in Different Membrane Environments Using Molecular Dynamics Simulations. <i>Membranes</i> , 2022 , 12, 469	3.8	0
4	Post-integration Misassembly of Membrane Proteins and Disease 2006 , 81-94		
3	A Structure for Little Orphan Diacylglycerol Kinase. <i>FASEB Journal</i> , 2007 , 21, A148	0.9	
2	NMR based structure and enzymatic insight into diacylglycerol kinase, an alpha-helical membrane protein. <i>FASEB Journal</i> , 2009 , 23, LB223	0.9	
1	Letter to the Editor: Distanced Inspiration from the Career of Stephen H. White. <i>Journal of Membrane Biology</i> , 2021 , 254, 1-3	2.3	