Charles R Sanders

List of Publications by Year in Descending Order

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	High-Content Imaging Platform to Discover Chemical Modulators of Plasma Membrane Rafts.. *ACS Central Science*, **2022**, 8, 370-378	16.8	1
133	Verteporfin is a Substrate-Selective γ-Secretase Inhibitor that Binds the Amyloid Precursor Protein Transmembrane Domain.. *Journal of Biological Chemistry*, **2022**, 101792	5.4	1
132	Predicting the functional impact of KCNQ1 variants with artificial neural networks.. *PLoS Computational Biology*, **2022**, 18, e1010038	5	0
131	Investigating Structural Dynamics of KCNE3 in Different Membrane Environments Using Molecular Dynamics Simulations. *Membranes*, **2022**, 12, 469	3.8	0
130	A Model for the Signal Initiation Complex Between Arrestin-3 and the Src Family Kinase Fgr.. *Journal of Molecular Biology*, **2021**, 434, 167400	6.5	1
129	Ion mobility-mass spectrometry reveals the role of peripheral myelin protein dimers in peripheral neuropathy. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	3
128	Structural determinants of cholesterol recognition in helical integral membrane proteins. *Biophysical Journal*, **2021**, 120, 1592-1604	2.9	3
127	Letter to the Editor: Distanced Inspiration from the Career of Stephen H. White. *Journal of Membrane Biology*, **2021**, 254, 1-3	2.3	
126	Disease-linked supertrafficking of a potassium channel. *Journal of Biological Chemistry*, **2021**, 296, 100423	5.4	2
125	The C99 domain of the amyloid precursor protein resides in the disordered membrane phase. *Journal of Biological Chemistry*, **2021**, 296, 100652	5.4	2
124	Disruption of the integrin-linked kinase (ILK) pseudokinase domain affects kidney development in mice. *Journal of Biological Chemistry*, **2021**, 296, 100361	5.4	1
123	Recombinant SARS-CoV-2 envelope protein traffics to the trans-Golgi network following amphipol-mediated delivery into human cells. *Journal of Biological Chemistry*, **2021**, 297, 100940	5.4	3
122	Compendium of causative genes and their encoded proteins for common monogenic disorders. *Protein Science*, **2021**,	6.3	2
121	The transmembrane amyloid precursor C99 protein exhibits non-specific interaction with tau. *Biochemical and Biophysical Research Communications*, **2021**, 576, 48-52	3.4	0
120	Glycosylation limits forward trafficking of the tetraspan membrane protein PMP22. *Journal of Biological Chemistry*, **2021**, 296, 100719	5.4	1
119	Structures Illuminate Cardiac Ion Channel Functions in Health and in Long QT Syndrome. *Frontiers in Pharmacology*, **2020**, 11, 550	5.6	11
118	Peripheral myelin protein 22 preferentially partitions into ordered phase membrane domains. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 14168-14177	11.5	16

117	Bicelles Rich in both Sphingolipids and Cholesterol and Their Use in Studies of Membrane Proteins. *Journal of the American Chemical Society*, **2020**, 142, 12715-12729	16.4	10
116	Structure and physiological function of the human KCNQ1 channel voltage sensor intermediate state. *ELife*, **2020**, 9,	8.9	15
115	Allosteric mechanism for KCNE1 modulation of KCNQ1 potassium channel activation. *ELife*, **2020**, 9,	8.9	5
114	Collision-Induced Unfolding Differentiates Functional Variants of the KCNQ1 Voltage Sensor Domain. *Journal of the American Society for Mass Spectrometry*, **2020**, 31, 2348-2355	3.5	4
113	Direct relationship between increased expression and mistrafficking of the Charcot-Marie-Tooth-associated protein PMP22. *Journal of Biological Chemistry*, **2020**, 295, 11963-11970	5.4	5
112	Genetic intolerance analysis as a tool for protein science. *Biochimica Et Biophysica Acta - Biomembranes*, **2020**, 1862, 183058	3.8	3
111	Peripheral myelin protein 22 modulates store-operated calcium channel activity, providing insights into Charcot-Marie-Tooth disease etiology. *Journal of Biological Chemistry*, **2019**, 294, 12054-12065	5.4	9
110	A unified structural model of the mammalian translocator protein (TSPO). *Journal of Biomolecular NMR*, **2019**, 73, 347-364	3	8
109	The vexing complexity of the amyloidogenic pathway. *Protein Science*, **2019**, 28, 1177-1193	6.3	13
108	Reciprocal modulation between amyloid precursor protein and synaptic membrane cholesterol revealed by live cell imaging. *Neurobiology of Disease*, **2019**, 127, 449-461	7.5	11
107	Protein structure aids predicting functional perturbation of missense variants in and. *Computational and Structural Biotechnology Journal*, **2019**, 17, 206-214	6.8	10
106	Life During Wartime: A Personal Recollection of the Circa 1990 Prestegard Lab and Its Contributions to Membrane Biophysics. *Journal of Membrane Biology*, **2019**, 252, 541-548	2.3	1
105	Upgraded molecular models of the human KCNQ1 potassium channel. *PLoS ONE*, **2019**, 14, e0220415	3.7	13
104	NMR resonance assignments and secondary structure of a mutant form of the human KCNE1 channel accessory protein that exhibits KCNE3-like function. *Biomolecular NMR Assignments*, **2019**, 13, 143-147	0.7	0
103	Folding and Misfolding of Human Membrane Proteins in Health and Disease: From Single Molecules to Cellular Proteostasis. *Chemical Reviews*, **2019**, 119, 5537-5606	68.1	93
102	Probing the Dynamics and Structural Topology of the Reconstituted Human KCNQ1 Voltage Sensor Domain (Q1-VSD) in Lipid Bilayers Using Electron Paramagnetic Resonance Spectroscopy. *Biochemistry*, **2019**, 58, 965-973	3.2	8
101	Bexarotene Binds to the Amyloid Precursor Protein Transmembrane Domain, Alters Its α-Helical Conformation, and Inhibits γ-Secretase Nonselectively in Liposomes. *ACS Chemical Neuroscience*, **2018**, 9, 1702-1713	5.7	8
100	Mechanisms of KCNQ1 channel dysfunction in long QT syndrome involving voltage sensor domain mutations. *Science Advances*, **2018**, 4, eaar2631	14.3	37

99	Membrane properties that shape the evolution of membrane enzymes. *Current Opinion in Structural Biology*, **2018**, 51, 80-91	8.1	12
98	De novo designed transmembrane peptides activating the 51 integrin. *Protein Engineering, Design and Selection*, **2018**, 31, 181-190	1.9	8
97	High-Throughput Functional Evaluation of KCNQ1 Decrypts Variants of Unknown Significance. *Circulation Genomic and Precision Medicine*, **2018**, 11, e002345	5.2	40
96	LCP1 preferentially binds clasped M2 integrin and attenuates leukocyte adhesion under flow. *Journal of Cell Science*, **2018**, 131,	5.3	7
95	Structural and biochemical differences between the Notch and the amyloid precursor protein transmembrane domains. *Science Advances*, **2017**, 3, e1602794	14.3	27
94	Dodecyl-melibioside Detergent Micelles as a Medium for Membrane Proteins. *Biochemistry*, **2017**, 56, 5481-5484	3.2	7
93	Predicting the Functional Impact of KCNQ1 Variants of Unknown Significance. *Circulation: Cardiovascular Genetics*, **2017**, 10,		20
92	Talin regulates integrin 1-dependent and -independent cell functions in ureteric bud development. *Development (Cambridge)*, **2017**, 144, 4148-4158	6.6	7
91	Structural Dynamics of 15-Lipoxygenase-2 via Hydrogen-Deuterium Exchange. *Biochemistry*, **2017**, 56, 5065-5074	3.2	11
90	Peripheral myelin protein 22 alters membrane architecture. *Science Advances*, **2017**, 3, e1700220	14.3	30
89	Backbone Hydrogen Bond Strengths Can Vary Widely in Transmembrane Helices. *Journal of the American Chemical Society*, **2017**, 139, 10742-10749	16.4	25
88	Regulation of KCNQ/Kv7 family voltage-gated K channels by lipids. *Biochimica Et Biophysica Acta - Biomembranes*, **2017**, 1859, 586-597	3.8	25
87	Documentation of an Imperative To Improve Methods for Predicting Membrane Protein Stability. *Biochemistry*, **2016**, 55, 5002-9	3.2	31
86	A pH-Mediated Topological Switch within the N-Terminal Domain of Human Caveolin-3. *Biophysical Journal*, **2016**, 110, 2475-2485	2.9	5
85	Structural and Molecular Determinants of Membrane Binding by the HIV-1 Matrix Protein. *Journal of Molecular Biology*, **2016**, 428, 1637-55	6.5	55
84	Topologically Diverse Human Membrane Proteins Partition to Liquid-Disordered Domains in Phase-Separated Lipid Vesicles. *Biochemistry*, **2016**, 55, 985-8	3.2	14
83	Implications of the differing roles of the 1 and 3 transmembrane and cytoplasmic domains for integrin function. *ELife*, **2016**, 5,	8.9	22
82	How secretase hits a moving target. *ELife*, **2016**, 5,	8.9	2

81	Structural basis for KCNE3 modulation of potassium recycling in epithelia. *Science Advances*, **2016**, 2, e1501228	14.3	32
80	Transthyretin Suppresses Amyloid-β Secretion by Interfering with Processing of the Amyloid-β Protein Precursor. *Journal of Alzheimer's Disease*, **2016**, 52, 1263-75	4.3	13
79	The safety dance: biophysics of membrane protein folding and misfolding in a cellular context. *Quarterly Reviews of Biophysics*, **2015**, 48, 1-34	7	28
78	Conformational Stability and Pathogenic Misfolding of the Integral Membrane Protein PMP22. *Journal of the American Chemical Society*, **2015**, 137, 8758-68	16.4	29
77	Biophysical characterization of interactions between the C-termini of peripheral nerve claudins and the PDZ-domain of zonula occludens. *Biochemical and Biophysical Research Communications*, **2015**, 459, 87-93	3.4	1
76	Personalized biochemistry and biophysics. *Biochemistry*, **2015**, 54, 2551-9	3.2	22
75	Probing Structural Dynamics and Topology of the KCNE1 Membrane Protein in Lipid Bilayers via Site-Directed Spin Labeling and Electron Paramagnetic Resonance Spectroscopy. *Biochemistry*, **2015**, 54, 6402-12	3.2	19
74	Perplexing new insight into the dynamics of the EmrE transporter. *Journal of General Physiology*, **2015**, 146, 441-4	3.4	3
73	Influence of Arrestin on the Photodecay of Bovine Rhodopsin. *Angewandte Chemie - International Edition*, **2015**, 54, 13555-60	16.4	6
72	Development of electron spin echo envelope modulation spectroscopy to probe the secondary structure of recombinant membrane proteins in a lipid bilayer. *Protein Science*, **2015**, 24, 1707-13	6.3	9
71	Influence of Pathogenic Mutations on the Energetics of Translocon-Mediated Bilayer Integration of Transmembrane Helices. *Journal of Membrane Biology*, **2015**, 248, 371-81	2.3	16
70	Notch Transmembrane Domain: Secondary Structure and Topology. *Biochemistry*, **2015**, 54, 3565-8	3.2	14
69	Impact of bilayer lipid composition on the structure and topology of the transmembrane amyloid precursor C99 protein. *Journal of the American Chemical Society*, **2014**, 136, 4093-6	16.4	39
68	The homology model of PMP22 suggests mutations resulting in peripheral neuropathy disrupt transmembrane helix packing. *Biochemistry*, **2014**, 53, 6139-41	3.2	16
67	Structural investigation of the transmembrane domain of KCNE1 in proteoliposomes. *Biochemistry*, **2014**, 53, 6392-401	3.2	37
66	Purification and structural study of the voltage-sensor domain of the human KCNQ1 potassium ion channel. *Biochemistry*, **2014**, 53, 2032-42	3.2	27
65	Cholesterol as a co-solvent and a ligand for membrane proteins. *Protein Science*, **2014**, 23, 1-22	6.3	91
64	Competition between homodimerization and cholesterol binding to the C99 domain of the amyloid precursor protein. *Biochemistry*, **2013**, 52, 5051-64	3.2	84

63	The backbone dynamics of the amyloid precursor protein transmembrane helix provides a rationale for the sequential cleavage mechanism of -secretase. *Journal of the American Chemical Society*, **2013**, 135, 1317-29	16.4	57
62	Reversible folding of human peripheral myelin protein 22, a tetraspan membrane protein. *Biochemistry*, **2013**, 52, 3229-41	3.2	27
61	An allosteric mechanism for drug block of the human cardiac potassium channel KCNQ1. *Molecular Pharmacology*, **2013**, 83, 481-9	4.3	10
60	Bicelles at low concentrations. *Molecular Pharmaceutics*, **2012**, 9, 752-61	5.6	37
59	The amyloid precursor protein has a flexible transmembrane domain and binds cholesterol. *Science*, **2012**, 336, 1168-71	33.3	351
58	Prokaryotic diacylglycerol kinase and undecaprenol kinase. *Annual Review of Biophysics*, **2012**, 41, 81-101	21.1	52
57	1 integrin NPXY motifs regulate kidney collecting-duct development and maintenance by induced-fit interactions with cytosolic proteins. *Molecular and Cellular Biology*, **2012**, 32, 4080-91	4.8	8
56	Enhancing integrin 1 inserted (I) domain affinity to ligand potentiates integrin 11-mediated down-regulation of collagen synthesis. *Journal of Biological Chemistry*, **2012**, 287, 35139-35152	5.4	20
55	Structural basis for the Trembler-J phenotype of Charcot-Marie-Tooth disease. *Structure*, **2011**, 19, 1160-9	5.2	30
54	Working model for the structural basis for KCNE1 modulation of the KCNQ1 potassium channel. *Current Opinion in Structural Biology*, **2011**, 21, 283-91	8.1	25
53	NSAID-based -secretase modulators do not bind to the amyloid- polypeptide. *Biochemistry*, **2011**, 50, 10328-42	3.2	20
52	Reconstitution of KCNE1 into lipid bilayers: comparing the structural, dynamic, and activity differences in micelle and vesicle environments. *Biochemistry*, **2011**, 50, 10851-9	3.2	23
51	Tolerance to changes in membrane lipid composition as a selected trait of membrane proteins. *Biochemistry*, **2011**, 50, 7858-67	3.2	63
50	Solution NMR approaches for establishing specificity of weak heterodimerization of membrane proteins. *Journal of the American Chemical Society*, **2011**, 133, 20571-80	16.4	22
49	KCNQ1/KCNE1 assembly, co-translation not required. *Channels*, **2010**, 4, 108-14	3	17
48	Functional delivery of a membrane protein into oocyte membranes using bicelles. *Biochemistry*, **2010**, 49, 653-5	3.2	31
47	Lysophospholipid micelles sustain the stability and catalytic activity of diacylglycerol kinase in the absence of lipids. *Biochemistry*, **2010**, 49, 7089-99	3.2	31
46	Direct binding of cholesterol to the amyloid precursor protein: An important interaction in lipid-Alzheimer's disease relationships?. *Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids*, **2010**, 1801, 975-82	5	110

45	Distinct subdomains of the KCNQ1 S6 segment determine channel modulation by different KCNE subunits. *Journal of General Physiology*, **2009**, 134, 207-17	3.4	19
44	Solution nuclear magnetic resonance structure of membrane-integral diacylglycerol kinase. *Science*, **2009**, 324, 1726-9	33.3	188
43	A unified hydrophobicity scale for multispan membrane proteins. *Proteins: Structure, Function and Bioinformatics*, **2009**, 76, 13-29	4.2	39
42	Recent Advances in the Application of Solution NMR Spectroscopy to Multi-Span Integral Membrane Proteins. *Progress in Nuclear Magnetic Resonance Spectroscopy*, **2009**, 55, 335-360	10.4	132
41	Bolaamphiphile-class surfactants can stabilize and support the function of solubilized integral membrane proteins. *Biochemistry*, **2009**, 48, 11606-8	3.2	25
40	Nonspecificity of binding of gamma-secretase modulators to the amyloid precursor protein. *Biochemistry*, **2009**, 48, 11837-9	3.2	39
39	NMR based structure and enzymatic insight into diacylglycerol kinase, an alpha-helical membrane protein. *FASEB Journal*, **2009**, 23, LB223	0.9	
38	Cross-talk between integrins alpha1beta1 and alpha2beta1 in renal epithelial cells. *Experimental Cell Research*, **2008**, 314, 3593-604	4.2	27
37	Structural studies of the transmembrane C-terminal domain of the amyloid precursor protein (APP): does APP function as a cholesterol sensor?. *Biochemistry*, **2008**, 47, 9428-46	3.2	137
36	Structure of KCNE1 and implications for how it modulates the KCNQ1 potassium channel. *Biochemistry*, **2008**, 47, 7999-8006	3.2	164
35	The peripheral neuropathy-linked Trembler and Trembler-J mutant forms of peripheral myelin protein 22 are folding-destabilized. *Biochemistry*, **2008**, 47, 10620-9	3.2	23
34	Development and Application of Bicelles for Use in Biological NMR and Other Biophysical Studies **2008**, 233-239		5
33	Purification and initiation of structural characterization of human peripheral myelin protein 22, an integral membrane protein linked to peripheral neuropathies. *Biochemistry*, **2007**, 46, 11185-95	3.2	19
32	Preparation, functional characterization, and NMR studies of human KCNE1, a voltage-gated potassium channel accessory subunit associated with deafness and long QT syndrome. *Biochemistry* , **2007**, 46, 11459-72	3.2	56
31	Structural models for the KCNQ1 voltage-gated potassium channel. *Biochemistry*, **2007**, 46, 14141-52	3.2	82
30	Visiting order on membrane proteins by using nanotechnology. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 6502-3	11.5	4
29	A Structure for Little Orphan Diacylglycerol Kinase. *FASEB Journal*, **2007**, 21, A148	0.9	
28	Solution NMR of membrane proteins: practice and challenges. *Magnetic Resonance in Chemistry*, **2006**, 44 Spec No, S24-40	2.1	193

27	Irreversible misfolding of diacylglycerol kinase is independent of aggregation and occurs prior to trimerization and membrane association. *Biochemistry*, **2006**, 45, 10072-84	3.2	16
26	Post-integration Misassembly of Membrane Proteins and Disease **2006**, 81-94		
25	Phenotology of disease-linked proteins. *Human Mutation*, **2005**, 25, 90-7	4.7	10
24	Disease-related misassembly of membrane proteins. *Annual Review of Biophysics and Biomolecular Structure*, **2004**, 33, 25-51		209
23	French swimwear for membrane proteins. *ChemBioChem*, **2004**, 5, 423-6	3.8	74
22	Destabilizing mutations promote membrane protein misfolding. *Biochemistry*, **2004**, 43, 19-25	3.2	43
21	A critical residue in the folding pathway of an integral membrane protein. *Biochemistry*, **2002**, 41, 9021-5	3.2	16
20	Amphipols can support the activity of a membrane enzyme. *Journal of the American Chemical Society*, **2002**, 124, 11594-5	16.4	61
19	Kinetic study of folding and misfolding of diacylglycerol kinase in model membranes. *Biochemistry*, **2001**, 40, 8971-80	3.2	57
18	Use of amphipathic polymers to deliver a membrane protein to lipid bilayers. *FEBS Letters*, **2001**, 501, 115-20	3.8	52
17	Mutations of peripheral myelin protein 22 result in defective trafficking through mechanisms which may be common to diseases involving tetraspan membrane proteins. *Biochemistry*, **2001**, 40, 9453-9	3.2	64
16	Conformationally specific misfolding of an integral membrane protein. *Biochemistry*, **2001**, 40, 5111-8	3.2	23
15	Functionality of a membrane protein in bicelles. *Analytical Biochemistry*, **2000**, 284, 327-33	3.1	89
14	Misfolding of membrane proteins in health and disease: the lady or the tiger?. *Current Opinion in Structural Biology*, **2000**, 10, 438-42	8.1	85
13	Thiol modification of diacylglycerol kinase: dependence upon site membrane disposition and reagent hydrophobicity. *FEBS Letters*, **2000**, 472, 225-9	3.8	13
12	Reconstitutive refolding of diacylglycerol kinase, an integral membrane protein. *Biochemistry*, **1999**, 38, 16373-82	3.2	78
11	On choosing a detergent for solution NMR studies of membrane proteins. *Journal of Biomolecular NMR*, **1998**, 11, 381-6	3	103
10	Bicelles: a model membrane system for all seasons?. *Structure*, **1998**, 6, 1227-34	5.2	303

9	Reconstitution of membrane proteins into lipid-rich bilayered mixed micelles for NMR studies. *Biochemistry*, **1995**, 34, 4030-40	3.2	301
8	Magnetically-oriented phospholipid micelles as a tool for the study of membrane-associated molecules. *Progress in Nuclear Magnetic Resonance Spectroscopy*, **1994**, 26, 421-444	10.4	347
7	Characterization of magnetically orientable bilayers in mixtures of dihexanoylphosphatidylcholine and dimyristoylphosphatidylcholine by solid-state NMR. *Biochemistry*, **1992**, 31, 8898-905	3.2	426
6	Headgroup orientations of alkyl glycosides at a lipid bilayer interface. *Journal of the American Chemical Society*, **1992**, 114, 7096-7107	16.4	29
5	Orientation and dynamics of .beta.-dodecyl glucopyranoside in phospholipid bilayers by oriented sample NMR and order matrix analysis. *Journal of the American Chemical Society*, **1991**, 113, 1987-1996	16.4	46
4	Mechanism of adenylate kinase. Is there a relationship between local substrate dynamics, local binding energy, and the catalytic mechanism?. *Biochemistry*, **1989**, 28, 9028-43	3.2	39
3	Mechanism of adenylate kinase. 3. Use of deuterium NMR to show lack of correlation between local substrate dynamics and local binding energy. *Journal of the American Chemical Society*, **1988**, 110, 3323-3324	16.4	4
2	Peripheral Myelin Protein 22 Preferentially Partitions into Ordered Phase Membrane Domains		1
1	High Throughput Functional Evaluation of KCNQ1 Decrypts Variants of Unknown Significance		1