Bruce Cornell

List of Publications by Year
in descending order

77 papers	3,521 citations	159585 30 h-index	138484 58 g-index
80 all docs	80 docs citations	80 times ranked	2401 citing authors

#	Article	IF	Citations
1	A biosensor that uses ion-channel switches. Nature, 1997, 387, 580-583.	27.8	1,102
2	Interactions of helical polypeptide segments which span the hydrocarbon region of lipid bilayers. Journal of Molecular Biology, 1977, 113, 517-538.	4.2	210
3	Structure and Orientation of the Pore-forming Peptide Melittin, in Lipid Bilayers. Journal of Molecular Biology, 1994, 241, 456-466.	4.2	165
4	Conformation and Orientation of Gramicidin a in Oriented Phospholipid Bilayers Measured by Solid State Carbon-13 NMR. Biophysical Journal, 1988, 53, 67-76.	0.5	154
5	Membrane thickness and acyl chain length. Biochimica Et Biophysica Acta - Biomembranes, 1983, 733, 189-193.	2.6	108
6	Determination of the structure of a membrane-incorporated ion channel. Solid-state nuclear magnetic resonance studies of gramicidin A. Biophysical Journal, 1989, 56, 307-314.	0.5	91
7	The molecular packing and stability within highly curved phospholipid bilayers. Biochimica Et Biophysica Acta - Biomembranes, 1980, 598, 405-410.	2.6	83
8	Tethered-bilayer lipid membranes as a support for membrane-active peptides. Biochemical Society Transactions, 2001, 29, 613-617.	3.4	75
9	Gramicidin channel controversy--revisited. Nature Structural Biology, 1999, 6, 610-611.	9.7	58
10	The lower limit to the size of small sonicated phospholipid vesicles. Biochimica Et Biophysica Acta - Biomembranes, 1982, 690, 15-19.	2.6	53
11	Melittin-induced changes in lipid multilayers. A solid-state NMR study. Biophysical Journal, 1992, 63, 469-474.	0.5	52
12	The ion channel switch biosensor. , 1999, 12, 328-334.		52
13	Solid-state 13C-NMR studies of the effects of sodium ions on the gramicidin A ion channel. Biochimica Et Biophysica Acta - Biomembranes, 1990, 1026, 161-166.	2.6	51
14	Gramicidin A-phospholipid model systems. Journal of Bioenergetics and Biomembranes, 1987, 19, 655-676.	2.3	50
15	Sodium ion binding in the gramicidin A channel. Solid-state NMR studies of the tryptophan residues. Biophysical Journal, 1994, 67, 1495-1500.	0.5	49
16	Low-frequency motion in membranes. The effect of cholesterol and proteins. Biochimica Et Biophysica Acta - Biomembranes, 1982, 689, 337-345.	2.6	46
17	The Dynamics of the Intrinsic Membrane Polypeptide Gramicidin a in Phospholipid Bilayers. Biophysical Journal, 1986, 49, 117-118.	0.5	46
18	Cross-polarization 13C NMR spectroscopy of whole soils. Nature, 1980, 286, 585-587.	27.8	42

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19	Bacterial Mechanosensitive Channels: Models for Studying Mechanosensory Transduction. Antioxidants and Redox Signaling, 2014, 20, 952-969.	5.4	41
20	The modulation of lipid bilayer fluidity by intrinsic polypeptides and proteins. FEBS Letters, 1978, 90, 29-35.	2.8	39
21	Biological membranes are rich in low-frequency motion. Biochimica Et Biophysica Acta - Biomembranes, 1983, 732, 473-478.	2.6	39
22	A pulsed N.M.R. study of D2O bound to 1,2 dipalmitoyl phosphatidylcholine. Chemistry and Physics of Lipids, 1974, 13, 183-201.	3.2	37
23	NMR order parameter analysis of a peptide plane aligned in a lyotropic liquid crystal. Molecular Physics, 1993, 78, 357-369.	1.7	37
24	Evidence of the Key Role of H₃O⁺ in Phospholipid Membrane Morphology. Langmuir, 2016, 32, 10725-10734.	3.5	35
25	The Assembly and Use of Tethered Bilayer Lipid Membranes (tBLMs). Methods in Molecular Biology, 2015, 1232, 45-53.	0.9	35
26	The effect of gramicidin A on phospholipid bilayers. European Biophysics Journal, 1988, 16, 113-9.	2.2	33
27	Molecular sequence effect on the carbon-13 carbonyl chemical shift shielding tensor. Journal of the American Chemical Society, 1990, 112, 8324-8328.	13.7	33
28	Kinetics of the competitive response of receptors immobilised to ion-channels which have been incorporated into a tethered bilayer. Faraday Discussions, 1999, 111, 247-258.	3.2	33
29	NMR study of synthetic lecithin bilayers in the vicinity of the gel-liquid--crystal transition. Biophysical Journal, 1981, 35, 509-520.	0.5	32
30	Kalata B1 and Kalata B2 Have a Surfactant-Like Activity in Phosphatidylethanolomine-Containing Lipid Membranes. Langmuir, 2017, 33, 6630-6637.	3.5	32
31	Ion-Channel Biosensorsâ€”Part I: Construction, Operation, and Clinical Studies. IEEE Nanotechnology Magazine, 2010, 9, 303-312.	2.0	31
32	Design and synthesis of short amphiphilic cationic peptidomimetics based on biphenyl backbone as antibacterial agents. European Journal of Medicinal Chemistry, 2018, 143, 1702-1722.	5.5	29
33	An Engineered Membrane to Measure Electroporation: Effect of Tethers and Bioelectronic Interface. Biophysical Journal, 2014, 107, 1339-1351.	0.5	26
34	Ion Channel Biosensorsâ€”Part II: Dynamic Modeling, Analysis, and Statistical Signal Processing. IEEE Nanotechnology Magazine, 2010, 9, 313-321.	2.0	25
35	Lipid Membrane Interactions of the Cationic Antimicrobial Peptide Chimeras Melimine and Cys-Melimine. Langmuir, 2018, 34, 11586-11592.	3.5	24
36	31P nuclear magnetic resonance studies of the association of basic proteins with multilayers of diacyl phosphatidylserine. Biochimica Et Biophysica Acta - Biomembranes, 1983, 732, 492-498.	2.6	23

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37	Temperature dependence of the size of phospholipid vesicles. Biochimica Et Biophysica Acta - Biomembranes, 1981, 642, 375-380.	2.6	22
38	A Study of the Angular Dependence of NMR Relaxation Times in Macroscopically Oriented Lyotropic Liquid Crystal Lamellar Phases. Molecular Crystals and Liquid Crystals, 1982, 89, 137-150.	0.8	21
39	Myelin basic protein induces hexagonal phase formation in dispersions of diacylphosphatidic acid. Biochimica Et Biophysica Acta - Biomembranes, 1985, 818, 275-279.	2.6	21
40	The effect of hydronium ions on the structure of phospholipid membranes. Physical Chemistry Chemical Physics, 2018, 20, 357-366.	2.8	21
41	Actin dynamics studied by solid-state NMR spectroscopy. European Biophysics Journal, 1991, 19, 147-155.	2.2	20
42	Microviscosity of human erythrocytes studied with hypophosphite and 31P-NMR. Biophysical Chemistry, 1989, 33, 205-215.	2.8	19
43	Orientation dependence of NMR relaxation time, T1Ï, in lipid bilayers. Chemistry and Physics of Lipids, 2000, 107, 159-167.	3.2	18
44	Nanoscale Ion Sequestration To Determine the Polarity Selectivity of Ion Conductance in Carriers and Channels. Langmuir, 2015, 31, 292-298.	3.5	18
45	Association of ferri- and ferro-cytochrome c with lipid multilayers: a 31P solid-state NMR study. Biochimica Et Biophysica Acta - Biomembranes, 1986, 862, 451-456.	2.6	17
46	A model for gramicidin A?-phospholipid interactions in bilayers. European Biophysics Journal, 1988, 16, 299-306.	2.2	17
47	Effect of acyl chain length on the structure and motion of gramicidin A in lipid bilayers. Biochimica Et Biophysica Acta - Biomembranes, 1989, 985, 229-232.	2.6	17
48	A 35Cl and 37Cl NMR study of chloride binding to the erythrocyte anion transport protein. Biophysical Chemistry, 1991, 40, 329-337.	2.8	17
49	A molecular machine biosensor: Construction, predictive models and experimental studies. Biosensors and Bioelectronics, 2012, 34, 261-266.	10.1	17
50	Investigating Sterol and Redox Regulation of the Ion Channel Activity of CLIC1 Using Tethered Bilayer Membranes. Membranes, 2016, 6, 51.	3.0	17
51	The protective effect of osmoprotectant TMAO on bacterial mechanosensitive channels of small conductance MscS/MscK under high hydrostatic pressure. Channels, 2012, 6, 262-271.	2.8	16
52	Chemical shielding tensors of C13in solid dimethyl oxalate. Journal of Chemical Physics, 1986, 85, 4199-4201.	3.0	15
53	Crystal structures of dimethylsuccinate and dimethyloxalate: Carbonyl group orientation for C13 chemical shielding tensor studies. Journal of Crystallographic and Spectroscopic Research, 1989, 19, 715-723.	0.2	13
54	The Effect of Cholesterol on the Dielectric Structure of Lipid Bilayers. Journal of Membrane Biology, 2018, 251, 153-161.	2.1	13

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55	Making lipid membranes even tougher. Journal of Materials Research, 2007, 22, 2189-2194.	2.6	12
56	The effect of pulsed electric fields on the phosphorus-31 spectra of lipid bilayers. Biochimica Et Biophysica Acta - Biomembranes, 1994, 1195, 197-204.	2.6	11
57	Engineering aspects of biological ion channelsâ€"from biosensors to computational models for permeation. Protoplasma, 2012, 249, 3-9.	2.1	11
58	The Effect of Tethers on Artificial Cell Membranes: A Coarse-Grained Molecular Dynamics Study. PLoS ONE, 2016, 11, e0162790.	2.5	11
59	The effect of H3O+ on the membrane morphology and hydrogen bonding of a phospholipid bilayer. Biophysical Reviews, 2018, 10, 1371-1376.	3.2	10
60	Gramicidin Ion Channel-Based Biosensors: Construction, Stochastic Dynamical Models, and Statistical Detection Algorithms. IEEE Sensors Journal, 2007, 7, 1281-1288.	4.7	9
61	The use of proton-enhanced, natural abundance 13 C NMR to study the molecular dynamics of model and biological membranes. FEBS Letters, 1980, 115, 134-138.	2.8	8
62	The Effect of Cholesterol on the Voltageâ€"Current Characteristics of Tethered Lipid Membranes. Journal of Membrane Biology, 2020, 253, 319-330.	2.1	8
63	Excitation of triple quantum NMR coherences in solids by hard rf pulses. Chemical Physics Letters, 1988, 144, 87-89.	2.6	6
64	Multiple Surface-Based Biosensors for Enhanced Molecular Detection in Fluid Flow Systems. IEEE Sensors Journal, 2013, 13, 1265-1273.	4.7	6
65	Modelling the Bioelectronic Interface in Engineered Tethered Membranes: From Biosensing to Electroporation. IEEE Transactions on Biomedical Circuits and Systems, 2015, 9, 321-333.	4.0	6
66	The Effect of Benzyl Alcohol on the Dielectric Structure of Lipid Bilayers. Journal of Membrane Biology, 2016, 249, 833-844.	2.1	6
67	Probing the influence of tether density on tethered bilayer lipid membrane (tBLM)-peptide interactions. Applied Materials Today, 2020, 18, 100527.	4.3	5
68	Label-Free, Real-Time Phospholipase-A Isoform Assay. ACS Biomaterials Science and Engineering, 2020, 6, 4714-4721.	5.2	5
69	Subtle changes in pH affect the packing and robustness of fatty acid bilayers. Soft Matter, 2022, 18, 3498-3504.	2.7	5
70	‹title›Gated ion channel biosensor: a functioning nanomachine‹/title›. , 1998, , .		4
71	Measuring the impedance of a tethered bilayer membrane biosensor. , 2008, , .		2
72	Mathematical Models for Sensing Devices Constructed out of Artificial Cell Membranes. The Nanoscale Systems: Mathematical Modelingory and Applications, 2012, 1, 143-171.	0.3	2

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73	Mathematical modeling of a tethered bilayer sensor containing gramicidin a ion channels. , 2009, 2009, 1262-5.		1
74	Reconfigurable ion-channel based biosensor: Input excitation design and analyte classification. , 2009, , .		1
75	Stochastic modeling and signal processing of nano-scale protein-based biosensors. , 2009, , .		1
76	The phosphorus-31 spectra of dielectrophoretically reoriented tubules in the HII phase of DOPE. Biochimica Et Biophysica Acta - Biomembranes, 1996, 1278, 160-168.	2.6	0
77	Real-Time Molecular Detectors using Gramicidin Ion Channel Nano-Biosensors. , 2007, , .		0