Michael Landreh

List of Publications by Year in Descending Order

141 papers	10,547 citations	50 h-index	102 g-index
149 ext. papers	12,356 ext. citations	11.7 avg, IF	6.5 L-index

#	Paper	IF	Citations
141	Electrospray ionization of native membrane proteins proceeds a charge equilibration step.. *RSC Advances*, **2022**, 12, 9671-9680	3.7	1
140	Structure, mechanism and lipid-mediated remodeling of the mammalian Na/H exchanger NHA2.. *Nature Structural and Molecular Biology*, **2022**, 29, 108-120	17.6	2
139	A "spindle and thread" mechanism unblocks p53 translation by modulating N-terminal disorder.. *Structure*, **2022**,	5.2	1
138	Capturing a rhodopsin receptor signalling cascade across a native membrane.. *Nature*, **2022**,	50.4	4
137	The dimerization mechanism of the N-terminal domain of spider silk proteins is conserved despite extensive sequence divergence.. *Journal of Biological Chemistry*, **2022**, 101913	5.4	1
136	Understanding glycoprotein structural heterogeneity and interactions: Insights from native mass spectrometry.. *Current Opinion in Structural Biology*, **2022**, 74, 102351	8.1	1
135	Peptidoglycan biosynthesis is driven by lipid transfer along enzyme-substrate affinity gradients.. *Nature Communications*, **2022**, 13, 2278	17.4	1
134	Non-ionic hybrid detergents for protein delipidation.. *Biochimica Et Biophysica Acta - Biomembranes*, **2022**, 183958	3.8	1
133	Charge Engineering Reveals the Roles of Ionizable Side Chains in Electrospray Ionization Mass Spectrometry.. *Jacs Au*, **2021**, 1, 2385-2393		2
132	A Genetically Encoded Picolyl Azide for Improved Live Cell Copper Click Labeling. *Frontiers in Chemistry*, **2021**, 9, 768535	5	0
131	The Effects of Sodium Ions on Ligand Binding and Conformational States of G Protein-Coupled Receptors-Insights from Mass Spectrometry. *Journal of the American Chemical Society*, **2021**, 143, 4085-4089	16.4	16
130	The synthesis and characterization of Bri2 BRICHOS coated magnetic particles and their application to protein fishing: Identification of novel binding proteins. *Journal of Pharmaceutical and Biomedical Analysis*, **2021**, 198, 113996	3.5	0
129	Connecting multi-omics approaches to endogenous protein complexes. *Trends in Chemistry*, **2021**, 3, 445-455	14.8	3
128	Order and disorder-An integrative structure of the full-length human growth hormone receptor. *Science Advances*, **2021**, 7,	14.3	6
127	Dendritic Oligoglycerol Regioisomer Mixtures and Their Utility for Membrane Protein Research. *Chemistry - A European Journal*, **2021**, 27, 2537-2542	4.8	7
126	Dynamics of an LPS translocon induced by substrate and an antimicrobial peptide. *Nature Chemical Biology*, **2021**, 17, 187-195	11.7	18
125	Imidazolium-based catenane host for bromide recognition in aqueous media. *Chemical Communications*, **2021**, 57, 101-104	5.8	5

124	Smallest Secondary Nucleation Competent A Aggregates Probed by an ATP-Independent Molecular Chaperone Domain. *Biochemistry*, **2021**, 60, 678-688	3.2	3
123	Probing membrane protein-lipid interactions. *Current Opinion in Structural Biology*, **2021**, 69, 78-85	8.1	3
122	N-Thio- lactams targeting L,D-transpeptidase-2, with activity against drug-resistant strains of Mycobacterium tuberculosis. *Cell Chemical Biology*, **2021**, 28, 1321-1332.e5	8.2	1
121	Mass spectrometry informs the structure and dynamics of membrane proteins involved in lipid and drug transport. *Current Opinion in Structural Biology*, **2021**, 70, 53-60	8.1	4
120	Ion mobility-mass spectrometry shows stepwise protein unfolding under alkaline conditions. *Chemical Communications*, **2021**, 57, 1450-1453	5.8	1
119	Combining native and 'omics' mass spectrometry to identify endogenous ligands bound to membrane proteins. *Nature Methods*, **2020**, 17, 505-508	21.6	43
118	The use of sonicated lipid vesicles for mass spectrometry of membrane protein complexes. *Nature Protocols*, **2020**, 15, 1690-1706	18.8	20
117	A new azobenzene-based design strategy for detergents in membrane protein research. *Chemical Science*, **2020**, 11, 3538-3546	9.4	10
116	Site-Specific Incorporation of Two ncAAs for Two-Color Bioorthogonal Labeling and Crosslinking of Proteins on Live Mammalian Cells. *Cell Reports*, **2020**, 31, 107811	10.6	19
115	High-yield Production of Amyloid- Peptide Enabled by a Customized Spider Silk Domain. *Scientific Reports*, **2020**, 10, 235	4.9	16
114	Augmentation of Bri2 molecular chaperone activity against amyloid- reduces neurotoxicity in mouse hippocampus in vitro. *Communications Biology*, **2020**, 3, 32	6.7	11
113	Structure and elevator mechanism of the mammalian sodium/proton exchanger NHE9. *EMBO Journal*, **2020**, 39, e105908	13	11
112	Modular detergents tailor the purification and structural analysis of membrane proteins including G-protein coupled receptors. *Nature Communications*, **2020**, 11, 564	17.4	36
111	Studies on citrullinated LL-37: detection in human airways, antibacterial effects and biophysical properties. *Scientific Reports*, **2020**, 10, 2376	4.9	12
110	Scratching the surface: native mass spectrometry of peripheral membrane protein complexes. *Biochemical Society Transactions*, **2020**, 48, 547-558	5.1	10
109	A Mass-Spectrometry-Based Approach to Distinguish Annular and Specific Lipid Binding to Membrane Proteins. *Angewandte Chemie - International Edition*, **2020**, 59, 3523-3528	16.4	18
108	A Mass-Spectrometry-Based Approach to Distinguish Annular and Specific Lipid Binding to Membrane Proteins. *Angewandte Chemie*, **2020**, 132, 3551-3556	3.6	1
107	High intracellular stability of the spidroin N-terminal domain in spite of abundant amyloidogenic segments revealed by in-cell hydrogen/deuterium exchange mass spectrometry. *FEBS Journal*, **2020**, 287, 2823-2833	5.7	4

106	Predicting the Shapes of Protein Complexes through Collision Cross Section Measurements and Database Searches. *Analytical Chemistry*, **2020**, 92, 12297-12303	7.8	5
105	The importance of the membrane for biophysical measurements. *Nature Chemical Biology*, **2020**, 16, 1285-1292	11.7	10
104	Spatial variation and structural characteristics of phycobiliproteins from the red algae Furcellaria lumbricalis and Coccotylus truncatus. *Algal Research*, **2020**, 52, 102058	5	6
103	Structural and biophysical insights into the mode of covalent binding of rationally designed potent BMX inhibitors. *RSC Chemical Biology*, **2020**, 1, 251-262	3	2
102	Probing the limits of Q-tag bioconjugation of antibodies. *Chemical Communications*, **2019**, 55, 11342-11345	5.8	9
101	Mass spectrometry: From plasma proteins to mitochondrial membranes. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 2814-2820	11.5	29
100	Probing -glycoprotein microheterogeneity by lectin affinity purification-mass spectrometry analysis. *Chemical Science*, **2019**, 10, 5146-5155	9.4	34
99	Membrane Protein-Lipid Interactions Probed Using Mass Spectrometry. *Annual Review of Biochemistry*, **2019**, 88, 85-111	29.1	82
98	A strategy for the identification of protein architectures directly from ion mobility mass spectrometry data reveals stabilizing subunit interactions in light harvesting complexes. *Protein Science*, **2019**, 28, 1024-1030	6.3	8
97	Gas-Phase Collisions with Trimethylamine-N-Oxide Enable Activation-Controlled Protein Ion Charge Reduction. *Journal of the American Society for Mass Spectrometry*, **2019**, 30, 1385-1388	3.5	10
96	Response to Comment on "Protein assemblies ejected directly from native membranes yield complexes for mass spectrometry". *Science*, **2019**, 366,	33.3	5
95	Efficient delipidation of a recombinant lung surfactant lipopeptide analogue by liquid-gel chromatography. *PLoS ONE*, **2019**, 14, e0226072	3.7	0
94	Ion Mobility in Structural Biology. *Comprehensive Analytical Chemistry*, **2019**, 83, 161-195	1.9	6
93	Lipids Shape the Electron Acceptor-Binding Site of the Peripheral Membrane Protein Dihydroorotate Dehydrogenase. *Cell Chemical Biology*, **2018**, 25, 309-317.e4	8.2	13
92	Direct observation of the influence of cardiolipin and antibiotics on lipid II binding to MurJ. *Nature Chemistry*, **2018**, 10, 363-371	17.6	44
91	Mass Spectrometry Reveals the Direct Action of a Chemical Chaperone. *Journal of Physical Chemistry Letters*, **2018**, 9, 4082-4086	6.4	16
90	PtdIns(4,5)P stabilizes active states of GPCRs and enhances selectivity of G-protein coupling. *Nature*, **2018**, 559, 423-427	50.4	141
89	Lipid binding attenuates channel closure of the outer membrane protein OmpF. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 6691-6696	11.5	21

88	Protein assemblies ejected directly from native membranes yield complexes for mass spectrometry. *Science*, **2018**, 362, 829-834	33.3	99
87	An engineered thermal-shift screen reveals specific lipid preferences of eukaryotic and prokaryotic membrane proteins. *Nature Communications*, **2018**, 9, 4253	17.4	35
86	Biomimetic spinning of artificial spider silk from a chimeric minispidroin. *Nature Chemical Biology*, **2017**, 13, 262-264	11.7	143
85	Mass spectrometry captures structural intermediates in protein fiber self-assembly. *Chemical Communications*, **2017**, 53, 3319-3322	5.8	12
84	The role of interfacial lipids in stabilizing membrane protein oligomers. *Nature*, **2017**, 541, 421-424	50.4	238
83	Integrating mass spectrometry with MD simulations reveals the role of lipids in Na/H antiporters. *Nature Communications*, **2017**, 8, 13993	17.4	50
82	Ligand binding to a G protein-coupled receptor captured in a mass spectrometer. *Science Advances*, **2017**, 3, e1701016	14.3	39
81	Effects of Detergent Micelles on Lipid Binding to Proteins in Electrospray Ionization Mass Spectrometry. *Analytical Chemistry*, **2017**, 89, 7425-7430	7.8	20
80	Efficient protein production inspired by how spiders make silk. *Nature Communications*, **2017**, 8, 15504	17.4	48
79	Bri2 BRICHOS client specificity and chaperone activity are governed by assembly state. *Nature Communications*, **2017**, 8, 2081	17.4	35
78	A PBX1 transcriptional network controls dopaminergic neuron development and is impaired in Parkinson's disease. *EMBO Journal*, **2016**, 35, 1963-78	13	52
77	Interfacing Membrane Mimetics with Mass Spectrometry. *Accounts of Chemical Research*, **2016**, 49, 2459-2467	24.9	51
76	High-resolution mass spectrometry of small molecules bound to membrane proteins. *Nature Methods*, **2016**, 13, 333-6	21.6	164
75	Optimal Synthetic Glycosylation of a Therapeutic Antibody. *Angewandte Chemie - International Edition*, **2016**, 55, 2361-7	16.4	92
74	A combined computational and structural model of the full-length human prolactin receptor. *Nature Communications*, **2016**, 7, 11578	17.4	38
73	Unraveling the Composition and Behavior of Heterogeneous Lipid Nanodiscs by Mass Spectrometry. *Analytical Chemistry*, **2016**, 88, 6199-204	7.8	27
72	Probing the Lipid Annular Belt by Gas-Phase Dissociation of Membrane Proteins in Nanodiscs. *Angewandte Chemie - International Edition*, **2016**, 55, 550-4	16.4	68
71	Negative Ions Enhance Survival of Membrane Protein Complexes. *Journal of the American Society for Mass Spectrometry*, **2016**, 27, 1099-104	3.5	15

70	Low Charge and Reduced Mobility of Membrane Protein Complexes Has Implications for Calibration of Collision Cross Section Measurements. *Analytical Chemistry*, **2016**, 88, 5879-5884	7.8	28
69	A sliding selectivity scale for lipid binding to membrane proteins. *Current Opinion in Structural Biology*, **2016**, 39, 54-60	8.1	41
68	Mass spectrometry guided structural biology. *Current Opinion in Structural Biology*, **2016**, 40, 136-144	8.1	79
67	C-peptide evolution: generation from few structural restrictions of bioactivities not necessarily functional. *FEBS Letters*, **2015**, 589, 415-8	3.8	2
66	Hsp70 forms antiparallel dimers stabilized by post-translational modifications to position clients for transfer to Hsp90. *Cell Reports*, **2015**, 11, 759-69	10.6	83
65	Collision cross sections for structural proteomics. *Structure*, **2015**, 23, 791-9	5.2	169
64	Alcohol dehydrogenase, SDR and MDR structural stages, present update and altered era. *Chemico-Biological Interactions*, **2015**, 234, 75-9	5	16
63	Different modes of lipid binding to membrane proteins probed by mass spectrometry. *Journal of the American Chemical Society*, **2015**, 137, 5240-7	16.4	51
62	The role of the detergent micelle in preserving the structure of membrane proteins in the gas phase. *Angewandte Chemie - International Edition*, **2015**, 54, 4577-81	16.4	97
61	Bayesian deconvolution of mass and ion mobility spectra: from binary interactions to polydisperse ensembles. *Analytical Chemistry*, **2015**, 87, 4370-6	7.8	373
60	Specific chaperones and regulatory domains in control of amyloid formation. *Journal of Biological Chemistry*, **2015**, 290, 26430-6	5.4	27
59	Quantifying the stabilizing effects of protein-ligand interactions in the gas phase. *Nature Communications*, **2015**, 6, 8551	17.4	111
58	Controlling release, unfolding and dissociation of membrane protein complexes in the gas phase through collisional cooling. *Chemical Communications*, **2015**, 51, 15582-4	5.8	14
57	Structures of CD6 and Its Ligand CD166 Give Insight into Their Interaction. *Structure*, **2015**, 23, 1426-1436	5.2	39
56	A new window into the molecular physiology of membrane proteins. *Journal of Physiology*, **2015**, 593, 355-62	3.9	29
55	Diversified Structural Basis of a Conserved Molecular Mechanism for pH-Dependent Dimerization in Spider Silk N-Terminal Domains. *ChemBioChem*, **2015**, 16, 1720-4	3.8	29
54	The Effect of Detergent, Temperature, and Lipid on the Oligomeric State of MscL Constructs: Insights from Mass Spectrometry. *Chemistry and Biology*, **2015**, 22, 593-603		50
53	The role of lipids in mechanosensation. *Nature Structural and Molecular Biology*, **2015**, 22, 991-8	17.6	111

52	Topological models of heteromeric protein assemblies from mass spectrometry: application to the yeast eIF3:eIF5 complex. *Chemistry and Biology*, **2015**, 22, 117-28		34
51	A subset of annular lipids is linked to the flippase activity of an ABC transporter. *Nature Chemistry*, **2015**, 7, 255-62	17.6	91
50	A mass spectrometry-based hybrid method for structural modeling of protein complexes. *Nature Methods*, **2014**, 11, 403-406	21.6	131
49	Separate molecular determinants in amyloidogenic and antimicrobial peptides. *Journal of Molecular Biology*, **2014**, 426, 2159-66	6.5	16
48	A subdivided molecular architecture with separate features and stepwise emergence among proinsulin C-peptides. *Biochemical and Biophysical Research Communications*, **2014**, 450, 1433-8	3.4	5
47	Protective effects of dimethyl sulfoxide on labile protein interactions during electrospray ionization. *Analytical Chemistry*, **2014**, 86, 4135-9	7.8	10
46	Sequential pH-driven dimerization and stabilization of the N-terminal domain enables rapid spider silk formation. *Nature Communications*, **2014**, 5, 3254	17.4	96
45	Membrane proteins bind lipids selectively to modulate their structure and function. *Nature*, **2014**, 510, 172-175	50.4	503
44	Mass spectrometry defines the C-terminal dimerization domain and enables modeling of the structure of full-length OmpA. *Structure*, **2014**, 22, 781-90	5.2	46
43	Carbonic anhydrase generates CO2 and H+ that drive spider silk formation via opposite effects on the terminal domains. *PLoS Biology*, **2014**, 12, e1001921	9.7	109
42	Insulin, islet amyloid polypeptide and C-peptide interactions evaluated by mass spectrometric analysis. *Rapid Communications in Mass Spectrometry*, **2014**, 28, 178-84	2.2	6
41	Charge reduction stabilizes intact membrane protein complexes for mass spectrometry. *Journal of the American Chemical Society*, **2014**, 136, 17010-2	16.4	56
40	The structure, molecular interactions and bioactivities of proinsulin C-peptide correlate with a tripartite molecule. *Biomolecular Concepts*, **2014**, 5, 109-18	3.7	8
39	Intrinsically disordered p53 and its complexes populate compact conformations in the gas phase. *Angewandte Chemie - International Edition*, **2013**, 52, 361-5	16.4	77
38	Detergent-free mass spectrometry of membrane protein complexes. *Nature Methods*, **2013**, 10, 1206-8	21.6	131
37	The role of lipids in defining membrane protein interactions: insights from mass spectrometry. *Trends in Cell Biology*, **2013**, 23, 1-8	18.3	114
36	Dodecyl maltoside protects membrane proteins in vacuo. *Biophysical Journal*, **2013**, 105, 648-56	2.9	19
35	Twenty years of gas phase structural biology. *Structure*, **2013**, 21, 1541-50	5.2	126

34	Mass spectrometry of intact membrane protein complexes. *Nature Protocols*, **2013**, 8, 639-51	18.8	263
33	Mass spectrometry reveals synergistic effects of nucleotides, lipids, and drugs binding to a multidrug resistance efflux pump. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 9704-9	11.5	128
32	The 'sticky business' of cleaning gas-phase membrane proteins: a detergent oriented perspective. *Physical Chemistry Chemical Physics*, **2012**, 14, 14439-49	3.6	32
31	Control of amyloid assembly by autoregulation. *Biochemical Journal*, **2012**, 447, 185-92	3.8	13
30	pH-dependent dimerization of spider silk N-terminal domain requires relocation of a wedged tryptophan side chain. *Journal of Molecular Biology*, **2012**, 422, 477-87	6.5	61
29	Proinsulin C-peptide interferes with insulin fibril formation. *Biochemical and Biophysical Research Communications*, **2012**, 418, 489-93	3.4	20
28	Insulin solubility transitions by pH-dependent interactions with proinsulin C-peptide. *FEBS Journal*, **2012**, 279, 4589-97	5.7	11
27	Mass spectrometry--from peripheral proteins to membrane motors. *Journal of Molecular Biology*, **2012**, 423, 1-13	6.5	23
26	Peptide Interactions of Proinsulin C-Peptide **2012**, 7-16		0
25	Charge-state dependent compaction and dissociation of protein complexes: insights from ion mobility and molecular dynamics. *Journal of the American Chemical Society*, **2012**, 134, 3429-38	16.4	193
24	High-resolution structure of a BRICHOS domain and its implications for anti-amyloid chaperone activity on lung surfactant protein C. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 2325-9	11.5	87
23	Do charge state signatures guarantee protein conformations?. *Journal of the American Society for Mass Spectrometry*, **2012**, 23, 1161-8	3.5	136
22	New developments in protein structure-function analysis by MS and use of hydrogen-deuterium exchange microfluidics. *FEBS Journal*, **2011**, 278, 3815-21	5.7	21
21	A membrane cell for on-line hydrogen/deuterium exchange to study protein folding and protein-protein interactions by mass spectrometry. *Molecular and Cellular Proteomics*, **2011**, 10, M110.006510	7.6	9
20	Quaternary dynamics and plasticity underlie small heat shock protein chaperone function. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 2007-12	11.5	205
19	Alternate dissociation pathways identified in charge-reduced protein complex ions. *Analytical Chemistry*, **2010**, 82, 5363-72	7.8	126
18	Collision cross sections of proteins and their complexes: a calibration framework and database for gas-phase structural biology. *Analytical Chemistry*, **2010**, 82, 9557-65	7.8	600
17	A pH-dependent dimer lock in spider silk protein. *Journal of Molecular Biology*, **2010**, 404, 328-36	6.5	47

16	Integrating ion mobility mass spectrometry with molecular modelling to determine the architecture of multiprotein complexes. *PLoS ONE*, **2010**, 5, e12080	3.7	112
15	Subunit architecture of multiprotein assemblies determined using restraints from gas-phase measurements. *Structure*, **2009**, 17, 1235-43	5.2	97
14	Micelles protect membrane complexes from solution to vacuum. *Science*, **2008**, 321, 243-6	33.3	291
13	Small heat shock protein activity is regulated by variable oligomeric substructure. *Journal of Biological Chemistry*, **2008**, 283, 28513-7	5.4	85
12	The role of mass spectrometry in structure elucidation of dynamic protein complexes. *Annual Review of Biochemistry*, **2007**, 76, 167-93	29.1	320
11	Determining the stoichiometry and interactions of macromolecular assemblies from mass spectrometry. *Nature Protocols*, **2007**, 2, 715-26	18.8	538
10	Protein complexes in the gas phase: technology for structural genomics and proteomics. *Chemical Reviews*, **2007**, 107, 3544-67	68.1	342
9	Mass spectrometry of macromolecular assemblies: preservation and dissociation. *Current Opinion in Structural Biology*, **2006**, 16, 245-51	8.1	190
8	Evidence for macromolecular protein rings in the absence of bulk water. *Science*, **2005**, 310, 1658-61	33.3	502
7	Polydispersity of a mammalian chaperone: mass spectrometry reveals the population of oligomers in alphaB-crystallin. *Proceedings of the National Academy of Sciences of the United States of America*, **2003**, 100, 10611-6	11.5	206
6	Phospholipid complexation and association with apolipoprotein C-II: insights from mass spectrometry. *Biophysical Journal*, **2003**, 85, 3802-12	2.9	36
5	A tandem mass spectrometer for improved transmission and analysis of large macromolecular assemblies. *Analytical Chemistry*, **2002**, 74, 1402-7	7.8	448
4	Characterization of the oligomeric states of insulin in self-assembly and amyloid fibril formation by mass spectrometry. *Biophysical Journal*, **2000**, 79, 1053-65	2.9	228
3	Probing the Nature of Noncovalent Interactions by Mass Spectrometry. A Study of Protein□CoA Ligand Binding and Assembly. *Journal of the American Chemical Society*, **1996**, 118, 8646-8653	16.4	285
2	Mass-selective and ice-free cryo-EM protein sample preparation via native electrospray ion-beam deposition		2
1	Anionic Dendritic Polyglycerol for Protein Purification and Delipidation. *ACS Applied Polymer Materials*,	4.3	2