Mehdi Mobli

List of Publications by Year
in descending order

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114	4,954	66343	110387
papers	citations	42 h-index	64 g-index

133	133	133	5936
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Nonuniform sampling and non-Fourier signal processing methods in multidimensional NMR. Progress in Nuclear Magnetic Resonance Spectroscopy, 2014, 83, 21-41.	7.5	197
2	Potent neuroprotection after stroke afforded by a double-knot spider-venom peptide that inhibits acid-sensing ion channel 1a. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 3750-3755.	7.1	180
3	Venomics: a new paradigm for natural products-based drug discovery. Amino Acids, 2011, 40, 15-28.	2.7	172
4	Macromolecular NMR spectroscopy for the nonâ€spectroscopist. FEBS Journal, 2011, 278, 687-703.	4.7	140
5	Structural basis of TIR-domain-assembly formation in MAL- and MyD88-dependent TLR4 signaling. Nature Structural and Molecular Biology, 2017, 24, 743-751.	8.2	140
6	Production of Recombinant Disulfide-Rich Venom Peptides for Structural and Functional Analysis via Expression in the Periplasm of E. coli. PLoS ONE, 2013, 8, e63865.	2.5	140
7	Selenoether oxytocin analogues have analgesic properties in a mouse model of chronic abdominal pain. Nature Communications, 2014, 5, 3165.	12.8	122
8	Nonuniform Sampling and Maximum Entropy Reconstruction in Multidimensional NMR. Accounts of Chemical Research, 2014, 47, 708-717.	15.6	115
9	The CC domain structure from the wheat stem rust resistance protein Sr33 challenges paradigms for dimerization in plant NLR proteins. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12856-12861.	7.1	105
10	Selective Na _V 1.1 activation rescues Dravet syndrome mice from seizures and premature death. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E8077-E8085.	7.1	105
11	An amphipathic peptide with antibiotic activity against multidrug-resistant Gram-negative bacteria. Nature Communications, 2020, 11, 3184.	12.8	105
12	NaV1.7 as a pain target â€“ From gene to pharmacology. , 2017, 172, 73-100.		104
13	Classification of the human phox homology (PX) domains based on their phosphoinositide binding specificities. Nature Communications, 2019, 10, 1528.	12.8	101
14	Phox homology band 4.1/ezrin/radixin/moesin-like proteins function as molecular scaffolds that interact with cargo receptors and Ras GTPases. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 7763-7768.	7.1	99
15	Spectral reconstruction methods in fast NMR: Reduced dimensionality, random sampling and maximum entropy. Journal of Magnetic Resonance, 2006, 182, 96-105.	2.1	92
16	A Dynamic Pharmacophore Drives the Interaction between Psalmotoxin-1 and the Putative Drug Target Acid-Sensing Ion Channel 1a. Molecular Pharmacology, 2011, 80, 796-808.	2.3	85
17	1H chemical shifts in NMR: Part 19. Carbonyl anisotropies and steric effects in aromatic aldehydes and ketones. Magnetic Resonance in Chemistry, 2003, 41, 26-36.	1.9	81
18	The Nâ€“Terminal Tail of hERG Contains an Amphipathic Î±â€“Helix That Regulates Channel Deactivation. PLoS ONE, 2011, 6, e16191.	2.5	79

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19	An NMR, IR and theoretical investigation of ¹H Chemical Shifts and hydrogen bonding in phenols. Magnetic Resonance in Chemistry, 2007, 45, 865-877.	1.9	78
20	Sparse sampling methods in multidimensional NMR. Physical Chemistry Chemical Physics, 2012, 14, 10835-10843.	2.8	77
21	Nonuniform sampling and spectral aliasing. Journal of Magnetic Resonance, 2009, 199, 88-93.	2.1	76
22	Toxin structures as evolutionary tools: Using conserved 3D folds to study the evolution of rapidly evolving peptides. BioEssays, 2016, 38, 539-548.	2.5	76
23	Seven novel modulators of the analgesic target <scp>Na_V</scp>1.7 uncovered using a highâ€throughput venomâ€based discovery approach. British Journal of Pharmacology, 2015, 172, 2445-2458.	5.4	74
24	Enabling adoption of 2D-NMR for the higher order structure assessment of monoclonal antibody therapeutics. MAbs, 2019, 11, 94-105.	5.2	67
25	Chemical Synthesis, 3D Structure, and ASIC Binding Site of the Toxin Mambalginâ€2. Angewandte Chemie - International Edition, 2014, 53, 1017-1020.	13.8	66
26	Weaponization of a Hormone: Convergent Recruitment of Hyperglycemic Hormone into the Venom of Arthropod Predators. Structure, 2015, 23, 1283-1292.	3.3	66
27	Maximum entropy spectral reconstruction of nonuniformly sampled data. Concepts in Magnetic Resonance Part A: Bridging Education and Research, 2008, 32A, 436-448.	0.5	65
28	An automated tool for maximum entropy reconstruction of biomolecular NMR spectra. Nature Methods, 2007, 4, 467-468.	19.0	64
29	Direct Visualization of Disulfide Bonds through Diselenide Proxies Using ⁷⁷Se NMR Spectroscopy. Angewandte Chemie - International Edition, 2009, 48, 9312-9314.	13.8	63
30	A distinct sodium channel voltage-sensor locus determines insect selectivity of the spider toxin Dc1a. Nature Communications, 2014, 5, 4350.	12.8	63
31	Automatic maximum entropy spectral reconstruction in NMR. Journal of Biomolecular NMR, 2007, 39, 133-139.	2.8	59
32	Structural venomics reveals evolution of a complex venom by duplication and diversification of an ancient peptide-encoding gene. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 11399-11408.	7.1	59
33	A non-uniformly sampled 4D HCC(CO)NH-TOCSY experiment processed using maximum entropy for rapid protein sidechain assignment. Journal of Magnetic Resonance, 2010, 204, 160-164.	2.1	57
34	NMR methods for determining disulfide-bond connectivities. Toxicon, 2010, 56, 849-854.	1.6	56
35	A Tarantula-Venom Peptide Antagonizes the TRPA1 Nociceptor Ion Channel by Binding to the S1â€“S4 Gating Domain. Current Biology, 2014, 24, 473-483.	3.9	56
36	Isolation of an Orally Active Insecticidal Toxin from the Venom of an Australian Tarantula. PLoS ONE, 2013, 8, e73136.	2.5	55

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37	Macromolecular NMR spectroscopy for the nonâ€spectroscopist: beyond macromolecular solution structure determination. FEBS Journal, 2011, 278, 704-715.	4.7	53
38	Efficient biosynthesis of heterodimeric C3-aryl pyrroloindoline alkaloids. Nature Communications, 2018, 9, 4428.	12.8	53
39	Cyclization of Peptides by using Selenolanthionine Bridges. Angewandte Chemie - International Edition, 2012, 51, 10298-10302.	13.8	51
40	N-Acetylated amino sugars: the dependence of NMR 3J(HNH2)-couplings on conformation, dynamics and solvent. Organic and Biomolecular Chemistry, 2007, 5, 2243.	2.8	49
41	Total Synthesis of Human Hepcidin through Regioselective Disulfideâ€Bond Formation by using the Safetyâ€Catch Cysteine Protecting Group 4,4â€²â€Dimethylsulfinylbenzhydryl. Angewandte Chemie - International Edition, 2014, 53, 2931-2934.	13.8	46
42	Siteâ€Specific pK_a Determination of Selenocysteine Residues in Selenovasopressin by Using ⁷⁷Se NMR Spectroscopy. Angewandte Chemie - International Edition, 2011, 50, 11952-11955.	13.8	44
43	Molecular basis of the interaction between gating modifier spider toxins and the voltage sensor of voltage-gated ion channels. Scientific Reports, 2016, 6, 34333.	3.3	44
44	Structural insights into the mechanism of inhibition of AHAS by herbicides. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E1945-E1954.	7.1	44
45	Data Sampling in Multidimensional NMR: Fundamentals and Strategies. Topics in Current Chemistry, 2011, 316, 49-77.	4.0	41
46	Functional Expression in Escherichia coli of the Disulfide-Rich Sea Anemone Peptide APETx2, a Potent Blocker of Acid-Sensing Ion Channel 3. Marine Drugs, 2012, 10, 1605-1618.	4.6	41
47	The structural plasticity of heparan sulfate NA-domains and hence their role in mediating multivalent interactions is confirmed by high-accuracy 15N-NMR relaxation studies. Glycoconjugate Journal, 2008, 25, 401-414.	2.7	40
48	Understanding the Molecular Basis of Toxin Promiscuity: The Analgesic Sea Anemone Peptide APETx2 Interacts with Acid-Sensing Ion Channel 3 and hERG Channels via Overlapping Pharmacophores. Journal of Medicinal Chemistry, 2014, 57, 9195-9203.	6.4	40
49	Development of a Î¼O-Conotoxin Analogue with Improved Lipid Membrane Interactions and Potency for the Analgesic Sodium Channel NaV1.8. Journal of Biological Chemistry, 2016, 291, 11829-11842.	3.4	37
50	Molecular dynamics and functional studies define a hot spot of crystal contacts essential for PcTx1 inhibition of acidâ€sensing ion channel 1a. British Journal of Pharmacology, 2015, 172, 4985-4995.	5.4	35
51	The insecticidal spider toxin <scp>SFI</scp>1 is a knottin peptide that blocks the pore of insect voltageâ€gated sodium channels via a large Î²â€hairpin loop. FEBS Journal, 2015, 282, 904-920.	4.7	34
52	The insecticidal neurotoxin Aps III is an atypical knottin peptide that potently blocks insect voltage-gated sodium channels. Biochemical Pharmacology, 2013, 85, 1542-1554.	4.4	33
53	Solution Structure, Membrane Interactions, and Protein Binding Partners of the Tetraspanin Sm-TSP-2, a Vaccine Antigen from the Human Blood Fluke Schistosoma mansoni. Journal of Biological Chemistry, 2014, 289, 7151-7163.	3.4	33
54	Solution structure of the TLR adaptor MAL/TIRAP reveals an intact BB loop and supports MAL Cys91 glutathionylation for signaling. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E6480-E6489.	7.1	33

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55	The structure, dynamics and selectivity profile of a NaV1.7 potency-optimised huwentoxin-IV variant. PLoS ONE, 2017, 12, e0173551.	2.5	33
56	Vicinal Disulfide Constrained Cyclic Peptidomimetics: a Turn Mimetic Scaffold Targeting the Norepinephrine Transporter. Angewandte Chemie - International Edition, 2013, 52, 12020-12023.	13.8	32
57	Rational Engineering Defines a Molecular Switch That Is Essential for Activity of Spider-Venom Peptides against the Analgesics Target Na_V1.7. Molecular Pharmacology, 2015, 88, 1002-1010.	2.3	32
58	Î±-Conotoxin Dendrimers Have Enhanced Potency and Selectivity for Homomeric Nicotinic Acetylcholine Receptors. Journal of the American Chemical Society, 2015, 137, 3209-3212.	13.7	32
59	RNA polymerase-induced remodelling of NusA produces a pause enhancement complex. Nucleic Acids Research, 2015, 43, 2829-2840.	14.5	31
60	A complicated complex: Ion channels, voltage sensing, cell membranes and peptide inhibitors. Neuroscience Letters, 2018, 679, 35-47.	2.1	27
61	A Nuclear Localization Signal at the SAMâ€“SAM Domain Interface of AIDA-1 Suggests a Requirement for Domain Uncoupling Prior to Nuclear Import. Journal of Molecular Biology, 2009, 392, 1168-1177.	4.2	26
62	Reducing seed dependent variability of non-uniformly sampled multidimensional NMR data. Journal of Magnetic Resonance, 2015, 256, 60-69.	2.1	26
63	Three-Dimensional13C-Detected CH3-TOCSY Using Selectively Protonated Proteins:Â Facile Methyl Resonance Assignment and Protein Structure Determination. Journal of the American Chemical Society, 2006, 128, 9119-9128.	13.7	23
64	Chemical Synthesis and Structure of the Prokineticin Bv8. ChemBioChem, 2010, 11, 1882-1888.	2.6	22
65	Modulation of Ion Channels by Cysteine-Rich Peptides. Advances in Pharmacology, 2017, 79, 199-223.	2.0	22
66	1H chemical shifts in NMR. Part 21?Prediction of the1H chemical shifts of molecules containing the ester group: a modelling andab initio investigation. Magnetic Resonance in Chemistry, 2005, 43, 3-15.	1.9	19
67	Cyclisation Increases the Stability of the Sea Anemone Peptide APETx2 but Decreases Its Activity at Acid-Sensing Ion Channel 3. Marine Drugs, 2012, 10, 1511-1527.	4.6	19
68	Isolation, synthesis and characterization of Ï‰-TRTX-Cc1a, a novel tarantula venom peptide that selectively targets L-type CaV channels. Biochemical Pharmacology, 2014, 89, 276-286.	4.4	19
69	Determination of ligand binding modes in weak proteinâ€“ligand complexes using sparse NMR data. Journal of Biomolecular NMR, 2016, 66, 195-208.	2.8	19
70	Elucidating the Lipid Binding Properties of Membrane-Active Peptides Using Cyclised Nanodiscs. Frontiers in Chemistry, 2019, 7, 238.	3.6	19
71	Conformational analysis, Part 41. A modelling and LIS/NMR investigation of the conformations ofÎ±,Î²-unsaturated carbonyl compounds. Journal of Physical Organic Chemistry, 2006, 19, 384-392.	1.9	16
72	Do Vicinal Disulfide Bridges Mediate Functionally Important Redox Transformations in Proteins?. Antioxidants and Redox Signaling, 2013, 19, 1976-1980.	5.4	16

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73	The tarantula toxin Î²/Í´-TRTX-Pre1a highlights the importance of the S1-S2 voltage-sensor region for sodium channel subtype selectivity. Scientific Reports, 2017, 7, 974.	3.3	16
74	Mapping the Molecular Surface of the Analgesic NaV1.7-Selective Peptide Pn3a Reveals Residues Essential for Membrane and Channel Interactions. ACS Pharmacology and Translational Science, 2020, 3, 535-546.	4.9	16
75	Insulin-like growth factor binding protein-2: NMR analysis and structural characterization of the N-terminal domain. Biochimie, 2012, 94, 608-616.	2.6	15
76	Secreted Cysteine-Rich Repeat Proteins â€œSCREPsâ€• A Novel Multi-Domain Architecture. Frontiers in Pharmacology, 2018, 9, 1333.	3.5	15
77	1H chemical shifts in NMR. Part 20â€” Anisotropic and steric effects in halogen substituent chemical shifts(SCS), a modelling andab initio investigation. Magnetic Resonance in Chemistry, 2004, 42, 436-444.	1.9	14
78	CHAPTER 2. The Structural Universe of Disulfide-Rich Venom Peptides. RSC Drug Discovery Series, 2015, , 37-79.	0.3	13
79	Measuring Interactions of FERM Domain-Containing Sorting Nexin Proteins with Endosomal Lipids and Cargo Molecules. Methods in Enzymology, 2014, 534, 331-349.	1.0	12
80	Two proteins for the price of one: Structural studies of the dual-destiny protein preproalbumin with sunflower trypsin inhibitor-1. Journal of Biological Chemistry, 2017, 292, 12398-12411.	3.4	12
81	A non-uniform sampling approach enables studies of dilute and unstable proteins. Journal of Biomolecular NMR, 2017, 68, 119-127.	2.8	11
82	Structural and functional characterisation of a novel peptide from the Australian sea anemone Actinia tenebrosa. Toxicon, 2019, 168, 104-112.	1.6	11
83	Framework for and evaluation of bursts in random sampling of multidimensional NMR experiments. Journal of Magnetic Resonance, 2019, 300, 103-113.	2.1	10
84	Molecular Insights into the Interaction between Plasmodium falciparum Apical Membrane Antigen 1 and an Invasion-Inhibitory Peptide. PLoS ONE, 2014, 9, e109674.	2.5	10
85	Vicinal Disulfide Constrained Cyclic Peptidomimetics: a Turn Mimetic Scaffold Targeting the Norepinephrine Transporter. Angewandte Chemie, 2013, 125, 12242-12245.	2.0	9
86	Synthesis of Multivalent [Lys8]-Oxytocin Dendrimers that Inhibit Visceral Nociceptive Responses. Australian Journal of Chemistry, 2017, 70, 162.	0.9	9
87	Residual Dipolar Couplings for Resolving Cysteine Bridges in Disulfide-Rich Peptides. Frontiers in Chemistry, 2019, 7, 889.	3.6	9
88	Effective Protocol for Database Similarity Searching of Heteronuclear Single Quantum Coherence Spectra. Analytical Chemistry, 2009, 81, 9329-9335.	6.5	8
89	Non-uniform sampling in EPR â€“ optimizing data acquisition for HYSCORE spectroscopy. Physical Chemistry Chemical Physics, 2014, 16, 16378-16382.	2.8	8
90	Inhibition of the norepinephrine transporter by Ï‡â€conotoxin dendrimers. Journal of Peptide Science, 2016, 22, 280-289.	1.4	8

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91	Solution Structure and Peptide Binding of the PTB Domain from the AIDA1 Postsynaptic Signaling Scaffolding Protein. PLoS ONE, 2013, 8, e65605.	2.5	8
92	Functional implications of large backbone amplitude motions of the glycoprotein 130â€binding epitope of interleukinâ€6. FEBS Journal, 2014, 281, 2471-2483.	4.7	7
93	Evaluation of Chemical Strategies for Improving the Stability and Oral Toxicity of Insecticidal Peptides. Biomedicines, 2018, 6, 90.	3.2	7
94	Recombinant production, bioconjugation and membrane binding studies of Pn3a, a selective NaV1.7 inhibitor. Biochemical Pharmacology, 2020, 181, 114148.	4.4	7
95	NUScon: a community-driven platform for quantitative evaluation of nonuniform sampling in NMR. Magnetic Resonance, 2021, 2, 843-861.	1.9	7
96	Derivation of Peptide and Protein Structure using NMR Spectroscopy. , 2010, , 279-325.		6
97	Video with Impact: Access to the Worldâ€™s Magnetic-Resonance Experts for the Scientific-Education Community. Journal of Chemical Education, 2019, 96, 159-164.	2.3	6
98	The transmembrane adapter SCIMP recruits tyrosine kinase Syk to phosphorylate Toll-like receptors to mediate selective inflammatory outputs. Journal of Biological Chemistry, 2022, 298, 101857.	3.4	5
99	Solution structure of the RNA-binding cold-shock domain of the Chlamydomonas reinhardtii NAB1 protein and insights into RNA recognition. Biochemical Journal, 2015, 469, 97-106.	3.7	4
100	Multi-species transcriptomics reveals evolutionary diversity in the mechanisms regulating shrimp tail muscle excitation-contraction coupling. Gene, 2020, 752, 144765.	2.2	4
101	Intradomain Confinement of Disulfides in the Folding of Two Consecutive Modules of the LDL Receptor. PLoS ONE, 2015, 10, e0132141.	2.5	3
102	A new vector coupling ligation-independent cloning with sortase a fusion for efficient cloning and one-step purification of tag-free recombinant proteins. Protein Expression and Purification, 2019, 161, 1-7.	1.3	3
103	Structural basis for the binding of the cancer targeting scorpion toxin, ClTx, to the vascular endothelia growth factor receptor neuropilin-1. Current Research in Structural Biology, 2021, 3, 179-186.	2.2	3
104	Nonuniform Sampling in Biomolecular NMR. , 2018, , 2035-2054.		3
105	Methyl probes in proteins for determining ligand binding mode in weak proteinâ€“ligand complexes. Scientific Reports, 2022, 12, .	3.3	3
106	Quantum vs. classical models of the nitro group for proton chemical shift calculations and conformational analysis. Journal of Computational Chemistry, 2005, 26, 389-398.	3.3	2
107	Optimizing the transformation of HYSCORE data using the maximum entropy algorithm. Journal of Magnetic Resonance, 2019, 301, 30-39.	2.1	2
108	Chapter 9. Maximum Entropy Reconstruction. New Developments in NMR, 0, , 252-266.	0.1	2

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109	Nonuniform Sampling in Biomolecular NMR. , 2017, , 1-21.		2
110	Backbone and side chain NMR assignments of Geobacillus stearothermophilus ZapA allow identification of residues that mediate the interaction of ZapA with FtsZ. Biomolecular NMR Assignments, 2015, 9, 387-391.	0.8	1
111	Bacillus anthracis Protective Antigen Shows High Specificity for a UV Induced Mouse Model of Cutaneous Squamous Cell Carcinoma. Frontiers in Medicine, 2019, 6, 22.	2.6	1
112	Correction: Sparse sampling methods in multidimensional NMR. Physical Chemistry Chemical Physics, 2016, 18, 19482-19482.	2.8	0
113	Rational Design and Synthesis of a Novel Membrane Binding NaV1.8 Selective Inhibitor with in vivo Activity in Pain Models. Biophysical Journal, 2016, 110, 33a.	0.5	0
114	Derivation of Peptide and Protein Structure using NMR Spectroscopy. , 2010, , 14-49.		0