

# Gary A Lorigan

## List of Publications by Year in descending order

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96  
papers

2,197  
citations

218677

26  
h-index

289244

40  
g-index

97  
all docs

97  
docs citations

97  
times ranked

1855  
citing authors

#	ARTICLE	IF	CITATIONS
1	DEER EPR Measurements for Membrane Protein Structures via Bifunctional Spin Labels and Lipodisq Nanoparticles. <i>Biochemistry</i> , 2013, 52, 6627-6632.	2.5	110
2	ESEEM Studies of Alcohol Binding to the Manganese Cluster of the Oxygen Evolving Complex of Photosystem II. <i>Journal of the American Chemical Society</i> , 1998, 120, 13321-13333.	13.7	94
3	Use of Electron Paramagnetic Resonance To Solve Biochemical Problems. <i>Biochemistry</i> , 2013, 52, 5967-5984.	2.5	77
4	Tuning the size of styrene-maleic acid copolymer-lipid nanoparticles (SMALPs) using RAFT polymerization for biophysical studies. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2016, 1858, 2931-2939.	2.6	73
5	Significantly Improved Sensitivity of Q-Band PELDOR/DEER Experiments Relative to X-Band Is Observed in Measuring the Intercoil Distance of a Leucine Zipper Motif Peptide (GCN4-LZ). <i>Biochemistry</i> , 2009, 48, 5782-5784.	2.5	68
6	Determining the Topology of Integral Membrane Peptides Using EPR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2006, 128, 9549-9554.	13.7	67
7	Probing the Interaction of Polyphenols with Lipid Bilayers by Solid-State NMR Spectroscopy. <i>Journal of Agricultural and Food Chemistry</i> , 2011, 59, 6783-6789.	5.2	67
8	Characterizing the structure of lipodisq nanoparticles for membrane protein spectroscopic studies. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2015, 1848, 329-333.	2.6	66
9	Site-Directed Spin Labeling EPR for Studying Membrane Proteins. <i>BioMed Research International</i> , 2018, 2018, 1-13.	1.9	47
10	Investigating Structural Changes in the Lipid Bilayer upon Insertion of the Transmembrane Domain of the Membrane-Bound Protein Phospholamban Utilizing <sup>31</sup> P and <sup>2</sup> H Solid-State NMR Spectroscopy. <i>Biophysical Journal</i> , 2004, 86, 1564-1573.	0.5	46
11	Phospholamban and Its Phosphorylated Form Interact Differently with Lipid Bilayers: <sup>31</sup> P, <sup>2</sup> H, and <sup>13</sup> C Solid-State NMR Spectroscopic Study. <i>Biochemistry</i> , 2006, 45, 13312-13322.	2.5	43
12	Structural Investigation of the Transmembrane Domain of KCNE1 in Proteoliposomes. <i>Biochemistry</i> , 2014, 53, 6392-6401.	2.5	42
13	Evidence for Direct Binding between HetR from <i>Anabaena</i> sp. PCC 7120 and PatS-5. <i>Biochemistry</i> , 2011, 50, 9212-9224.	2.5	41
14	The g = 2 multiline EPR signal of the S <sub>2</sub> state of the photosynthetic oxygen-evolving complex originates from a ground spin state. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1992, 1140, 95-101.	1.0	38
15	Solid-State NMR Spectroscopic Studies of an Integral Membrane Protein Inserted into Aligned Phospholipid Bilayer Nanotube Arrays. <i>Journal of the American Chemical Society</i> , 2004, 126, 9504-9505.	13.7	36
16	Cholesterol-Dependent Conformational Exchange of the C-Terminal Domain of the Influenza A M2 Protein. <i>Biochemistry</i> , 2015, 54, 7157-7167.	2.5	36
17	Electron spin echo envelope modulation spectroscopy of the molybdenum center of xanthine oxidase. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1994, 1185, 284-294.	1.0	35
18	Spectroscopic Characterization of Spin-Labeled Magnetically Oriented Phospholipid Bilayers by EPR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2000, 122, 7052-7058.	13.7	35

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19	Magnetically aligned phospholipid bilayers in weak magnetic fields: optimization, mechanism, and advantages for X-band EPR studies. <i>Journal of Magnetic Resonance</i> , 2003, 161, 77-90.	2.1	35
20	A 2H solid-state NMR spectroscopic investigation of biomimetic bicelles containing cholesterol and polyunsaturated phosphatidylcholine. <i>Chemistry and Physics of Lipids</i> , 2004, 132, 55-64.	3.2	33
21	Electron Paramagnetic Resonance as a Tool for Studying Membrane Proteins. <i>Biomolecules</i> , 2020, 10, 763.	4.0	33
22	Magnetically Oriented Phospholipid Bilayers for Spin Label EPR Studies. <i>Journal of the American Chemical Society</i> , 1999, 121, 3240-3241.	13.7	32
23	Magnetically Aligned Phospholipid Bilayers at the Parallel and Perpendicular Orientations for X-Band Spin-Label EPR Studies. <i>Journal of the American Chemical Society</i> , 2001, 123, 2913-2914.	13.7	32
24	Reconstitution of KCNE1 into Lipid Bilayers: Comparing the Structural, Dynamic, and Activity Differences in Micelle and Vesicle Environments. <i>Biochemistry</i> , 2011, 50, 10851-10859.	2.5	31
25	Simple Derivatization of RAFT-Synthesized Styrene- <i>co</i> -Maleic Anhydride Copolymers for Lipid Disk Formulations. <i>Biomacromolecules</i> , 2020, 21, 1274-1284.	5.4	31
26	The structural topology of wild-type phospholamban in oriented lipid bilayers using <sup>15</sup> N solid-state NMR spectroscopy. <i>Protein Science</i> , 2007, 16, 2345-2349.	7.6	30
27	Characterization of KCNE1 inside Lipid Nanoparticles for EPR Spectroscopic Studies of Membrane Proteins. <i>Journal of Physical Chemistry B</i> , 2017, 121, 5312-5321.	2.6	28
28	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, 6402-6412.	2.5	26
29	Calculating order parameter profiles utilizing magnetically aligned phospholipid bilayers for 2H solid-state NMR studies. <i>Solid State Nuclear Magnetic Resonance</i> , 2003, 24, 137-149.	2.3	24
30	Electron Paramagnetic Resonance Studies of an Integral Membrane Peptide Inserted into Aligned Phospholipid Bilayer Nanotube Arrays. <i>Journal of the American Chemical Society</i> , 2006, 128, 12070-12071.	13.7	24
31	The voltage-gated sodium channel pore exhibits conformational flexibility during slow inactivation. <i>Journal of General Physiology</i> , 2018, 150, 1333-1347.	1.9	24
32	Exploring membrane selectivity of the antimicrobial peptide KIGAKI using solid-state NMR spectroscopy. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2006, 1758, 1303-1313.	2.6	23
33	Electron spin-lattice relaxation studies of different forms of the S(2) state multiline EPR signal of the Photosystem II oxygen-evolving complex. , 2000, 66, 189-198.		22
34	Distance Measurements on a Dual-Labeled TOAC AChR M2 <sup>+</sup> Peptide in Mechanically Aligned DMPC Bilayers via Dipolar Broadening CW-EPR Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2012, 116, 3866-3873.	2.6	22
35	Biophysical EPR Studies Applied to Membrane Proteins. , 2015, 05, .		22
36	Determining the Helical Tilt Angle of a Transmembrane Helix in Mechanically Aligned Lipid Bilayers Using EPR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2007, 129, 7710-7711.	13.7	21

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37	Understanding the Mechanism of Action of Triazine-Phosphonate Derivatives as Flame Retardants for Cotton Fabric. <i>Molecules</i> , 2015, 20, 11236-11256.	3.8	21
38	Side Chain and Backbone Dynamics of Phospholamban in Phospholipid Bilayers Utilizing $^2\text{H}$ and $^{15}\text{N}$ Solid-State NMR Spectroscopy. <i>Biochemistry</i> , 2007, 46, 11695-11706.	2.5	20
39	Comparing the Structural Topology of Integral and Peripheral Membrane Proteins Utilizing Electron Paramagnetic Resonance Spectroscopy. <i>Journal of the American Chemical Society</i> , 2008, 130, 9656-9657.	13.7	20
40	Solid-state $^2\text{H}$ and $^{15}\text{N}$ NMR studies of side-chain and backbone dynamics of phospholamban in lipid bilayers: Investigation of the N27A mutation. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2010, 1798, 210-215.	2.6	20
41	Characterizing the structure of styrene-maleic acid copolymer-lipid nanoparticles (SMALPs) using RAFT polymerization for membrane protein spectroscopic studies. <i>Chemistry and Physics of Lipids</i> , 2019, 218, 65-72.	3.2	20
42	Probing the helical tilt and dynamic properties of membrane-bound phospholamban in magnetically aligned bicelles using electron paramagnetic resonance spectroscopy. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2012, 1818, 645-650.	2.6	19
43	Structural characterization of styrene-maleic acid copolymer-lipid nanoparticles (SMALPs) using EPR spectroscopy. <i>Chemistry and Physics of Lipids</i> , 2019, 220, 6-13.	3.2	19
44	Probing the structure of membrane proteins with electron spin echo envelope modulation spectroscopy. <i>Protein Science</i> , 2011, 20, 1100-1104.	7.6	18
45	NMR structure and MD simulations of the AAA protease intermembrane space domain indicates peripheral membrane localization within the hexaoligomer. <i>FEBS Letters</i> , 2013, 587, 3522-3528.	2.8	18
46	Conformational changes of the $\text{HsDHODH}$ N-terminal Microdomain via DEER Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2015, 119, 8693-8697.	2.6	18
47	Characterization of Bifunctional Spin Labels for Investigating the Structural and Dynamic Properties of Membrane Proteins Using EPR Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2017, 121, 9185-9195.	2.6	18
48	Continuous Wave Electron Paramagnetic Resonance Spectroscopy Reveals the Structural Topology and Dynamic Properties of Active Pinholin S2168 in a Lipid Bilayer. <i>Journal of Physical Chemistry B</i> , 2019, 123, 8048-8056.	2.6	18
49	Determining $\hat{\pm}$ -Helical and $\hat{2}$ -Sheet Secondary Structures via Pulsed Electron Spin Resonance Spectroscopy. <i>Biochemistry</i> , 2012, 51, 7417-7419.	2.5	17
50	Citrus Quality Control: An NMR/MRI Problem-Based Experiment. <i>Journal of Chemical Education</i> , 2016, 93, 335-339.	2.3	17
51	Characterization of the structure of lipodisq nanoparticles in the presence of KCNE1 by dynamic light scattering and transmission electron microscopy. <i>Chemistry and Physics of Lipids</i> , 2017, 203, 19-23.	3.2	17
52	Secondary Structure, Backbone Dynamics, and Structural Topology of Phospholamban and Its Phosphorylated and Arg9Cys-Mutated Forms in Phospholipid Bilayers Utilizing $^{13}\text{C}$ and $^{15}\text{N}$ Solid-State NMR Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2014, 118, 2124-2133.	2.6	16
53	Determining the Secondary Structure of Membrane Proteins and Peptides Via Electron Spin Echo Envelope Modulation (ESEEM) Spectroscopy. <i>Methods in Enzymology</i> , 2015, 564, 289-313.	1.0	16
54	The membrane protein KCNQ1 potassium ion channel: Functional diversity and current structural insights. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2020, 1862, 183148.	2.6	16

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55	Solid-State NMR spectroscopic studies on the interaction of sorbic acid with phospholipid membranes at different pH levels. <i>Magnetic Resonance in Chemistry</i> , 2009, 47, 651-657.	1.9	15
56	A Budding-Defective M2 Mutant Exhibits Reduced Membrane Interaction, Insensitivity to Cholesterol, and Perturbed Interdomain Coupling. <i>Biochemistry</i> , 2017, 56, 5955-5963.	2.5	15
57	The Turner syndrome research registry: Creating equipoise between investigators and participants. <i>American Journal of Medical Genetics, Part C: Seminars in Medical Genetics</i> , 2019, 181, 7-12.	1.6	15
58	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.	2.5	15
59	Characterization of the Human KCNQ1 Voltage Sensing Domain (VSD) in Lipid Bilayers for Electron Paramagnetic Resonance (EPR) Spectroscopic Studies of Membrane Proteins. <i>Journal of Physical Chemistry B</i> , 2020, 124, 2331-2342.	2.6	15
60	CW dipolar broadening EPR spectroscopy and mechanically aligned bilayers used to measure distance and relative orientation between two TOAC spin labels on an antimicrobial peptide. <i>Journal of Magnetic Resonance</i> , 2014, 249, 72-79.	2.1	14
61	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, 1707-1713.	7.6	13
62	Structural Dynamics and Topology of the Inactive Form of S <sup>21</sup> Holin in a Lipid Bilayer Using Continuous-Wave Electron Paramagnetic Resonance Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2020, 124, 5370-5379.	2.6	13
63	Investigating magnetically aligned phospholipid bilayers with various lanthanide ions for X-band spin-label EPR studies. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2003, 1612, 52-58.	2.6	12
64	Enhancement of Electron Spin Echo Envelope Modulation Spectroscopic Methods to Investigate the Secondary Structure of Membrane Proteins. <i>Journal of Physical Chemistry B</i> , 2012, 116, 11041-11045.	2.6	12
65	Probing the Local Secondary Structure of Human Vimentin with Electron Spin Echo Envelope Modulation (ESEEM) Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2016, 120, 12321-12326.	2.6	12
66	Assessing topology and surface orientation of an antimicrobial peptide magainin 2 using mechanically aligned bilayers and electron paramagnetic resonance spectroscopy. <i>Chemistry and Physics of Lipids</i> , 2018, 213, 124-130.	3.2	12
67	Determining the helical tilt of membrane peptides using electron paramagnetic resonance spectroscopy. <i>Journal of Magnetic Resonance</i> , 2009, 198, 1-7.	2.1	11
68	Solid-State NMR <sup>31</sup> P Paramagnetic Relaxation Enhancement Membrane Protein Immersion Depth Measurements. <i>Journal of Physical Chemistry B</i> , 2014, 118, 4370-4377.	2.6	11
69	Teaching the Fundamentals of Pulsed NMR Spectroscopy in an Undergraduate Physical Chemistry Laboratory. <i>Journal of Chemical Education</i> , 2001, 78, 956.	2.3	10
70	Cost-Effective Spectroscopic Instrumentation for the Physical Chemistry Laboratory. <i>Journal of Chemical Education</i> , 2002, 79, 1264.	2.3	10
71	Utilizing Electron Spin Echo Envelope Modulation To Distinguish between the Local Secondary Structures of an $\alpha$ -Helix and an Amphipathic 310-Helical Peptide. <i>Journal of Physical Chemistry B</i> , 2017, 121, 2961-2967.	2.6	10
72	Conformational Differences Are Observed for the Active and Inactive Forms of Pinholin S <sup>21</sup> Using DEER Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2020, 124, 11396-11405.	2.6	10

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73	Solid phase synthesis and spectroscopic characterization of the active and inactive forms of bacteriophage S21 pinholin protein. <i>Analytical Biochemistry</i> , 2019, 567, 14-20.	2.4	10
74	Utilization of <sup>13</sup> C-labeled amino acids to probe the $\alpha$ -helical local secondary structure of a membrane peptide using electron spin echo envelope modulation (ESEEM) spectroscopy. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2018, 1860, 1447-1451.	2.6	9
75	Probing Structural Dynamics of Membrane Proteins Using Electron Paramagnetic Resonance Spectroscopic Techniques. <i>Biophysica</i> , 2021, 1, 106-125.	1.4	9
76	A hydrophilic microenvironment in the substrate-translocating groove of the YidC membrane insertase is essential for enzyme function. <i>Journal of Biological Chemistry</i> , 2022, 298, 101690.	3.4	9
77	What Is the True Color of Fresh Meat? A Biophysical Undergraduate Laboratory Experiment Investigating the Effects of Ligand Binding on Myoglobin Using Optical, EPR, and NMR Spectroscopy. <i>Journal of Chemical Education</i> , 2011, 88, 223-225.	2.3	7
78	Probing the Secondary Structure of Membrane Peptides Using <sup>2</sup> H-Labeled d <sup>10</sup> -Leucine via Site-Directed Spin-Labeling and Electron Spin Echo Envelope Modulation Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2016, 120, 633-640.	2.6	7
79	<sup>1</sup> H-DHODH Microdomain-Membrane Interactions Influenced by the Lipid Composition. <i>Journal of Physical Chemistry B</i> , 2017, 121, 11085-11095.	2.6	7
80	Probing topology and dynamics of the second transmembrane domain (M2 $\alpha$ ) of the acetyl choline receptor using magnetically aligned lipid bilayers (bicelles) and EPR spectroscopy. <i>Chemistry and Physics of Lipids</i> , 2017, 206, 9-15.	3.2	7
81	Probing the interaction of Arg9Cys mutated phospholamban with phospholipid bilayers by solid-state NMR spectroscopy. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2013, 1828, 2444-2449.	2.6	6
82	Investigating the interaction between peptides of the amphipathic helix of Hcf106 and the phospholipid bilayer by solid-state NMR spectroscopy. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2014, 1838, 413-418.	2.6	6
83	Completion of the Vimentin Rod Domain Structure Using Experimental Restraints: A New Tool for Exploring Intermediate Filament Assembly and Mutations. <i>Structure</i> , 2019, 27, 1547-1560.e4.	3.3	6
84	Active S2168 and inactive S211RS pinholin interact differently with the lipid bilayer: A <sup>31</sup> P and <sup>2</sup> H solid state NMR study. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2020, 1862, 183257.	2.6	6
85	Pinholin S21 mutations induce structural topology and conformational changes. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2021, 1863, 183771.	2.6	6
86	Comparing the structural dynamics of the human KCNE3 in reconstituted micelle and lipid bilayered vesicle environments. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2022, 1864, 183974.	2.6	5
87	Investigating the Secondary Structure of Membrane Peptides Utilizing Multiple <sup>2</sup> H-Labeled Hydrophobic Amino Acids via Electron Spin Echo Envelope Modulation (ESEEM) Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2018, 122, 4388-4396.	2.6	4
88	Investigating Structural Dynamics of KCNE3 in Different Membrane Environments Using Molecular Dynamics Simulations. <i>Membranes</i> , 2022, 12, 469.	3.0	3
89	Probing the Structure of Membrane Proteins with ESEEM and DEER Pulsed EPR Techniques. <i>Biophysical Journal</i> , 2012, 102, 423a.	0.5	2
90	Probing the Secondary Structure of Membrane Proteins with the Pulsed EPR ESEEM Technique. <i>Biophysical Journal</i> , 2014, 106, 192a.	0.5	2

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91	Probing the local secondary structure of bacteriophage S21 pinholin membrane protein using electron spin echo envelope modulation spectroscopy. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2022, 1864, 183836.	2.6	2
92	Probing the interaction of the potassium channel modulating KCNE1 in lipid bilayers via solid-state NMR spectroscopy. <i>Magnetic Resonance in Chemistry</i> , 2017, 55, 754-758.	1.9	1
93	Biocatalytic Polymerization, Bioinspired Surfactants, and Bioconjugates Using RAFT Polymerization. <i>ACS Symposium Series</i> , 2018, , 219-232.	0.5	1
94	EPR Techniques, Spin Labeling, and Spin Trapping. , 2018, , .		1
95	16. Styrene-maleic acid copolymers: a new tool for membrane biophysics. , 2019, , 477-496.		1
96	Formation of styrene maleic acid lipid nanoparticles (SMALPs) using SMA thin film on a substrate. <i>Analytical Biochemistry</i> , 2022, 647, 114692.	2.4	1