

# Mohaddese Mohammadi

## List of Publications by Year in descending order

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Version: 2024-02-01

61  
papers

2,383  
citations

304743

22  
h-index

206112

48  
g-index

65  
all docs

65  
docs citations

65  
times ranked

3120  
citing authors

#	ARTICLE	IF	CITATIONS
1	Weak nuclear spin singlet relaxation mechanisms revealed by experiment and computation. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 7531-7538.	2.8	7
2	<sup>31</sup> P nuclear spin singlet lifetimes in a system with switchable magnetic inequivalence: experiment and simulation. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 19465-19471.	2.8	7
3	Battery Characterization via Eddy-Current Imaging with Nitrogen-Vacancy Centers in Diamond. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 3069.	2.5	16
4	<sup>7</sup> Li intermolecular multiple-quantum coherences in liquids. <i>Journal of Magnetic Resonance</i> , 2021, 329, 107010.	2.1	0
5	Observation of memory effects associated with degradation of rechargeable lithium-ion cells using ultrafast surface-scan magnetic resonance imaging. <i>Journal of Materials Chemistry A</i> , 2021, 9, 21078-21084.	10.3	13
6	Ultrafast Inside-Out NMR Assessment of Rechargeable Cells. <i>Batteries and Supercaps</i> , 2021, 4, 322-326.	4.7	8
7	Mapping oscillating magnetic fields around rechargeable batteries. <i>Journal of Magnetic Resonance</i> , 2020, 319, 106811.	2.1	5
8	Nuclear magnetic resonance spin-lattice relaxation of lithium ions in aqueous solution by NMR and molecular dynamics. <i>Journal of Chemical Physics</i> , 2020, 153, 184502.	3.0	11
9	Rapid Online Solid-State Battery Diagnostics with Optically Pumped Magnetometers. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 7864.	2.5	9
10	Nuclear magnetic resonance spectroscopy of rechargeable pouch cell batteries: beating the skin depth by excitation and detection via the casing. <i>Scientific Reports</i> , 2020, 10, 13781.	3.3	6
11	Sensitive magnetometry reveals inhomogeneities in charge storage and weak transient internal currents in Li-ion cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 10667-10672.	7.1	43
12	Accurate Visualization of Operating Commercial Batteries Using Specialized Magnetic Resonance Imaging with Magnetic Field Sensing. <i>Chemistry of Materials</i> , 2020, 32, 2107-2113.	6.7	23
13	Generalised magnetisation-to-singlet-order transfer in nuclear magnetic resonance. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 9703-9712.	2.8	23
14	Assessment of frequency drift on CEST MRI and dynamic correction: application to gagCEST at 7 T. <i>Magnetic Resonance in Medicine</i> , 2019, 81, 573-582.	3.0	35
15	In situ and operando magnetic resonance imaging of electrochemical cells: A perspective. <i>Journal of Magnetic Resonance</i> , 2019, 308, 106600.	2.1	31
16	Diagnosing current distributions in batteries with magnetic resonance imaging. <i>Journal of Magnetic Resonance</i> , 2019, 309, 106601.	2.1	23
17	Distortion-free inside-out imaging for rapid diagnostics of rechargeable Li-ion cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 18783-18789.	7.1	20
18	Magnetization transfer in liposome and proteoliposome samples that mimic the protein and lipid composition of myelin. <i>NMR in Biomedicine</i> , 2019, 32, e4097.	2.8	3

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19	1 Hâ€decoupling and Isotopic Labeling for the Measurement of the Longitudinal Relaxation Time of Hyperpolarized 13 Câ€Methylenes in Choline Analogs. Israel Journal of Chemistry, 2019, 59, 1014-1019.	2.3	0
20	Multinuclear absolute magnetic resonance thermometry. Communications Physics, 2019, 2, .	5.3	8
21	Parahydrogenâ€Based Hyperpolarization for Biomedicine. Angewandte Chemie - International Edition, 2018, 57, 11140-11162.	13.8	251
22	Monitoring Molecular Transport across Colloidal Membranes. Journal of Physical Chemistry B, 2018, 122, 4931-4936.	2.6	1
23	Rechargeable lithium-ion cell state of charge and defectâ€detection by in-situ inside-out magnetic resonance imaging. Nature Communications, 2018, 9, 1776.	12.8	75
24	Aspects of NMR reciprocity and applications in highly conductive media. Concepts in Magnetic Resonance Part A: Bridging Education and Research, 2018, 47A, .	0.5	3
25	Probing Solid-Electrolyte Interphase (SEI) Growth and Ion Permeability at Undriven Electrolyteâ€Metal Interfaces Using <sup>7</sup> Li NMR. Journal of Physical Chemistry C, 2018, 122, 12598-12604.	3.1	27
26	Multiple frequency saturation pulses reduce CEST acquisition time for quantifying conformational exchange in biomolecules. Journal of Biomolecular NMR, 2018, 71, 19-30.	2.8	17
27	Optimal control RF pulses for excitation and suppression of NMR signals in a conductive medium. Journal of Chemical Physics, 2018, 149, 034201.	3.0	1
28	Parawasserstoffâ€basierte Hyperpolarisierung fÃ¼r die Biomedizin. Angewandte Chemie, 2018, 130, 11310-11333.	2.0	54
29	Unusual Proton Transfer Kinetics in Water at the Temperature of Maximum Density. Physical Review Letters, 2018, 121, 076001.	7.8	6
30	Magnetization transfer in a partly deuterated lyotropic liquid crystal by single- and dual-frequency RF irradiations. Journal of Magnetic Resonance, 2017, 281, 141-150.	2.1	2
31	Super-resolution Surface Microscopy of Conductors using Magnetic Resonance. Scientific Reports, 2017, 7, 5425.	3.3	9
32	<sup>1</sup> H NMR study and multivariate data analysis of reindeer skin tanning methods. Magnetic Resonance in Chemistry, 2017, 55, 312-317.	1.9	3
33	Correlation of Phosphorus Cross-Linking to Hydration Rates in Sodium Starch Glycolate Tablet Disintegrants Using MRI. Journal of Pharmaceutical Sciences, 2016, 105, 1907-1913.	3.3	11
34	<i>In vitro</i> study of endogenous CEST agents at 3â€T and 7â€T. Contrast Media and Molecular Imaging, 2016, 11, 4-14.	0.8	37
35	Low-power slice selective imaging of broad signals. Journal of Magnetic Resonance, 2016, 272, 61-67.	2.1	0
36	Low-power suppression of fast-motion spin 3/2 signals. Journal of Magnetic Resonance, 2016, 272, 129-140.	2.1	2

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37	Real-time 3D imaging of microstructure growth in battery cells using indirect MRI. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 10779-10784.	7.1	110
38	Limits in Proton Nuclear Singlet State Lifetimes Measured with Hydrogen-Induced Polarization. ChemPhysChem, 2016, 17, 2967-2971.	2.1	38
39	Bloch equations for proton exchange reactions in an aqueous solution. Concepts in Magnetic Resonance Part A: Bridging Education and Research, 2016, 45A, .	0.5	6
40	Screening CEST contrast agents using ultrafast CEST imaging. Journal of Magnetic Resonance, 2016, 265, 224-229.	2.1	21
41	Quadrupole sensitive pulse for signal filtering. Journal of Magnetic Resonance, 2016, 265, 153-163.	2.1	3
42	MRI and Unilateral NMR Study of Reindeer Skin Tanning Processes. Analytical Chemistry, 2015, 87, 3820-3825.	6.5	8
43	Investigating Li Microstructure Formation on Li Anodes for Lithium Batteries by in Situ <sup>6</sup> Li/ <sup>7</sup> Li NMR and SEM. Journal of Physical Chemistry C, 2015, 119, 16443-16451.	3.1	130
44	Transfer Rate Edited experiment for the selective detection of Chemical Exchange via Saturation Transfer (TRE-CEST). Journal of Magnetic Resonance, 2015, 256, 43-51.	2.1	14
45	Correlating Microstructural Lithium Metal Growth with Electrolyte Salt Depletion in Lithium Batteries Using <sup>7</sup> Li MRI. Journal of the American Chemical Society, 2015, 137, 15209-15216.	13.7	221
46	Visualizing skin effects in conductors with MRI: $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si5.gif" overflow="scroll" \rangle \langle \text{mml:mrow} \langle \text{mml:msup} \langle \text{mml:mrow} / \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 7 \langle / \text{mml:mn} \rangle \langle / \text{mml:mrow} \rangle \langle / \text{mml:msup} \rangle \langle / \text{mml:mrow} \rangle \langle / \text{mml:math} \rangle$ Li MRI experiments and calculations. Journal of Magnetic Resonance, 2014, 245, 143-149.	2.1	63
47	Dependence of NMR noise line shapes on tuning, matching, and transmission line properties. Concepts in Magnetic Resonance Part B, 2014, 44, 1-11.	0.7	12
48	Multinuclear in situ magnetic resonance imaging of electrochemical double-layer capacitors. Nature Communications, 2014, 5, 4536.	12.8	68
49	Sodium MRI: Methods and applications. Progress in Nuclear Magnetic Resonance Spectroscopy, 2014, 79, 14-47.	7.5	176
50	Concurrent saturation transfer contrast in in vivo brain by a uniform magnetization transfer MRI. NeuroImage, 2014, 95, 22-28.	4.2	24
51	CHEMICAL EXCHANGE SATURATION TRANSFER CONTRAST BY GLYCOSAMINOGLYCANS AND ITS APPLICATION FOR MONITORING KNEE JOINT REPAIR. , 2014, , 249-271.		1
52	Ultrafast Z-Spectroscopy for <sup>129</sup> Xe NMR-Based Sensors. Journal of Physical Chemistry Letters, 2013, 4, 4172-4176.	4.6	48
53	<sup>7</sup> Li MRI of Li batteries reveals location of microstructural lithium. Nature Materials, 2012, 11, 311-315.	27.5	390
54	In Situ Unilateral <sup>1</sup> H-NMR Studies of the Interaction Between Lead White Pigments and Collagen-Based Binders. Applied Magnetic Resonance, 2012, 42, 363-376.	1.2	10

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55	Characterization of Al(III) complexes with hematein in artistic alum logwood inks. Journal of Raman Spectroscopy, 2010, 41, 445-451.	2.5	7
56	Functional Imaging of the Knee Joint. , 2010, , 185-233.		0
57	Solid-State NMR Studies Of Ultramarine Pigments Discoloration. Materials Research Society Symposia Proceedings, 2006, 984, 1.	0.1	2
58	MathNMR: Spin and spatial tensor manipulations in Mathematica. Journal of Magnetic Resonance, 2005, 176, 7-14.	2.1	46
59	From nuclear structure to the quadrupolar NMR interaction and high-resolution spectroscopy. Progress in Nuclear Magnetic Resonance Spectroscopy, 2005, 46, 63-78.	7.5	127
60	Solid-State NMR and Resonance Raman Studies of Ultramarine Pigments. Materials Research Society Symposia Proceedings, 2004, 852, 140.	0.1	0
61	Calculation of coherence pathway selection and cogwheel cycles. Journal of Magnetic Resonance, 2003, 160, 59-64.	2.1	35