

Michal Leskes

List of Publications by Year in descending order

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papers

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136950

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docs citations

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times ranked

6055
citing authors

#	ARTICLE	IF	CITATIONS
1	Cycling Li-O ₂ batteries via LiOH formation and decomposition. <i>Science</i> , 2015, 350, 530-533.	12.6	584
2	Identifying the Critical Role of Li Substitution in P2-Na _x [Li _y Ni _z Mn _{1-y-z}]O ₂ (0 x, y, z ≤ 1) Intercalation Cathode Materials for High-Energy Na-Ion Batteries. <i>Chemistry of Materials</i> , 2014, 26, 1260-1269.	6.7	417
3	Fluoroethylene Carbonate and Vinylene Carbonate Reduction: Understanding Lithium-Ion Battery Electrolyte Additives and Solid Electrolyte Interphase Formation. <i>Chemistry of Materials</i> , 2016, 28, 8149-8159.	6.7	339
4	Solid Electrolyte Interphase Growth and Capacity Loss in Silicon Electrodes. <i>Journal of the American Chemical Society</i> , 2016, 138, 7918-7931.	13.7	189
5	<i>In Situ</i> Solid-State NMR Spectroscopy of Electrochemical Cells: Batteries, Supercapacitors, and Fuel Cells. <i>Accounts of Chemical Research</i> , 2013, 46, 1952-1963.	15.6	170
6	Comprehensive Study of the CuF ₂ Conversion Reaction Mechanism in a Lithium Ion Battery. <i>Journal of Physical Chemistry C</i> , 2014, 118, 15169-15184.	3.1	168
7	A Mechanistic Study of Phase Transformation in Perovskite Nanocrystals Driven by Ligand Passivation. <i>Chemistry of Materials</i> , 2018, 30, 84-93.	6.7	154
8	Voltage Dependent Solid Electrolyte Interphase Formation in Silicon Electrodes: Monitoring the Formation of Organic Decomposition Products. <i>Chemistry of Materials</i> , 2016, 28, 385-398.	6.7	149
9	Floquet theory in solid-state nuclear magnetic resonance. <i>Progress in Nuclear Magnetic Resonance Spectroscopy</i> , 2010, 57, 345-380.	7.5	136
10	Ab Initio Structure Search and <i>In Situ</i> Li NMR Studies of Discharge Products in the Li-S Battery System. <i>Journal of the American Chemical Society</i> , 2014, 136, 16368-16377.	13.7	132
11	Multiple Redox Modes in the Reversible Lithiation of High-Capacity, Peierls-Distorted Vanadium Sulfide. <i>Journal of the American Chemical Society</i> , 2015, 137, 8499-8508.	13.7	127
12	A broad-banded z-rotation windowed phase-modulated Lee-Goldburg pulse sequence for 1H spectroscopy in solid-state NMR. <i>Chemical Physics Letters</i> , 2007, 447, 370-374.	2.6	92
13	Monitoring the Electrochemical Processes in the Lithium-Air Battery by Solid State NMR Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2013, 117, 26929-26939.	3.1	92
14	Relationships between Mn ³⁺ Content, Structural Ordering, Phase Transformation, and Kinetic Properties in LiNi _x Mn _{2-x} O ₄ Cathode Materials. <i>Chemistry of Materials</i> , 2014, 26, 5374-5382.	6.7	88
15	Direct Detection of Discharge Products in Lithium-Oxygen Batteries by Solid-State NMR Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 8560-8563.	13.8	75
16	Surface-Sensitive NMR Detection of the Solid Electrolyte Interphase Layer on Reduced Graphene Oxide. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 1078-1085.	4.6	69
17	Endogenous Dynamic Nuclear Polarization for Natural Abundance ¹⁷ O and Lithium NMR in the Bulk of Inorganic Solids. <i>Journal of the American Chemical Society</i> , 2019, 141, 451-462.	13.7	69
18	Homonuclear dipolar decoupling at magic-angle spinning frequencies up to 65kHz in solid-state nuclear magnetic resonance. <i>Chemical Physics Letters</i> , 2008, 466, 95-99.	2.6	63

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19	Supercycled homonuclear dipolar decoupling in solid-state NMR: Toward cleaner H1 spectrum and higher spinning rates. <i>Journal of Chemical Physics</i> , 2008, 128, 052309.	3.0	59
20	Paramagnetic electrodes and bulk magnetic susceptibility effects in the in situ NMR studies of batteries: Application to Li _{1.08} Mn _{1.92} O ₄ spinels. <i>Journal of Magnetic Resonance</i> , 2013, 234, 44-57.	2.1	59
21	Proton line narrowing in solid-state nuclear magnetic resonance: New insights from windowed phase-modulated Lee-Goldburg sequence. <i>Journal of Chemical Physics</i> , 2006, 125, 124506.	3.0	57
22	Formation of Ti ₂₈ Ln Cages, the Highest Nuclearity Polyoxotitanates (Ln=La, Ce). <i>Chemistry - A European Journal</i> , 2012, 18, 11867-11870.	3.3	56
23	Identifying the Structure of the Intermediate, Li _{2/3} CoPO ₄ , Formed during Electrochemical Cycling of LiCoPO ₄ . <i>Chemistry of Materials</i> , 2014, 26, 6193-6205.	6.7	54
24	Characterising local environments in high energy density Li-ion battery cathodes: a combined NMR and first principles study of LiFe _x Co _{1-x} PO ₄ . <i>Journal of Materials Chemistry A</i> , 2014, 2, 11948-11957.	10.3	50
25	Bimodal Floquet description of heteronuclear dipolar decoupling in solid-state nuclear magnetic resonance. <i>Journal of Chemical Physics</i> , 2007, 127, 024501.	3.0	49
26	Probing Dynamic Processes in Lithium-Ion Batteries by In-Situ NMR Spectroscopy: Application to Li _{1.08} Mn _{1.92} O ₄ Electrodes. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 14782-14786.	13.8	49
27	What Can We Learn from Solid State NMR on the Electrode-Electrolyte Interface?. <i>Advanced Materials</i> , 2018, 30, e1706496.	21.0	43
28	Role of annealing temperature on cation ordering in hydrothermally prepared zinc aluminate (ZnAl ₂ O ₄) spinel. <i>Materials Research Bulletin</i> , 2018, 98, 219-224.	5.2	42
29	Highly Reversible Conversion-Type FeOF Composite Electrode with Extended Lithium Insertion by Atomic Layer Deposition LiPON Protection. <i>Chemistry of Materials</i> , 2017, 29, 8780-8791.	6.7	41
30	Unraveling the Complex Delithiation Mechanisms of Olivine-Type Cathode Materials, LiFe _x Co _{1-x} PO ₄ . <i>Chemistry of Materials</i> , 2016, 28, 3676-3690.	6.7	38
31	Alkylated Li _x SiyO _z Coating for Stabilization of Li-rich Layered Oxide Cathodes. <i>Energy Storage Materials</i> , 2020, 33, 268-275.	18.0	35
32	Why does PMLG proton decoupling work at 65kHz MAS?. <i>Journal of Magnetic Resonance</i> , 2009, 199, 208-213.	2.1	34
33	A study of the optical properties of metal-doped polyoxotitanium cages and the relationship to metal-doped titania. <i>Dalton Transactions</i> , 2014, 43, 8679.	3.3	33
34	Theory and Practice: Bulk Synthesis of C ₃ B and its H ₂ - and Li-Storage Capacity. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 5919-5923.	13.8	33
35	Paramagnetic Metal-Ion Dopants as Polarization Agents for Dynamic Nuclear Polarization NMR Spectroscopy in Inorganic Solids. <i>ChemPhysChem</i> , 2018, 19, 2139-2142.	2.1	32
36	Ion Dynamics in Li ₂ CO ₃ Studied by Solid-State NMR and First-Principles Calculations. <i>Journal of Physical Chemistry C</i> , 2015, 119, 24255-24264.	3.1	31

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37	Bifunctional Role of LiNO_3 in Li^{O} Batteries: Deconvoluting Surface and Catalytic Effects. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 29622-29629.	8.0	31
38	Mitigating Structural Instability of High-Energy Lithium- and Manganese-Rich $\text{LiNi}_x\text{Mn}_y\text{Co}_z$ Oxide by Interfacial Atomic Surface Reduction. <i>Chemistry of Materials</i> , 2019, 31, 3840-3847.	6.7	30
39	Endogenous Dynamic Nuclear Polarization for Sensitivity Enhancement in Solid-State NMR of Electrode Materials. <i>Journal of Physical Chemistry C</i> , 2020, 124, 7082-7090.	3.1	30
40	Enabling Natural Abundance ^{17}O Solid-State NMR by Direct Polarization from Paramagnetic Metal Ions. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 5439-5445.	4.6	28
41	Atomic surface reduction of interfaces utilizing vapor phase approach: High energy $\text{LiNi}_x\text{Mn}_y\text{Co}_z$ oxide as a test case. <i>Energy Storage Materials</i> , 2019, 19, 261-269.	18.0	22
42	Dynamic Nuclear Polarization Solid-State NMR Spectroscopy for Materials Research. <i>Annual Review of Materials Research</i> , 2022, 52, 25-55.	9.3	20
43	Radio frequency assisted homonuclear recoupling – A Floquet description of homonuclear recoupling via surrounding heteronuclei in fully protonated to fully deuterated systems. <i>Journal of Magnetic Resonance</i> , 2011, 209, 207-219.	2.1	19
44	Structure and Functionality of an Alkylated $\text{Li}_x\text{Si}_y\text{O}_z$ Interphase for High-Energy Cathodes from DNP-ssNMR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2021, 143, 4694-4704.	13.7	19
45	What Happens to LiMnPO_4 upon Chemical Delithiation?. <i>Inorganic Chemistry</i> , 2016, 55, 4335-4343.	4.0	17
46	In situ NMR reveals real-time nanocrystal growth evolution via monomer-attachment or particle-coalescence. <i>Nature Communications</i> , 2021, 12, 229.	12.8	17
47	Oxygen Vacancy Distribution in Yttrium-Doped Ceria from ^{89}Y Correlations via Dynamic Nuclear Polarization Solid-State NMR. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 2964-2969.	4.6	17
48	Identification of dopant site and its effect on electrochemical activity in Mn-doped lithium titanate. <i>Physical Review Materials</i> , 2018, 2, .	2.4	17
49	Dynamic Nuclear Polarization in battery materials. <i>Solid State Nuclear Magnetic Resonance</i> , 2022, 117, 101763.	2.3	15
50	Selective formation of organo, organo-aqueous, and hydro gel-like materials from partially hydrolysed poly(vinyl acetate)s based on different boron-containing crosslinkers. <i>Soft Matter</i> , 2015, 11, 5060-5066.	2.7	13
51	The effects of sample conductivity on the efficacy of dynamic nuclear polarization for sensitivity enhancement in solid state NMR spectroscopy. <i>Solid State Nuclear Magnetic Resonance</i> , 2019, 99, 7-14.	2.3	11
52	Investigation of Rechargeable Poly(ethylene oxide)-Based Solid Lithium $^{\text{O}}$ Oxygen Batteries. <i>ACS Applied Energy Materials</i> , 2018, 1, 3048-3056.	5.1	10
53	Direct Detection of Lithium Exchange across the Solid Electrolyte Interphase by ^7Li Chemical Exchange Saturation Transfer. <i>Journal of the American Chemical Society</i> , 2022, 144, 9836-9844.	13.7	9
54	Design of a triple quantum coherence excitation scheme for protons in solid state NMR. <i>Journal of Chemical Physics</i> , 2009, 130, 124506.	3.0	8

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55	Divergence from the classical hydroboration reactivity; boron containing materials through a hydroboration cascade of small cyclic dienes. <i>Chemical Science</i> , 2015, 6, 6262-6269.	7.4	8
56	Relative merits of rCW and XiX heteronuclear spin decoupling in solid-state magic-angle-spinning NMR spectroscopy: A bimodal Floquet analysis. <i>Journal of Magnetic Resonance</i> , 2016, 263, 55-64.	2.1	7
57	Significance of symmetry in the nuclear spin Hamiltonian for efficient heteronuclear dipolar decoupling in solid-state NMR: A Floquet description of supercycled <i>r</i> CW schemes. <i>Journal of Chemical Physics</i> , 2017, 146, 104202.	3.0	6
58	Synthesis and extensive characterisation of phosphorus doped graphite. <i>RSC Advances</i> , 2016, 6, 62140-62145.	3.6	4
59	Monitoring electron spin fluctuations with paramagnetic relaxation enhancement. <i>Journal of Magnetic Resonance</i> , 2022, 336, 107143.	2.1	4
60	Finite pulse effects in CPMG pulse trains on paramagnetic materials. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 22311-22320.	2.8	3
61	Dynamic nuclear polarization in inorganic solids from paramagnetic metal ion dopants. , 2021, , .		3
62	Cation-Ligand Complexation Mediates the Temporal Evolution of Colloidal Fluoride Nanocrystals through Transient Aggregation. <i>Nano Letters</i> , 2021, 21, 9916-9921.	9.1	2
63	Nuclear Magnetic Resonance Spectroscopy Techniques: Solid-State. , 2018, , 403-403.		0