Clare Grey

List of Publications by Year
in descending order

630 papers	52,441 citations	997 114 h-index	2280 200 g-index
676 all docs	676 docs citations	676 times ranked	35921 citing authors

#	Article	IF	Citations
1	Electrodes with High Power and High Capacity for Rechargeable Lithium Batteries. Science, 2006, 311, 977-980.	12.6	2,369
2	Efficient storage mechanisms for building better supercapacitors. Nature Energy, 2016, 1, .	39.5	1,655
3	Sustainability and in situ monitoring in battery development. Nature Materials, 2017, 16, 45-56.	27.5	930
4	NMR reveals the surface functionalisation of Ti₃C₂MXene. Physical Chemistry Chemical Physics, 2016, 18, 5099-5102.	2.8	689
5	In situ NMR observation of the formation of metallic lithium microstructures in lithium batteries. Nature Materials, 2010, 9, 504-510.	27.5	650
6	Origin of additional capacities in metal oxide lithium-ion battery electrodes. Nature Materials, 2013, 12, 1130-1136.	27.5	635
7	Real-Time NMR Investigations of Structural Changes in Silicon Electrodes for Lithium-Ion Batteries. Journal of the American Chemical Society, 2009, 131, 9239-9249.	13.7	634
8	Niobium tungsten oxides for high-rate lithium-ion energy storage. Nature, 2018, 559, 556-563.	27.8	612
9	Selective oxidation of methane to synthesis gas using transition metal catalysts. Nature, 1990, 344, 319-321.	27.8	603
10	Mg/Al Ordering in Layered Double Hydroxides Revealed by Multinuclear NMR Spectroscopy. Science, 2008, 321, 113-117.	12.6	591
11	Cycling Li-O ₂ batteries via LiOH formation and decomposition. Science, 2015, 350, 530-533.	12.6	584
12	NMR Studies of Cathode Materials for Lithium-Ion Rechargeable Batteries. Chemical Reviews, 2004, 104, 4493-4512.	47.7	581
13	New Perspectives on the Charging Mechanisms of Supercapacitors. Journal of the American Chemical Society, 2016, 138, 5731-5744.	13.7	529
14	Rapid-acquisition pair distribution function (RA-PDF) analysis. Journal of Applied Crystallography, 2003, 36, 1342-1347.	4.5	501
15	Capturing metastable structures during high-rate cycling of LiFePO ₄ nanoparticle electrodes. Science, 2014, 344, 1252817.	12.6	493
16	Conversion Reaction Mechanisms in Lithium Ion Batteries: Study of the Binary Metal Fluoride Electrodes. Journal of the American Chemical Society, 2011, 133, 18828-18836.	13.7	492
17	Electrochemical and Structural Properties of xLi2Mâ€˜O3Â·(1â^’x)LiMn0.5Ni0.5O2 Electrodes for Lithium Batteries (Mâ€˜ = Ti, Mn, Zr; 0 â‰ x â©½ 0.3). Chemistry of Materials, 2004, 16, 1996-2006.	6.7	481
18	Lithium Salt of Tetrahydroxybenzoquinone: Toward the Development of a Sustainable Li-Ion Battery. Journal of the American Chemical Society, 2009, 131, 8984-8988.	13.7	438

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19	Investigation of the Charge Compensation Mechanism on the Electrochemically Li-Ion Deintercalated Li1-xCo1/3Ni1/3Mn1/3O2Electrode System by Combination of Soft and Hard X-ray Absorption Spectroscopy. Journal of the American Chemical Society, 2005, 127, 17479-17487.	13.7	436
20	Identifying the Critical Role of Li Substitution in P2â€“Na_{<i>x</i>}[Li_{<i>y</i>}Ni_{<i>z</i>}Mn_{1â€“<i>y</i>â€“<i>z</i>}]O₂ (0 < <i>x</i>, <i>y</i>, <i>z</i> < 1) Intercalation Cathode Materials for High-Energy Na-Ion Batteries. Chemistry of Materials, 2014, 26, 1260-1269.	6.7	417
21	7Li MRI of Li batteries reveals location of microstructural lithium. Nature Materials, 2012, 11, 311-315.	27.5	390
22	Reviewâ€"Manganese-Based P2-Type Transition Metal Oxides as Sodium-Ion Battery Cathode Materials. Journal of the Electrochemical Society, 2015, 162, A2589-A2604.	2.9	386
23	Prospects for lithium-ion batteries and beyondâ€"a 2030 vision. Nature Communications, 2020, 11, 6279.	12.8	369
24	Pair Distribution Function Analysis and Solid State NMR Studies of Silicon Electrodes for Lithium Ion Batteries: Understanding the (De)lithiation Mechanisms. Journal of the American Chemical Society, 2011, 133, 503-512.	13.7	368
25	Exploring Oxygen Activity in the High Energy P2-Type Na_{0.78}Ni_{0.23}Mn_{0.69}O₂ Cathode Material for Na-Ion Batteries. Journal of the American Chemical Society, 2017, 139, 4835-4845.	13.7	363
26	Determination of the Quadrupole Coupling Constant of the Invisible Aluminum Spins in Zeolite HY with 1H/27Al TRAPDOR NMR. Journal of the American Chemical Society, 1995, 117, 8232-8242.	13.7	358
27	Current Challenges and Routes Forward for Nonaqueous Lithiumâ€“Air Batteries. Chemical Reviews, 2020, 120, 6558-6625.	47.7	356
28	Bulk fatigue induced by surface reconstruction in layered Ni-rich cathodes for Li-ion batteries. Nature Materials, 2021, 20, 84-92.	27.5	349
29	Fluoroethylene Carbonate and Vinylene Carbonate Reduction: Understanding Lithium-Ion Battery Electrolyte Additives and Solid Electrolyte Interphase Formation. Chemistry of Materials, 2016, 28, 8149-8159.	6.7	339
30	Î²-NaMnO₂: A High-Performance Cathode for Sodium-Ion Batteries. Journal of the American Chemical Society, 2014, 136, 17243-17248.	13.7	333
31	Revealing lithiumâ€“silicide phase transformations in nano-structured silicon-based lithium ion batteries via in situ NMR spectroscopy. Nature Communications, 2014, 5, 3217.	12.8	332
32	High-resolution X-ray diffraction, DIFFaX, NMR and first principles study of disorder in the Li2MnO3â€“Li[Ni1/2Mn1/2]O2 solid solution. Journal of Solid State Chemistry, 2005, 178, 2575-2585.	2.9	323
33	Nanoparticulate TiO₂(B): An Anode for Lithiumâ€Ion Batteries. Angewandte Chemie - International Edition, 2012, 51, 2164-2167.	13.8	305
34	Proton trapping in yttrium-doped barium zirconate. Nature Materials, 2013, 12, 647-651.	27.5	297
35	In situ NMR and electrochemical quartz crystal microbalance techniques reveal the structure of the electrical double layer in supercapacitors. Nature Materials, 2015, 14, 812-819.	27.5	296
36	Direct observation of ion dynamics in supercapacitor electrodes using inÂsitu diffusion NMR spectroscopy. Nature Energy, 2017, 2, .	39.5	285

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37	Cation Ordering in Layered O3 Li[NixLi1/3-2x/3Mn2/3-x/3]O2 (0 â‰ x â‰ 1/2) Compounds. Chemistry of Materials, 2005, 17, 2386-2394.	6.7	283
38	Materialsâ€™ Methods: NMR in Battery Research. Chemistry of Materials, 2017, 29, 213-242.	6.7	279
39	Uranium bioaccumulation by a Citrobacter sp. as a result of enzymically mediated growth of polycrystalline HUO2PO4. Science, 1992, 257, 782-784.	12.6	277
40	Electrochemical and Structural Study of the Layered, â€œLi-Excessâ€•Lithium-Ion Battery Electrode Material Li[Li_{1/9}Ni_{1/3}Mn_{5/9}]O₂. Chemistry of Materials, 2009, 21, 2733-2745.	6.7	275
41	Paramagnetic NMR in solution and the solid state. Progress in Nuclear Magnetic Resonance Spectroscopy, 2019, 111, 1-271.	7.5	274
42	Structurally stable Mg-doped P2-Na_{2/3}Mn_{1âˆ’y}Mg_yO₂ sodium-ion battery cathodes with high rate performance: insights from electrochemical, NMR and diffraction studies. Energy and Environmental Science, 2016, 9, 3240-3251.	30.8	264
43	Identifying the Local Structures Formed during Lithiation of the Conversion Material, Iron Fluoride, in a Li Ion Battery: A Solid-State NMR, X-ray Diffraction, and Pair Distribution Function Analysis Study. Journal of the American Chemical Society, 2009, 131, 10525-10536.	13.7	263
44	A versatile sample-environment cell for non-ambient X-ray scattering experiments. Journal of Applied Crystallography, 2008, 41, 822-824.	4.5	258
45	High-Rate Intercalation without Nanostructuring in Metastable Nb₂O₅ Bronze Phases. Journal of the American Chemical Society, 2016, 138, 8888-8899.	13.7	247
46	Hydrophilic microporous membranes for selective ion separation and flow-battery energy storage. Nature Materials, 2020, 19, 195-202.	27.5	237
47	Evolution of Structure and Lithium Dynamics in LiNi_{0.8}Mn_{0.1}Co_{0.1}O₂ (NMC811) Cathodes during Electrochemical Cycling. Chemistry of Materials, 2019, 31, 2545-2554.	6.7	228
48	Metalâ€“Organic Nanosheets Formed via Defect-Mediated Transformation of a Hafnium Metalâ€“Organic Framework. Journal of the American Chemical Society, 2017, 139, 5397-5404.	13.7	224
49	Structural and Mechanistic Insights into Fast Lithium-Ion Conduction in Li₄SiO₄â€“Li₃PO₄ Solid Electrolytes. Journal of the American Chemical Society, 2015, 137, 9136-9145.	13.7	223
50	Mechanistic insights into sodium storage in hard carbon anodes using local structure probes. Chemical Communications, 2016, 52, 12430-12433.	4.1	223
51	Correlating Microstructural Lithium Metal Growth with Electrolyte Salt Depletion in Lithium Batteries Using ⁷Li MRI. Journal of the American Chemical Society, 2015, 137, 15209-15216.	13.7	221
52	In Situ X-ray Absorption Spectroscopic Study on LiNi0.5Mn0.5O2 Cathode Material during Electrochemical Cycling. Chemistry of Materials, 2003, 15, 3161-3169.	6.7	220
53	Understanding Fluoroethylene Carbonate and Vinylene Carbonate Based Electrolytes for Si Anodes in Lithium Ion Batteries with NMR Spectroscopy. Journal of the American Chemical Society, 2018, 140, 9854-9867.	13.7	219
54	Influence of the Benzoquinone Sorption on the Structure and Electrochemical Performance of the MIL-53(Fe) Hybrid Porous Material in a Lithium-Ion Battery. Chemistry of Materials, 2009, 21, 1602-1611.	6.7	214

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55	Composition-Structure Relationships in the Li-Ion Battery Electrode Material LiNi_{0.5}Mn_{1.5}O₄. Chemistry of Materials, 2012, 24, 2952-2964.	6.7	211
56	6Li and 7Li MAS NMR Studies of Lithium Manganate Cathode Materials. Journal of the American Chemical Society, 1998, 120, 12601-12613.	13.7	205
57	Effect of High Voltage on the Structure and Electrochemistry of LiNi0.5Mn0.5O2:Â A Joint Experimental and Theoretical Study. Chemistry of Materials, 2006, 18, 4768-4781.	6.7	203
58	Local Structure and Cation Ordering in O3 Lithium Nickel Manganese Oxides with Stoichiometry Li[Ni[sub x]Mn[sub (2â^'x)/3]Li[sub (1â^'2x)/3]]O[sub 2]. Electrochemical and Solid-State Letters, 2004, 7, A167.	2.2	195
59	A revised mechanistic model for sodium insertion in hard carbons. Energy and Environmental Science, 2020, 13, 3469-3479.	30.8	195
60	Solid Electrolyte Interphase Growth and Capacity Loss in Silicon Electrodes. Journal of the American Chemical Society, 2016, 138, 7918-7931.	13.7	189
61	Phosphate adsorption on the iron oxyhydroxides goethite (Î±-FeOOH), akaganeite (Î²-FeOOH), and lepidocrocite (Î³-FeOOH): a 31P NMR Study. Energy and Environmental Science, 2011, 4, 4298.	30.8	187
62	Short- and Long-Range Order in the Positive Electrode Material, Li(NiMn)0.5O2:Â A Joint X-ray and Neutron Diffraction, Pair Distribution Function Analysis and NMR Study. Journal of the American Chemical Society, 2005, 127, 7529-7537.	13.7	185
63	In Situ X-ray Diffraction and Solid-State NMR Study of the Fluorination of Î³-Al2O3with HCF2Cl. Journal of the American Chemical Society, 2001, 123, 1694-1702.	13.7	184
64	NMR Study of Ion Dynamics and Charge Storage in Ionic Liquid Supercapacitors. Journal of the American Chemical Society, 2015, 137, 7231-7242.	13.7	182
65	CO₂ Capture at Medium to High Temperature Using Solid Oxide-Based Sorbents: Fundamental Aspects, Mechanistic Insights, and Recent Advances. Chemical Reviews, 2021, 121, 12681-12745.	47.7	177
66	Identifying the Structural Basis for the Increased Stability of the Solid Electrolyte Interphase Formed on Silicon with the Additive Fluoroethylene Carbonate. Journal of the American Chemical Society, 2017, 139, 14992-15004.	13.7	176
67	Tracking Sodium-Antimonide Phase Transformations in Sodium-Ion Anodes: Insights from Operando Pair Distribution Function Analysis and Solid-State NMR Spectroscopy. Journal of the American Chemical Society, 2016, 138, 2352-2365.	13.7	175
68	Phase, structural and microstructural investigations of plasma sprayed hydroxyapatite coatings. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 360, 70-84.	5.6	174
69	How Strong Is the Hydrogen Bond in Hybrid Perovskites?. Journal of Physical Chemistry Letters, 2017, 8, 6154-6159.	4.6	174
70	<i>In Situ</i> Solid-State NMR Spectroscopy of Electrochemical Cells: Batteries, Supercapacitors, and Fuel Cells. Accounts of Chemical Research, 2013, 46, 1952-1963.	15.6	170
71	Realistic Atomistic Structure of Amorphous Silicon from Machine-Learning-Driven Molecular Dynamics. Journal of Physical Chemistry Letters, 2018, 9, 2879-2885.	4.6	170
72	Investigation of the Local Structure of the LiNi[sub 0.5]Mn[sub 0.5]O[sub 2] Cathode Material during Electrochemical Cycling by X-Ray Absorption and NMR Spectroscopy. Electrochemical and Solid-State Letters, 2002, 5, A263.	2.2	169

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73	Comprehensive Study of the CuF₂ Conversion Reaction Mechanism in a Lithium Ion Battery. Journal of Physical Chemistry C, 2014, 118, 15169-15184.	3.1	168
74	Structural insights into the formation and voltage degradation of lithium- and manganese-rich layered oxides. Nature Communications, 2019, 10, 5365.	12.8	166
75	Rotational echo14N/13C/1H triple resonance solidâ€state nuclear magnetic resonance: A probe of13Câ€“14N internuclear distances. Journal of Chemical Physics, 1993, 98, 7711-7724.	3.0	163
76	Sidorenkite (Na₃MnPO₄CO₃): A New Intercalation Cathode Material for Na-Ion Batteries. Chemistry of Materials, 2013, 25, 2777-2786.	6.7	163
77	Cation Ordering in Li[Ni_{<i>x</i>}Mn_{<i>x</i>}Co_(1â€“2<i>x</i>)]O₂-Layered Cathode Materials: A Nuclear Magnetic Resonance (NMR), Pair Distribution Function, X-ray Absorption Spectroscopy, and Electrochemical Study. Chemistry of Materials, 2007, 19, 6277-6289.	6.7	161
78	Electrolyte Oxidation Pathways in Lithium-Ion Batteries. Journal of the American Chemical Society, 2020, 142, 15058-15074.	13.7	160
79	Noninvasive <i>In Situ</i> NMR Study of â€œDead Lithiumâ€•Formation and Lithium Corrosion in Full-Cell Lithium Metal Batteries. Journal of the American Chemical Society, 2020, 142, 20814-20827.	13.7	160
80	Local Structure and Dynamics in the Na Ion Battery Positive Electrode Material Na₃V₂(PO₄)₂F₃. Chemistry of Materials, 2014, 26, 2513-2521.	6.7	156
81	Cation Migration in Zeolites:â€‰ An in Situ Powder Diffraction and MAS NMR Study of the Structure of Zeolite Cs(Na)âˆ’Y during Dehydration. Journal of Physical Chemistry B, 1998, 102, 839-856.	2.6	155
82	Understanding the NMR shifts in paramagnetic transition metal oxides using density functional theory calculations. Physical Review B, 2003, 67, .	3.2	154
83	Combined MAS NMR and X-ray Powder Diffraction Structural Characterization of Hydrofluorocarbon-134 Adsorbed on Zeolite NaY:Â Observation of Cation Migration and Strong Sorbateâˆ’Cation Interactions. Journal of the American Chemical Society, 1997, 119, 1981-1989.	13.7	153
84	Molten Salt Synthesis and High Rate Performance of the â€œDesertâ€Roseâ€•form of LiCoO₂. Advanced Materials, 2008, 20, 2206-2210.	21.0	153
85	Phase Behavior during Electrochemical Cycling of Niâ€Rich Cathode Materials for Liâ€Ion Batteries. Advanced Energy Materials, 2021, 11, 2003404.	19.5	153
86	In Situ NMR Spectroscopy of Supercapacitors: Insight into the Charge Storage Mechanism. Journal of the American Chemical Society, 2013, 135, 18968-18980.	13.7	152
87	Liquid phase aldol condensation reactions with MgOâ€“ZrO2 and shape-selective nitrogen-substituted NaY. Applied Catalysis A: General, 2011, 392, 57-68.	4.3	149
88	Voltage Dependent Solid Electrolyte Interphase Formation in Silicon Electrodes: Monitoring the Formation of Organic Decomposition Products. Chemistry of Materials, 2016, 28, 385-398.	6.7	149
89	Real-Time NMR Studies of Electrochemical Double-Layer Capacitors. Journal of the American Chemical Society, 2011, 133, 19270-19273.	13.7	145
90	Dynamic Nuclear Polarization Enhanced Natural Abundance ¹⁷O Spectroscopy. Journal of the American Chemical Society, 2013, 135, 2975-2978.	13.7	142

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91	A Simple Molecular Design Strategy for Delayed Fluorescence toward 1000 nm. Journal of the American Chemical Society, 2019, 141, 18390-18394.	13.7	137
92	Unraveling the Reaction Mechanisms of SiO Anodes for Li-Ion Batteries by Combining <i>in Situ</i> ⁷Li and <i>ex Situ</i> ⁷Li/²⁹Si Solid-State NMR Spectroscopy. Journal of the American Chemical Society, 2019, 141, 7014-7027.	13.7	136
93	Ionic and Electronic Conduction in TiNb₂O₇. Journal of the American Chemical Society, 2019, 141, 16706-16725.	13.7	134
94	Linking Local Environments and Hyperfine Shifts: A Combined Experimental and Theoretical³¹P and⁷Li Solid-State NMR Study of Paramagnetic Fe(III) Phosphates. Journal of the American Chemical Society, 2010, 132, 16825-16840.	13.7	133
95	Three-dimensional characterization of electrodeposited lithium microstructures using synchrotron X-ray phase contrast imaging. Chemical Communications, 2015, 51, 266-268.	4.1	133
96	Lithium and Deuterium NMR Studies of Acid-Leached Layered Lithium Manganese Oxides. Chemistry of Materials, 2002, 14, 5109-5115.	6.7	132
97	Electrochemical Activity of Li in the Transition-Metal Sites of O3 Li[Li[sub (1âˆ'2x)/3]Mn[sub (2âˆ'x)/3]Ni[sub x]]O[sub 2]. Electrochemical and Solid-State Letters, 2004, 7, A290.	2.2	132
98	Ab Initio Structure Search and in Situ ⁷Li NMR Studies of Discharge Products in the Liâ€"S Battery System. Journal of the American Chemical Society, 2014, 136, 16368-16377.	13.7	132
99	In situ NMR metrology reveals reaction mechanisms in redox flow batteries. Nature, 2020, 579, 224-228.	27.8	132
100	High Field Multinuclear NMR Investigation of the SEI Layer in Lithium Rechargeable Batteries. Electrochemical and Solid-State Letters, 2005, 8, A145.	2.2	131
101	Similarities in 2- and 6-Line Ferrihydrite Based on Pair Distribution Function Analysis of X-ray Total Scattering. Chemistry of Materials, 2007, 19, 1489-1496.	6.7	131
102	Investigating Li Microstructure Formation on Li Anodes for Lithium Batteries by in Situ ⁶Li/⁷Li NMR and SEM. Journal of Physical Chemistry C, 2015, 119, 16443-16451.	3.1	130
103	Studies of rare-earth stannates by trin-119 MAS NMR. The use of paramagnetic shift probes in the solid state. Journal of the American Chemical Society, 1989, 111, 505-511.	13.7	129
104	Layered Li<i>_x</i>Ni<i>_y</i>Mn<i>_y</i>Co₁₋₂<i>_y</i>O₂ Cathodes for Lithium Ion Batteries:â€‰ Understanding Local Structure via Magnetic Properties. Chemistry of Materials, 2007, 19, 4682-4693.	6.7	127
105	Multiple Redox Modes in the Reversible Lithiation of High-Capacity, Peierls-Distorted Vanadium Sulfide. Journal of the American Chemical Society, 2015, 137, 8499-8508.	13.7	127
106	Investigation of the Conversion Reaction Mechanisms for Binary Copper(II) Compounds by Solid-State NMR Spectroscopy and X-ray Diffraction. Chemistry of Materials, 2009, 21, 3162-3176.	6.7	126
107	2021 roadmap for sodium-ion batteries. JPhys Energy, 2021, 3, 031503.	5.3	125
108	Comprehensive Insights into the Structural and Chemical Changes in Mixed-Anion FeOF Electrodes by Using Operando PDF and NMR Spectroscopy. Journal of the American Chemical Society, 2013, 135, 4070-4078.	13.7	124

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109	6Li MAS NMR Studies of the Local Structure and Electrochemical Properties of Cr-doped Lithium Manganese and Lithium Cobalt Oxide Cathode Materials for Lithium-Ion Batteries. Chemistry of Materials, 2002, 14, 2289-2299.	6.7	122
110	Watching Nanoparticles Grow:â€‰ The Mechanism and Kinetics for the Formation of TiO₂-Supported Platinum Nanoparticles. Journal of the American Chemical Society, 2007, 129, 13822-13824.	13.7	122
111	Spin-Transfer Pathways in Paramagnetic Lithium Transition-Metal Phosphates from Combined Broadband Isotropic Solid-State MAS NMR Spectroscopy and DFT Calculations. Journal of the American Chemical Society, 2012, 134, 17178-17185.	13.7	122
112	Understanding the Crystal Structure of Layered LiNi[sub 0.5]Mn[sub 0.5]O[sub 2] by Electron Diffraction and Powder Diffraction Simulation. Electrochemical and Solid-State Letters, 2004, 7, A155.	2.2	121
113	Changes in the Cation Ordering of Layered O3 LixNi0.5Mn0.5O2during Electrochemical Cycling to High Voltages:Â An Electron Diffraction Study. Chemistry of Materials, 2007, 19, 2551-2565.	6.7	121
114	Investigating Sodium Storage Mechanisms in Tin Anodes: A Combined Pair Distribution Function Analysis, Density Functional Theory, and Solid-State NMR Approach. Journal of the American Chemical Society, 2017, 139, 7273-7286.	13.7	121
115	Operando optical tracking of single-particle ion dynamics in batteries. Nature, 2021, 594, 522-528.	27.8	121
116	Isotropic High Field NMR Spectra of Li-Ion Battery Materials with Anisotropy >1 MHz. Journal of the American Chemical Society, 2012, 134, 1898-1901.	13.7	117
117	In situ NMR of lithium ion batteries: Bulk susceptibility effects and practical considerations. Solid State Nuclear Magnetic Resonance, 2012, 42, 62-70.	2.3	117
118	Detecting Different Oxygen-Ion Jump Pathways in Bi2WO6with 1- and 2-Dimensional17O MAS NMR Spectroscopy. Chemistry of Materials, 2005, 17, 1952-1958.	6.7	115
119	Stabilized tilted-octahedra halide perovskites inhibit local formation of performance-limiting phases. Science, 2021, 374, 1598-1605.	12.6	115
120	Combined Neutron Diffraction, NMR, and Electrochemical Investigation of the Layered-to-Spinel Transformation in LiMnO2. Chemistry of Materials, 2004, 16, 3106-3118.	6.7	113
121	Density Functional Theory-Based Bond Pathway Decompositions of Hyperfine Shifts: Equipping Solid-State NMR to Characterize Atomic Environments in Paramagnetic Materials. Chemistry of Materials, 2013, 25, 1723-1734.	6.7	113
122	Detection of BrÃ¸nsted acid sites in zeolite HY with high-field 17O-MAS-NMR techniques. Nature Materials, 2005, 4, 216-219.	27.5	110
123	Ring Current Effects: Factors Affecting the NMR Chemical Shift of Molecules Adsorbed on Porous Carbons. Journal of Physical Chemistry C, 2014, 118, 7508-7514.	3.1	110
124	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
125	Characterization of Extra-Framework Cation Positions in Zeolites NaX and NaY with Very Fast23Na MAS and Multiple Quantum MAS NMR Spectroscopy. Journal of the American Chemical Society, 2000, 122, 9768-9780.	13.7	109
126	Crystal Structures, Local Atomic Environments, and Ion Diffusion Mechanisms of Scandium-Substituted Sodium Superionic Conductor (NASICON) Solid Electrolytes. Chemistry of Materials, 2018, 30, 2618-2630.	6.7	109

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127	Revisiting metal fluorides as lithium-ion battery cathodes. Nature Materials, 2021, 20, 841-850.	27.5	109
128	Combined NMR and XAS Study on Local Environments and Electronic Structures of Electrochemically Li-Ion Deintercalated Li[sub 1âˆ’x]Co[sub 1/3]Ni[sub 1/3]Mn[sub 1/3]O[sub 2] Electrode System. Electrochemical and Solid-State Letters, 2004, 7, A53.	2.2	108
129	Yttrium-89 magic angle spinning NMR study of rare-earth pyrochlores: paramagnetic shifts in the solid state. Journal of the American Chemical Society, 1990, 112, 4670-4675.	13.7	107
130	Three-dimensional localization of nanoscale battery reactions using soft X-ray tomography. Nature Communications, 2018, 9, 921.	12.8	107
131	The effects of moderate thermal treatments under air on LiFePO4-based nano powders. Journal of Materials Chemistry, 2009, 19, 3979.	6.7	106
132	Direct evidence for high Na⁺mobility and high voltage structural processes in P2-Na_x[Li_yNi_zMn_{1âˆ’yâˆ’z}]O₂(x, y, z â‰ 1) cathodes from solid-state NMR and DFT calculations. Journal of Materials Chemistry A, 2017, 5, 4129-4143.	10.3	105
133	Energy transfer, proton transfer and electron transfer reactions within zeolites. Chemical Communications, 1998, , 2411-2424.	4.1	104
134	Titanium Niobium Oxide: From Discovery to Application in Fast-Charging Lithium-Ion Batteries. Chemistry of Materials, 2021, 33, 4-18.	6.7	104
135	Identification of Cation Clustering in Mgâ€“Al Layered Double Hydroxides Using Multinuclear Solid State Nuclear Magnetic Resonance Spectroscopy. Chemistry of Materials, 2012, 24, 2449-2461.	6.7	103
136	Ordered and Disordered Polymorphs of Na(Ni_{2/3}Sb_{1/3})O₂: Honeycomb-Ordered Cathodes for Na-Ion Batteries. Chemistry of Materials, 2015, 27, 2387-2399.	6.7	103
137	Electronic Spin Transition in Nanosize Stoichiometric Lithium Cobalt Oxide. Journal of the American Chemical Society, 2012, 134, 6096-6099.	13.7	102
138	Crystal structure changes of LiMn0.5Ni0.5O2 cathode materials during charge and discharge studied by synchrotron based in situ XRD. Electrochemistry Communications, 2002, 4, 649-654.	4.7	101
139	Surface modification of fluorinated aluminas: Application of solid state NMR spectroscopy to the study of acidity and surface structure. Journal of Catalysis, 2004, 224, 69-79.	6.2	101
140	Mg(PF₆)₂-Based Electrolyte Systems: Understanding Electrolyteâ€“Electrode Interactions for the Development of Mg-Ion Batteries. Journal of the American Chemical Society, 2016, 138, 8682-8685.	13.7	101
141	The detection of weak heteronuclear coupling between spin 1 and spin nuclei in MAS NMR; 14N/13C/1H triple resonance experiments. Chemical Physics Letters, 1992, 192, 379-385.	2.6	100
142	Lithium MAS NMR studies of cathode materials for lithium-ion batteries. Solid State Sciences, 2003, 5, 883-894.	3.2	100
143	Copperâ€Catalyzed Crossâ€Coupling of Functionalized Alkyl Halides and Tosylates with Secondary and Tertiary Alkyl Grignard Reagents. Angewandte Chemie - International Edition, 2012, 51, 9110-9113.	13.8	99
144	Dependence on Crystal Size of the Nanoscale Chemical Phase Distribution and Fracture in Li_{<i>x</i>}FePO₄. Nano Letters, 2015, 15, 4282-4288.	9.1	99

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145	⁷Li NMR Chemical Shift Imaging To Detect Microstructural Growth of Lithium in All-Solid-State Batteries. Chemistry of Materials, 2019, 31, 2762-2769.	6.7	97
146	Nonequilibrium structure of Zn2SnO4 spinel nanoparticles. Journal of Materials Chemistry, 2012, 22, 3117.	6.7	96
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