Riqiang Fu

List of Publications by Year
in descending order

100	4,100	117571	123376
papers	citations	34 h-index	61 g-index

103	103	103	4033
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Histidines, heart of the hydrogen ion channel from influenza A virus: Toward an understanding of conductance and proton selectivity. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 6865-6870.	3.3	236
2	Li-rich cathodes for rechargeable Li-based batteries: reaction mechanisms and advanced characterization techniques. Energy and Environmental Science, 2020, 13, 4450-4497.	15.6	219
3	The stability of P2-layered sodium transition metal oxides in ambient atmospheres. Nature Communications, 2020, 11, 3544.	5.8	204
4	Insights into the Effects of Zinc Doping on Structural Phase Transition of P2-Type Sodium Nickel Manganese Oxide Cathodes for High-Energy Sodium Ion Batteries. ACS Applied Materials & Interfaces, 2016, 8, 22227-22237.	4.0	177
5	Backbone Structure of the Amantadine-Blocked Trans-Membrane Domain M2 Proton Channel from Influenza A Virus. Biophysical Journal, 2007, 92, 4335-4343.	0.2	175
6	Carbon-13 chemical shift anisotropies of solid amino acids. Magnetic Resonance in Chemistry, 1993, 31, 699-704.	1.1	146
7	Exploring Highly Reversible 1.5-Electron Reactions (V³⁺/V⁴⁺/V⁵⁺) in Na₃VCr(PO₄)₃ Cathode for Sodium-Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 43632-43639.	4.0	134
8	P2â€Na_{0.67}Al_xMn_{1â^'x}O₂: Costâ€Effective, Stable and Highâ€Rate Sodium Electrodes by Suppressing Phase Transitions and Enhancing Sodium Cation Mobility. Angewandte Chemie - International Edition, 2019, 58, 18086-18095.	7.2	127
9	Engineering Na+-layer spacings to stabilize Mn-based layered cathodes for sodium-ion batteries. Nature Communications, 2021, 12, 4903.	5.8	109
10	SOLID-STATE NUCLEAR MAGNETIC RESONANCE INVESTIGATION OF PROTEIN AND POLYPEPTIDE STRUCTURE. Annual Review of Biophysics and Biomolecular Structure, 1999, 28, 235-268.	18.3	105
11	Recoupling of heteronuclear dipolar interactions in solid state magic-angle spinning NMR by simultaneous frequency and amplitude modulation. Chemical Physics Letters, 1997, 272, 361-369.	1.2	96
12	Visualizing the growth process of sodium microstructures in sodium batteries by in-situ 23Na MRI and NMR spectroscopy. Nature Nanotechnology, 2020, 15, 883-890.	15.6	95
13	Nuclease activity gives an edge to hostâ€defense peptide piscidin 3 over piscidin 1, rendering it more effective against persisters and biofilms. FEBS Journal, 2017, 284, 3662-3683.	2.2	86
14	M2 Proton Channel Structural Validation from Fullâ€Length Protein Samples in Synthetic Bilayers and E.â€...coli Membranes. Angewandte Chemie - International Edition, 2012, 51, 8383-8386.	7.2	84
15	Quantitatively analyzing the failure processes of rechargeable Li metal batteries. Science Advances, 2021, 7, eabj3423.	4.7	84
16	In Situ Structural Characterization of a Recombinant Protein in Native Escherichia coli Membranes with Solid-State Magic-Angle-Spinning NMR. Journal of the American Chemical Society, 2011, 133, 12370-12373.	6.6	83
17	The synergistic effects of Al and Te on the structure and Li⁺-mobility of garnet-type solid electrolytes. Journal of Materials Chemistry A, 2014, 2, 20271-20279.	5.2	83
18	Identifying the Structural Evolution of the Sodium Ion Battery Na₂FePO₄F Cathode. Angewandte Chemie - International Edition, 2018, 57, 11918-11923.	7.2	79

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19	High-Resolution Structures and Orientations of Antimicrobial Peptides Piscidin 1 and Piscidin 3 in Fluid Bilayers Reveal Tilting, Kinking, and Bilayer Immersion. Journal of the American Chemical Society, 2014, 136, 3491-3504.	6.6	78
20	Broadband decoupling in NMR with frequency-modulated â€˜chirpâ€™ pulses. Chemical Physics Letters, 1995, 245, 415-420.	1.2	76
21	Proton NMR and Dynamic Studies of Hydrous Ruthenium Oxide. Journal of Physical Chemistry B, 2002, 106, 3592-3596.	1.2	76
22	The Chemical and Dynamical Influence of the Anti-Viral Drug Amantadine on the M2 Proton Channel Transmembrane Domain. Biophysical Journal, 2007, 93, 276-283.	0.2	72
23	Structure and Function in Antimicrobial Piscidins: Histidine Position, Directionality of Membrane Insertion, and pH-Dependent Permeabilization. Journal of the American Chemical Society, 2019, 141, 9837-9853.	6.6	60
24	Mechanism of Initiation in the Phillips Ethylene Polymerization Catalyst: Redox Processes Leading to the Active Site. ACS Catalysis, 2015, 5, 5574-5583.	5.5	57
25	Simulations of Membrane-Disrupting Peptides II: AMP Piscidin 1 Favors Surface Defects over Pores. Biophysical Journal, 2016, 111, 1258-1266.	0.2	56
26	Al and Fe-containing Mn-based layered cathode with controlled vacancies for high-rate sodium ion batteries. Nano Energy, 2020, 76, 104997.	8.2	54
27	Dynamic Short Hydrogen Bonds in Histidine Tetrad of Full-Length M2 Proton Channel Reveal Tetrameric Structural Heterogeneity and Functional Mechanism. Structure, 2015, 23, 2300-2308.	1.6	53
28	Towards quantitative measurements in solid-state CPMAS NMR: A Leeâ€“Goldburg frequency modulated cross-polarization scheme. Journal of Magnetic Resonance, 2004, 168, 8-17.	1.2	50
29	Solid-State ¹⁹F NMR Spectroscopy Reveals That Trp₄₁ Participates in the Gating Mechanism of the M2 Proton Channel of Influenza A Virus. Journal of the American Chemical Society, 2008, 130, 918-924.	6.6	47
30	Complementary Effects of Host Defense Peptides Piscidin 1 and Piscidin 3 on DNA and Lipid Membranes: Biophysical Insights into Contrasting Biological Activities. Journal of Physical Chemistry B, 2015, 119, 15235-15246.	1.2	46
31	High Resolution Heteronuclear Correlation NMR Spectroscopy of an Antimicrobial Peptide in Aligned Lipid Bilayers: Peptideâ^'Water Interactions at the Waterâ^'Bilayer Interface. Journal of the American Chemical Society, 2009, 131, 10830-10831.	6.6	43
32	Frequency-modulated cross-polarization for fast magic angle spinning NMR at high fields: relaxing the Hartmann-Hahn condition. Chemical Physics Letters, 1997, 264, 63-69.	1.2	37
33	High-precision31P chemical shift measurements on KH2PO4-type crystals: role of electronic instability in the ferroelectric transition mechanism. Journal of Physics Condensed Matter, 2001, 13, L231-L237.	0.7	37
34	Structural Influences: Cholesterol, Drug, and Proton Binding to Full-Length Influenza A M2 Protein. Biophysical Journal, 2016, 110, 1391-1399.	0.2	37
35	Understanding Ferroelectricity in the Pb-Free Perovskite-Like Metalâ€“Organic Framework [(CH₃)₂NH₂]Zn(HCOO)₃: Dielectric, 2D NMR, and Theoretical Studies. Journal of Physical Chemistry C, 2017, 121, 6314-6322.	1.5	36
36	The Effect of RF Inhomogeneity on Heteronuclear Dipolar Recoupling in Solid State NMR: Practical Performance of SFAM and REDOR. Journal of Magnetic Resonance, 2001, 152, 227-233.	1.2	35

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37	Solidâ€State NMR and MRI Spectroscopy for Li/Na Batteries: Materials, Interface, and In Situ Characterization. Advanced Materials, 2021, 33, e2005878.	11.1	35
38	Mechanism of Initiation in the Phillips Ethylene Polymerization Catalyst: Ethylene Activation by Cr(II) and the Structure of the Resulting Active Site. ACS Catalysis, 2017, 7, 7442-7455.	5.5	34
39	Quantitative cross-polarization NMR spectroscopy in uniformly 13C-labeled solids. Chemical Physics Letters, 2006, 421, 356-360.	1.2	33
40	Analysis of RF heating and sample stability in aligned static solid-state NMR spectroscopy. Journal of Magnetic Resonance, 2006, 180, 51-57.	1.2	33
41	A large volume flat coil probe for oriented membrane proteins. Journal of Magnetic Resonance, 2006, 181, 9-20.	1.2	33
42	Tuning Oxygen Redox Reaction through the Inductive Effect with Proton Insertion in Li-Rich Oxides. ACS Applied Materials & Interfaces, 2020, 12, 7277-7284.	4.0	33
43	Observation of the Imidazole-Imidazolium Hydrogen Bonds Responsible for Selective Proton Conductance in the Influenza A M2 Channel. Journal of the American Chemical Society, 2020, 142, 2115-2119.	6.6	29
44	Rippled Î²-Sheet Formation by an Amyloid-Î² Fragment Indicates Expanded Scope of Sequence Space for Enantiomeric Î²-Sheet Peptide Coassembly. Molecules, 2019, 24, 1983.	1.7	27
45	Insight into Ion Diffusion Dynamics/Mechanisms and Electronic Structure of Highly Conductive Sodium-Rich Na_{3+x}La_xZr_{2â€“x}Si₂PO₁₂ (0 â‰¤ x â‰¤ 0.5) Solid-State Electrolytes. ACS Applied Materials & Interfaces, 2021, 13, 13132-13138.	4.0	27
46	Gating Mechanism of Aquaporin Z in Synthetic Bilayers and Native Membranes Revealed by Solid-State NMR Spectroscopy. Journal of the American Chemical Society, 2018, 140, 7885-7895.	6.6	26
47	The effect of Hartmannâ€“Hahn mismatching on polarization inversion spin exchange at the magic angle. Journal of Magnetic Resonance, 2002, 159, 167-174.	1.2	25
48	Distance-Selected Topochemical Dehydro-Dielsâ€“Alder Reaction of 1,4-Diphenylbutadiyne toward Crystalline Graphitic Nanoribbons. Journal of the American Chemical Society, 2020, 142, 17662-17669.	6.6	23
49	Identifying the Structural Evolution of the Sodium Ion Battery Na₂FePO₄F Cathode. Angewandte Chemie, 2018, 130, 12094-12099.	1.6	22
50	Cross-polarization schemes for peptide samples oriented in hydrated phospholipid bilayers. Journal of Magnetic Resonance, 2004, 168, 147-152.	1.2	20
51	Solid state NMR investigation of hydrous ruthenium oxide. Chemical Physics Letters, 2000, 331, 64-70.	1.2	19
52	Identifying inter-residue resonances in crowded 2D 13Câ€“13C chemical shift correlation spectra of membrane proteins by solid-state MAS NMR difference spectroscopy. Journal of Biomolecular NMR, 2013, 56, 265-273.	1.6	18
53	NMR Spin Locking of Proton Magnetization under a Frequency-Switched Leeâ€“Goldburg Pulse Sequence. Journal of Magnetic Resonance, 2002, 154, 130-135.	1.2	17
54	High-resolution heteronuclear correlation spectroscopy in solid state NMR of aligned samples. Journal of Magnetic Resonance, 2007, 188, 41-48.	1.2	17

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55	Unravelling the Fast Alkaliâ€Ion Dynamics in Paramagnetic Battery Materials Combined with NMR and Deepâ€Potential Molecular Dynamics Simulation. Angewandte Chemie - International Edition, 2021, 60, 12547-12553.	7.2	16
56	Differentiation of histidine tautomeric states using 15N selectively filtered 13C solid-state NMR spectroscopy. Journal of Magnetic Resonance, 2014, 245, 105-109.	1.2	15
57	Probing Hydronium Ion Histidine NH Exchange Rate Constants in the M2 Channel via Indirect Observation of Dipolar-Dephased ¹⁵N Signals in Magic-Angle-Spinning NMR. Journal of the American Chemical Society, 2016, 138, 15801-15804.	6.6	14
58	The host-defense peptide piscidin P1 reorganizes lipid domains in membranes and decreases activation energies in mechanosensitive ion channels. Journal of Biological Chemistry, 2019, 294, 18557-18570.	1.6	14
59	2-Fluorotyrosine is a valuable but understudied amino acid for protein-observed 19F NMR. Journal of Biomolecular NMR, 2020, 74, 61-69.	1.6	14
60	Characterization of Pt^{IV}-containing polyoxometalates by high-resolution solid-state ¹⁹⁵Pt and ⁵¹V NMR spectroscopy. New Journal of Chemistry, 2016, 40, 923-927.	1.4	13
61	Molecular dynamics of poly(l-lactide) biopolymer studied by wide-line solid-state 1H and 2H NMR spectroscopy. Solid State Nuclear Magnetic Resonance, 2006, 29, 258-266.	1.5	12
62	Simultaneous Supralinear Line-Narrowing and Sensitivity Enhancement at High Fields in Magic Angle Spinning NMR of Spin-1/2 Nuclei in Solids. Journal of the American Chemical Society, 2007, 129, 470-471.	6.6	12
63	Evidence from 900 MHz ¹H MAS NMR of Displacive Behavior of the Model Orderâ€“Disorder Antiferroelectric NH₄H₂AsO₄. Journal of Physical Chemistry C, 2015, 119, 5013-5019.	1.5	12
64	Internalization of Fluoride in Hydroxyapatite Nanoparticles. Environmental Science & Technology, 2021, 55, 2639-2651.	4.6	12
65	Surprising Rigidity of Functionally Important Water Molecules Buried in the Lipid Headgroup Region. Journal of the American Chemical Society, 2022, 144, 7881-7888.	6.6	12
66	Measurement of spin-lattice relaxation times of 13C in organic solids. Solid State Nuclear Magnetic Resonance, 1997, 7, 291-299.	1.5	11
67	Hahn-echoes from in solids by the stray-field method: prospects for imaging using Long Echo-Train Summation. Solid State Nuclear Magnetic Resonance, 1999, 14, 173-179.	1.5	10
68	High-Resolution7Li Solid-State NMR Study of LixV2O5Cathode Electrodes for Li-Rechargeable Batteries. Journal of Physical Chemistry B, 2003, 107, 9730-9735.	1.2	10
69	Increasing ¹³C CP-MAS NMR Resolution Using Single Crystals: Application to Model Octaethyl Porphyrins. Journal of Physical Chemistry B, 2012, 116, 9215-9222.	1.2	10
70	Gasâ€Phase Fluorination of Hexagonal Boron Nitride. Advanced Materials, 2021, 33, e2106084.	11.1	10
71	A machine learning protocol for revealing ion transport mechanisms from dynamic NMR shifts in paramagnetic battery materials. Chemical Science, 2022, 13, 7863-7872.	3.7	10
72	Dual-band selective double cross polarization for heteronuclear polarization transfer between dilute spins in solid-state MAS NMR. Journal of Magnetic Resonance, 2012, 217, 92-99.	1.2	9

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73	P2â€Na 0.67 Al x Mn 1â^' x O 2 : Costâ€Effective, Stable and Highâ€Rate Sodium Electrodes by Suppressing Phase Transitions and Enhancing Sodium Cation Mobility. Angewandte Chemie, 2019, 131, 18254-18263.	1.6	9
74	Probing the Dielectric Transition and Molecular Dynamics in the Metalâ€“Organic Framework [(CH₃)₂NH₂]Mg(HCOO)₃ Using High Resolution NMR. Journal of Physical Chemistry C, 2021, 125, 3441-3450.	1.5	9
75	Beyond Structural Biology to Functional Biology: Solid-State NMR Experiments and Strategies for Understanding the M2 Proton Channel Conductance. Journal of Physical Chemistry B, 2017, 121, 4799-4809.	1.2	7
76	Breaking the Backbone: Central Arginine Residues Induce Membrane Exit and Helix Distortions within a Dynamic Membrane Peptide. Journal of Physical Chemistry B, 2019, 123, 8034-8047.	1.2	7
77	Coordination of Redox Ions within a Membrane-Binding Peptide: A Tale of Aromatic Rings. Journal of Physical Chemistry Letters, 2021, 12, 4392-4399.	2.1	7
78	Measurement of 15Nâ€“1H bond lengths by rotational-echo double-resonance NMR spectroscopy. Chemical Physics Letters, 2003, 376, 62-67.	1.2	6
79	Efficient heteronuclear dipolar decoupling in NMR of static solid samples using phase-wiggled two-pulse phase modulation. Chemical Physics Letters, 2009, 483, 147-153.	1.2	6
80	Asymmetric simultaneous phase-inversion cross-polarization in solid-state MAS NMR: Relaxing selective polarization transfer condition between two dilute spins. Journal of Magnetic Resonance, 2014, 242, 214-219.	1.2	6
81	15N CSA tensors and 15Nâ€“1H dipolar couplings of protein hydrophobic core residues investigated by static solid-state NMR. Journal of Magnetic Resonance, 2015, 259, 225-231.	1.2	6
82	Revisiting spinâ€“lattice relaxation time measurements for dilute spins in high-resolution solid-state NMR spectroscopy. Journal of Magnetic Resonance, 2016, 268, 107-113.	1.2	6
83	Triple-pulse excitation: An efficient way for suppressing background signals and eliminating radio-frequency acoustic ringing in direct polarization NMR experiments. Journal of Magnetic Resonance, 2021, 332, 107067.	1.2	6
84	NMR of residual protons in partly deuterated anisotropic materials with phase-alternated decoupling of deuterium spins. Solid State Nuclear Magnetic Resonance, 1996, 5, 273-291.	1.5	5
85	13C Selective Polarization and Spin Diffusion in a Lipid Bilayer-Bound Polypeptide by Solid-State NMR. Journal of Magnetic Resonance, 1999, 139, 377-381.	1.2	5
86	Sr(ii)-UPRM-5 titanium silicate framework thermally induced contraction: in situ high temperature XRD and 29Si MAS NMR. Dalton Transactions, 2011, 40, 3547.	1.6	5
87	Transient NOE enhancement in solid-state MAS NMR of mobile systems. Journal of Magnetic Resonance, 2017, 284, 73-79.	1.2	5
88	Engineering spin Hamiltonians using multiple pulse sequences in solid state NMR spectroscopy. Journal of Magnetic Resonance, 2018, 294, 83-92.	1.2	5
89	Boosting sensitivity and suppressing artifacts via multi-acquisition in direct polarization NMR experiments with small flip-angle pulses. Journal of Magnetic Resonance, 2018, 293, 34-40.	1.2	4
90	De novo resonance assignment of the transmembrane domain of LR11/SorLA in E. coli membranes. Journal of Magnetic Resonance, 2020, 310, 106639.	1.2	4

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91	Detecting water-protein chemical exchange in membrane-bound proteins/peptides by solid-state NMR spectroscopy. Magnetic Resonance Letters, 2021, 1, 99-111.	0.7	4
92	Determination of the Apparent Crystal Structure of a Highly Faulted UPRM-5 Type Flexible Porous Titanium Silicate via a Polymorph Based Superposition Model, a Rietveld Refinement and a Pair Distribution Function. Journal of Physical Chemistry C, 2014, 118, 8859-8867.	1.5	3
93	NMR detection of dynamical processes in antiferroelectric nanoclusters during the order-disorder transition in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>NH</mml:mi><mml:mn>4</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">H</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi>AsO</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2015, 91, .	1.4	3
94	Revealing weak histidine 15N homonuclear scalar couplings using Solid-State Magic-Angle-Spinning NMR spectroscopy. Journal of Magnetic Resonance, 2020, 316, 106757.	1.2	3
95	Spin-echo based diagonal peak suppression in solid-state MAS NMR homonuclear chemical shift correlation spectra. Journal of Magnetic Resonance, 2018, 287, 91-98.	1.2	2
96	Anisotropic and Isotropic Chemical Shifts Perturbations from Solid State NMR Spectroscopy for Structural and Functional Biology. , 2018, , 505-519.		2
97	On the use of cross polarization in solid-state NMR: 1H spin-lock versus adiabatic demagnetization in the rotating frame. Magnetic Resonance Letters, 2022, 2, 147-158.	0.7	2
98	Combining NMR and molecular dynamics simulations for revealing the alkali-ion transport in solid-state battery materials. Current Opinion in Electrochemistry, 2022, 35, 101048.	2.5	1
99	Unravelling the Fast Alkaliâ€Ion Dynamics in Paramagnetic Battery Materials Combined with NMR and Deepâ€Potential Molecular Dynamics Simulation. Angewandte Chemie, 2021, 133, 12655-12661.	1.6	0
100	Anisotropic and Isotropic Chemical Shifts Perturbations from Solid State NMR Spectroscopy for Structural and Functional Biology. , 2017, , 1-15.		0