

Hans J Jakobsen

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Sensitivity-Enhanced Quadrupolar-Echo NMR of Half-Integer Quadrupolar Nuclei. Magnitudes and Relative Orientation of Chemical Shielding and Quadrupolar Coupling Tensors. <i>Journal of Physical Chemistry A</i> , 1997, 101, 8597-8606.	1.1	323
2	Characterization of calcium aluminate phases in cements by aluminum-27 MAS NMR spectroscopy. <i>Inorganic Chemistry</i> , 1993, 32, 1013-1027.	1.9	265
3	51V MAS NMR spectroscopy: determination of quadrupole and anisotropic shielding tensors, including the relative orientation of their principal-axis systems. <i>Chemical Physics Letters</i> , 1992, 188, 405-412.	1.2	155
4	QCPMG-MAS NMR of Half-Integer Quadrupolar Nuclei. <i>Journal of Magnetic Resonance</i> , 1998, 131, 144-147.	1.2	135
5	Magnitudes and relative orientation of vanadium-51 quadrupole coupling and anisotropic shielding tensors in metavanadates and potassium vanadium oxide (KV3O8) from vanadium-51 MAS NMR spectra. Sodium-23 quadrupole coupling parameters for .alpha.- and .beta.-NaVO3. <i>Journal of the American Chemical Society</i> , 1993, 115, 7351-7362.	6.6	104
6	51V Chemical Shielding and Quadrupole Coupling in Ortho- and Metavanadates from 51V MAS NMR Spectroscopy. <i>Inorganic Chemistry</i> , 1998, 37, 3083-3092.	1.9	76
7	A solid-state 14N magic-angle spinning NMR study of some amino acids. <i>Journal of Magnetic Resonance</i> , 2004, 166, 262-272.	1.2	70
8	High-field QCPMG-MAS NMR of half-integer quadrupolar nuclei with large quadrupole couplings. <i>Molecular Physics</i> , 1998, 95, 1185-1195.	0.8	68
9	14N MAS NMR Spectroscopy: The Nitrate Ion. <i>Journal of the American Chemical Society</i> , 2001, 123, 5098-5099.	6.6	68
10	A sink for methane on Mars? The answer is blowing in the wind. <i>Icarus</i> , 2014, 236, 24-27.	1.1	67
11	51V MAS NMR Investigation of 51V Quadrupole Coupling and Chemical Shift Anisotropy in Divalent Metal Pyrovanadates. <i>Journal of Physical Chemistry B</i> , 2001, 105, 420-429.	1.2	66
12	133Cs Chemical Shielding Anisotropies and Quadrupole Couplings from Magic-Angle Spinning NMR of Cesium Salts. <i>The Journal of Physical Chemistry</i> , 1996, 100, 14872-14881.	2.9	62
13	Molecular dynamics from 2H Quadrupolar Carr-Purcell-Meiboom-Gill solid-state NMR spectroscopy. <i>Chemical Physics Letters</i> , 1998, 292, 467-473.	1.2	57
14	Characterization of Divalent Metal Metavanadates by 51V Magic-Angle Spinning NMR Spectroscopy of the Central and Satellite Transitions. <i>Inorganic Chemistry</i> , 2000, 39, 2135-2145.	1.9	57
15	Magic-angle spinning NMR spectra of satellite transitions for quadrupolar nuclei in solids. <i>Journal of Magnetic Resonance</i> , 1989, 85, 173-180.	0.5	55
16	The Complete 51V MAS NMR Spectrum of Surface Vanadia Nanoparticles on Anatase (TiO2): Vanadia Surface Structure of a DeNOx Catalyst. <i>Journal of the American Chemical Society</i> , 2004, 126, 4926-4933.	6.6	51
17	Mixed-Anion and Mixed-Cation Borohydride KZn(BH ₄) ₂ Cl ₂ : Synthesis, Structure and Thermal Decomposition. <i>European Journal of Inorganic Chemistry</i> , 2010, 2010, 1608-1612.	1.0	48
18	SOLID-STATE 13 C AND 31 P NMR ANALYSIS OF URINARY STONES. <i>Journal of Urology</i> , 2000, 164, 856-863.	0.2	47

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19	Structure refinement of CsNO ₃ (II) by coupling of ¹⁴ N MAS NMR experiments with WIEN2k DFT calculations. <i>Chemical Physics Letters</i> , 2005, 402, 133-137.	1.2	40
20	Sensitivity enhancement in natural-abundance solid-state ³³ S MAS NMR spectroscopy employing adiabatic inversion pulses to the satellite transitions. <i>Journal of Magnetic Resonance</i> , 2008, 190, 316-326.	1.2	39
21	¹⁴ N MAS NMR Spectroscopy and Quadrupole Coupling Data in Characterization of the IV $\hat{a}t^{\prime}$ III Phase Transition in Ammonium Nitrate. <i>Journal of Physical Chemistry B</i> , 2002, 106, 3026-3032.	1.2	37
22	Combined Effect of Second-Order Quadrupole Coupling and Chemical Shielding Anisotropy on the Central Transition in MAS NMR of Quadrupolar Nuclei. ⁸⁷ Rb MAS NMR of RbClO ₄ . <i>The Journal of Physical Chemistry</i> , 1995, 99, 10731-10735.	2.9	35
23	Variable-Temperature ⁸⁷ Rb Magic-Angle Spinning NMR Spectroscopy of Inorganic Rubidium Salts. <i>Journal of Physical Chemistry A</i> , 1999, 103, 7958-7971.	1.1	35
24	Evaluation of ²⁷ Al and ⁵¹ V Electric Field Gradients and the Crystal Structure for Aluminum Orthovanadate (AlVO ₄) by Density Functional Theory Calculations. <i>Journal of Physical Chemistry B</i> , 2006, 110, 5975-5983.	1.2	34
25	Solid-state ¹⁴ N MAS NMR of ammonium ions as a spy to structural insights for ammonium salts. <i>Magnetic Resonance in Chemistry</i> , 2006, 44, 348-356.	1.1	34
26	Unusual observation of nitrogen chemical shift anisotropies in tetraalkylammonium halides by ¹⁴ N MAS NMR spectroscopy. <i>Solid State Nuclear Magnetic Resonance</i> , 2003, 24, 218-235.	1.5	27
27	A new goniometer design for single-crystal nuclear magnetic resonance spectroscopy. <i>Review of Scientific Instruments</i> , 1996, 67, 2130-2133.	0.6	26
28	Characterization of Mo(CO) ₆ by ⁹⁵ Mo Single-Crystal NMR Spectroscopy. <i>Journal of Physical Chemistry A</i> , 1999, 103, 9144-9149.	1.1	25
29	Long-term stability of rotor-controlled MAS frequencies to 0.1 Hz proved by ¹⁴ N MAS NMR experiments and simulations. <i>Journal of Magnetic Resonance</i> , 2007, 185, 159-163.	1.2	25
30	Solid-state ²⁹ Si MAS NMR studies of illite and illite-smectite from shale. <i>American Mineralogist</i> , 1999, 84, 1433-1438.	0.9	24
31	Crystal structure of $\tilde{A}\tilde{z}\tilde{A}\pm$ -Mg ₂ V ₂ O ₇ from synchrotron X-ray powder diffraction and characterization by ⁵¹ V MAS NMR spectroscopy. <i>Dalton Transactions RSC</i> , 2001, , 3214-3218.	2.3	24
32	Probing Crystal Structures and Transformation Reactions of Ammonium Molybdates by ¹⁴ N MAS NMR Spectroscopy. <i>Inorganic Chemistry</i> , 2006, 45, 10873-10881.	1.9	24
33	Natural abundance proton-coupled ¹⁵ N NMR spectra of pyridines observed from proton polarization transfer experiments. <i>Magnetic Resonance in Chemistry</i> , 1981, 17, 290-295.	0.7	22
34	Characterization of the Two Rubidium Sites in Rb ₂ CrO ₄ by ⁸⁷ Rb Single-Crystal NMR. <i>Journal of Physical Chemistry B</i> , 1997, 101, 8955-8958.	1.2	21
35	A two-axis goniometer for sensitivity enhancement in single-crystal nuclear magnetic resonance spectroscopy. <i>Review of Scientific Instruments</i> , 1999, 70, 1771-1779.	0.6	21
36	² H chemical shift anisotropies from high-field ² H MAS NMR spectroscopy. <i>Journal of Magnetic Resonance</i> , 2003, 165, 282-292.	1.2	20

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37	Determination of nitrogen chemical shift anisotropy from the second-order cross-term in ^{14}N MAS NMR spectroscopy. <i>Chemical Physics Letters</i> , 2003, 377, 426-432.	1.2	19
38	New opportunities in acquisition and analysis of natural abundance complex solid-state ^{33}S MAS NMR spectra: $(\text{CH}_3\text{NH}_3)_2\text{WS}_4$. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 6981.	1.3	19
39	Satellite transitions in natural abundance solid-state ^{33}S MAS NMR of alums: Sign change with zero-crossing of CQ in a variable temperature study. <i>Journal of Magnetic Resonance</i> , 2006, 180, 170-177.	1.2	18
40	^{23}Na Magic-angle spinning nuclear magnetic resonance of central and satellite transitions in the characterization of the anhydrous, dihydrate, and mixed phases of sodium molybdate and tungstate. <i>Solid State Nuclear Magnetic Resonance</i> , 1994, 3, 29-38.	1.5	17
41	^{51}V -VO $_2$ a V(IV) or a mixed-valence V(III)-V(V) oxide studied by ^{51}V MAS NMR spectroscopy. <i>Chemical Physics Letters</i> , 2002, 356, 73-78.	1.2	17
42	Advancements in natural abundance solid-state ^{33}S MAS NMR: characterization of transition-metal M-S bonds in ammonium tetrathiomellates. <i>Chemical Communications</i> , 2007, , 1629-1631.	2.2	17
43	Phase Transitions in KNO_3 Studied by Variable-Temperature ^{15}N Magic-Angle Spinning NMR Spectroscopy. <i>Journal of Solid State Chemistry</i> , 1999, 145, 10-14.	1.4	16
44	^{59}Co Chemical Shift Anisotropy and Quadrupole Coupling for $\text{K}_3\text{Co}(\text{CN})_6$ from MQMAS and MAS NMR Spectroscopy. <i>Solid State Nuclear Magnetic Resonance</i> , 2001, 20, 23-34.	1.5	15
45	^{29}Si cross-polarization magic-angle spinning NMR spectroscopy: an efficient tool for quantification of thaumasite in cement-based materials. <i>Cement and Concrete Composites</i> , 2003, 25, 823-829.	4.6	14
46	Direct observation of ^{17}O - $^{185}/^{187}\text{Re}$ 1J-coupling in perhenates by solid-state ^{17}O VT MAS NMR: Temperature and self-decoupling effects. <i>Journal of Magnetic Resonance</i> , 2013, 230, 98-110.	1.2	14
47	A strategy for acquisition and analysis of complex natural abundance ^{33}S solid-state NMR spectra of a disordered tetrathio transition-metal anion. <i>Journal of Magnetic Resonance</i> , 2010, 202, 173-179.	1.2	12
48	Structure and Dynamics of Hydrated Surface Species on Alumina-Boria Catalysts and Their Precursors from ^1H , ^2H , ^{11}B , and ^{27}Al MAS NMR Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2009, 113, 2475-2486.	1.5	11
49	Site Preferences of NH_4^+ in Its Solid Solutions with Cs_2WS_4 and Rb_2WS_4 from Multinuclear Solid-State MAS NMR. <i>Inorganic Chemistry</i> , 2009, 48, 1787-1789.	1.9	11
50	Solid-state ^{51}V MAS NMR spectroscopy determines component concentration and crystal phase in co-crystallised mixtures of vanadium complexes. <i>CrystEngComm</i> , 2010, 12, 2826.	1.3	11
51	Quantitative Dynamics and Structure for Crystalline Cs_2WO_4 and KMnO_4 Determined from High-Field ^{17}O Variable-Temperature MAS NMR Experiments. <i>Journal of Physical Chemistry C</i> , 2014, 118, 20639-20646.	1.5	11
52	NMR and EPR Studies of Free-Radical Intermediates from Experiments Mimicking the Winds on Mars: A Sink for Methane and Other Gases. <i>Journal of Physical Chemistry C</i> , 2016, 120, 26138-26149.	1.5	11
53	Synthesis of ^{17}O -Labeled Cs_2WO_4 and Its Ambient- and Low-Temperature Solid-State ^{17}O MAS NMR Spectra. <i>Inorganic Chemistry</i> , 2011, 50, 7676-7684.	1.9	10
54	A natural abundance ^{15}N NMR investigation of bilirubin IX- β . <i>Magnetic Resonance in Chemistry</i> , 1984, 22, 668-670.	0.7	9

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55	High-Field ^{17}O MAS NMR Reveals ^{17}O (17O-127I) with its Sign and the NMR Crystallography of the Scheelite Structures for NaIO_4 and KIO_4 . <i>Journal of Physical Chemistry C</i> , 2015, , 150612155518000.	1.5	9
56	Natural abundance solid-state ^{95}Mo MAS NMR of MoS_2 reveals precise ^{95}Mo anisotropic parameters from its central and satellite transitions. <i>Chemical Communications</i> , 2010, 46, 2103.	2.2	8
57	Experimental aspects in acquisition of wide bandwidth solid-state MAS NMR spectra of low- γ nuclei with different opportunities on two commercial NMR spectrometers. <i>Journal of Magnetic Resonance</i> , 2011, 211, 195-206.	1.2	7
58	Resolving multiple ^{27}Al sites in AlVO_4 by ^{27}Al MAS NMR spectroscopy at 21.15 Tesla. <i>Chemical Communications</i> , 2001, , 2690-2691.	2.2	6
59	Magic-angle spinning solid-state multinuclear NMR on low-field instrumentation. <i>Journal of Magnetic Resonance</i> , 2014, 238, 20-25.	1.2	6
60	Effects of T_2 -relaxation in MAS NMR spectra of the satellite transitions for quadrupolar nuclei: a ^{27}Al MAS and single-crystal NMR study of alum $\text{KAl}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$. <i>Journal of Magnetic Resonance</i> , 2005, 173, 209-217.	1.2	5
61	Low-Temperature ^{23}Na MAS NMR Reveals Dynamic Effects and Compositions for the Large and Small Channels in the Zeolite-Like Ge-Framework of $\text{Na}^x\text{Ge}_3\text{Z}$ Materials. <i>Journal of Physical Chemistry C</i> , 2014, 118, 28890-28897.	1.5	4
62	Dynamic Solid-State NMR Experiments Reveal Structural Changes for a Methyl Silicate Nanostructure on Deuterium Substitution. <i>Journal of Physical Chemistry C</i> , 2017, 121, 26507-26518.	1.5	1
63	Exciting Opportunities for Solid-State ^{95}Mo NMR Studies of MoS_2 Nanostructures in Materials Research from a Low to an Ultrahigh Magnetic Field (35.2 T). <i>Journal of Physical Chemistry C</i> , 2021, 125, 7824-7838.	1.5	1