Stephen Wimperis

List of Publications by Year
in descending order

116	4,411	94381	123376
papers	citations	37 h-index	61 g-index

125	125	125	2551
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Multipleâ€quantum NMR spectroscopy ofS=3/2 spins in isotropic phase: A new probe for multiexponential relaxation. Journal of Chemical Physics, 1986, 85, 6282-6293.	1.2	344
2	Broadband, Narrowband, and Passband Composite Pulses for Use in Advanced NMR Experiments. Journal of Magnetic Resonance Series A, 1994, 109, 221-231.	1.6	223
3	Two-Dimensional Multiple-Quantum MAS NMR of Quadrupolar Nuclei: A Comparison of Methods. Journal of Magnetic Resonance, 1997, 128, 42-61.	1.2	182
4	High-resolution NMR of quadrupolar nuclei in solids: the satellite-transition magic angle spinning (STMAS) experiment. Progress in Nuclear Magnetic Resonance Spectroscopy, 2004, 45, 53-108.	3.9	133
5	Silica-supported imine palladacyclesâ€"recyclable catalysts for the Suzuki reaction?. Journal of Organometallic Chemistry, 2001, 633, 173-181.	0.8	110
6	17O and29Si NMR Parameters of MgSiO3Phases from High-Resolution Solid-State NMR Spectroscopy and First-Principles Calculations. Journal of the American Chemical Society, 2007, 129, 13213-13224.	6.6	104
7	Multiple-quantum MAS NMR of quadrupolar nuclei. Do five-, seven- and nine-quantum experiments yield higher resolution than the three-quantum experiment?. Solid State Nuclear Magnetic Resonance, 2000, 16, 203-215.	1.5	100
8	Structure and NMR assignment in calcined and as-synthesized forms of AlPO-14: a combined study by first-principles calculations and high-resolution 27Alâ€"31P MAS NMR correlation. Physical Chemistry Chemical Physics, 2008, 10, 5754.	1.3	95
9	Relaxation-allowed cross-peaks in two-dimensional N.M.R. correlation spectroscopy. Molecular Physics, 1989, 66, 897-919.	0.8	91
10	High-Resolution ¹⁹F MAS NMR Spectroscopy: Structural Disorder and Unusual J Couplings in a Fluorinated Hydroxy-Silicate. Journal of the American Chemical Society, 2010, 132, 15651-15660.	6.6	83
11	Dynamics on the Microsecond Timescale in Microporous Aluminophosphate AlPO-14 as Evidenced by27Al MQMAS and STMAS NMR Spectroscopy. Journal of the American Chemical Society, 2006, 128, 8054-8062.	6.6	72
12	Satellite-Transition MAS NMR of Spin I=3/2, 5/2, 7/2, and 9/2 Nuclei: Sensitivity, Resolution, and Practical Implementation. Journal of Magnetic Resonance, 2002, 156, 269-281.	1.2	71
13	Long-range carbon-proton coupling constants. Journal of Magnetic Resonance, 1984, 58, 526-532.	0.5	67
14	23Na NMR methods for selective observation of sodium ions in ordered environments. Progress in Nuclear Magnetic Resonance Spectroscopy, 1997, 30, 157-181.	3.9	67
15	Motional broadening: an important distinction between multiple-quantum and satellite-transition MAS NMR of quadrupolar nuclei. Chemical Physics Letters, 2002, 364, 634-642.	1.2	67
16	First-principles calculations of solid-state17O and29Si NMR spectra of Mg2SiO4polymorphs. Physical Chemistry Chemical Physics, 2007, 9, 1587-1598.	1.3	65
17	27Al multiple-quantum MAS and 27Al{1H} CPMAS NMR study of amorphous aluminosilicates. Journal of Non-Crystalline Solids, 2001, 282, 278-290.	1.5	62
18	Solid-State 17O NMR Spectroscopy of Hydrous Magnesium Silicates: Evidence for Proton Dynamics. Journal of Physical Chemistry C, 2009, 113, 465-471.	1.5	61

#	Article	IF	Citations
19	Refocussing of chemical and paramagnetic shift anisotropies in 2H NMR using the quadrupolar-echo experiment. Journal of Magnetic Resonance, 2003, 164, 343-350.	1.2	59
20	An excitation sequence which discriminates between direct and long-range CH coupling. Journal of Magnetic Resonance, 1984, 58, 348-353.	0.5	58
21	2H double-quantum MAS NMR spectroscopy as a probe of dynamics on the microsecond timescale in solids. Chemical Physics Letters, 2006, 423, 276-281.	1.2	58
22	Observation of 2izsz order in NMR relaxation studies for measuring cross-correlation of chemical shift anisotropy and dipolar interactions. Chemical Physics Letters, 1987, 138, 601-606.	1.2	55
23	Measurement of spin-5/2 relaxation in biological and macromolecular systems using multiple-quantum NMR techniques. Molecular Physics, 1992, 76, 47-81.	0.8	54
24	Multiple-quantum cross-polarization in MAS NMR of quadrupolar nuclei. Chemical Physics Letters, 1998, 288, 509-517.	1.2	52
25	Multiple-Quantum Cross-Polarization and Two-Dimensional MQMAS NMR of Quadrupolar Nuclei. Journal of Magnetic Resonance, 2000, 147, 238-249.	1.2	52
26	Multiple-Quantum and Cross-Polarized27Al MAS NMR of Mechanically Treated Mixtures of Kaolinite and Gibbsite. Journal of Physical Chemistry B, 2000, 104, 6408-6416.	1.2	49
27	Spin-locking of half-integer quadrupolar nuclei in nuclear magnetic resonance of solids: Second-order quadrupolar and resonance offset effects. Journal of Chemical Physics, 2009, 131, 194509.	1.2	48
28	Band-selective pulses without phase distortion. A simulated annealing approach. Journal of Magnetic Resonance, 1989, 85, 620-627.	0.5	47
29	Phase evolution in mechanically treated mixtures of kaolinite and alumina hydrates (gibbsite and) Tj ETQq1 1 0.784314 rgBT /Overloc	2.8	44
30	Relaxation-allowed transfer of coherence in NMR between spins which are not scalar coupled. Chemical Physics Letters, 1987, 140, 41-45.	1.2	42
31	Single- and multiple-quantum cross-polarization in NMR of quadrupolar nuclei in static samples. Molecular Physics, 2000, 98, 1-26.	0.8	42
32	Local Order of Amorphous Zeolite Precursors from 29Si{H} CPMAS and 27Al and 23Na MQMAS NMR and Evidence for the Nature of Medium-Range Order from Neutron Diffraction. Journal of Physical Chemistry B, 2004, 108, 8208-8217.	1.2	41
33	Water in the Earth's mantle: a solid-state NMR study of hydrous wadsleyite. Chemical Science, 2013, 4, 1523.	3.7	41
34	Transformation of AlPO-53 to JDF-2: Reversible Dehydration of a Templated Aluminophosphate Studied by MAS NMR and Diffraction. Journal of Physical Chemistry C, 2009, 113, 10780-10789.	1.5	40
35	17O Multiple-Quantum MAS NMR Study of High-Pressure Hydrous Magnesium Silicates. Journal of the American Chemical Society, 2001, 123, 6360-6366.	6.6	39
36	Second-order quadrupolar-dipolar broadening in two-dimensional multiple-quantum MAS NMR1Presented at Spin Choreography â€“ A Symposium in Appreciation of Ray Freeman, Cambridge, UK, 8â€“11 April 1999.1. Chemical Physics Letters, 1999, 311, 292-298.	1.2	37

#	Article	IF	Citations
37	Three- and five-quantum¹⁷O MAS NMR of forsterite Mg₂SiO₄. American Mineralogist, 1999, 84, 1191-1194.	0.9	37
38	17O Multiple-Quantum MAS NMR Study of Pyroxenes. Journal of Physical Chemistry B, 2002, 106, 773-778.	1.2	37
39	Magic angle spinning (MAS) NMR linewidths in the presence of solid-state dynamics. Chemical Physics Letters, 2008, 452, 233-238.	1.2	36
40	Relative Orientation of Quadrupole Tensors from Two-Dimensional Multiple-Quantum MAS NMR. Journal of the American Chemical Society, 2001, 123, 8135-8136.	6.6	35
41	High-Resolution 17O NMR Spectroscopy of Wadsleyite (Î²-Mg2SiO4). Journal of the American Chemical Society, 2003, 125, 11824-11825.	6.6	34
42	Detection of the Interaction of Sodium Ions with Ordered Structures in Biological Systems. Use of the Jeener-Broekaert Experiment. Journal of Magnetic Resonance Series B, 1993, 102, 326-331.	1.6	33
43	Relative Orientation of Quadrupole Tensors from High-Resolution NMR of Powdered Solids. Journal of Physical Chemistry A, 2002, 106, 9470-9478.	1.1	32
44	Two-dimensional satellite-transition MAS NMR of quadrupolar nuclei: shifted echoes, high-spin nuclei and resolution. Chemical Physics Letters, 2001, 345, 400-408.	1.2	31
45	Spin-locking of half-integer quadrupolar nuclei in nuclear magnetic resonance of solids: Creation and evolution of coherences. Journal of Chemical Physics, 2004, 120, 2719-2731.	1.2	31
46	Heteronuclear coherence transfer over a range of coupling constants. A broadband-INEPT experiment. Journal of Magnetic Resonance, 1986, 69, 264-282.	0.5	30
47	27Al Multiple-Quantum Magic Angle Spinning NMR Study of the Thermal Transformation between the Microporous Aluminum Methylphosphonates AlMePO-Î² and AlMePO-Î±. Journal of Physical Chemistry B, 1999, 103, 812-817.	1.2	30
48	Dynamics on the microsecond timescale in hydrous silicates studied by solid-state 2H NMR spectroscopy. Physical Chemistry Chemical Physics, 2010, 12, 2989.	1.3	30
49	Satellite-Transition MAS NMR of Low-Î³ Nuclei at Natural Abundance:Â Sensitivity, Practical Implementation, and Application to39K (I= 3/2) and25Mg (I= 5/2). Journal of Physical Chemistry B, 2004, 108, 13292-13299.	1.2	29
50	Second-order cross-term interactions in high-resolution MAS NMR of quadrupolar nuclei. Progress in Nuclear Magnetic Resonance Spectroscopy, 2009, 55, 160-181.	3.9	28
51	Broadband excitation of quadrupolar order by modified jeener-broekaert sequences. Chemical Physics Letters, 1986, 132, 194-199.	1.2	27
52	Rotor-synchronized acquisition of quadrupolar satellite-transition NMR spectra: practical aspects and double-quantum filtration. Journal of Magnetic Resonance, 2005, 177, 44-55.	1.2	26
53	Broadband and narrowband composite excitation sequences. Journal of Magnetic Resonance, 1990, 86, 46-59.	0.5	25
54	Separation of quadrupolar and chemical/paramagnetic shift interactions in two-dimensional 2Hâ€Š(I=1) nuclear magnetic resonance spectroscopy. Journal of Chemical Physics, 2005, 122, 044312.	1.2	25

#	Article	IF	Citations
55	Dual-compensated antisymmetric composite refocusing pulses for NMR. Journal of Magnetic Resonance, 2012, 225, 81-92.	1.2	25
56	A Multinuclear NMR Study of Six Forms of AlPO-34: Structure and Motional Broadening. Journal of Physical Chemistry C, 2017, 121, 1781-1793.	1.5	25
57	High-Resolution NMR Spectroscopy of Quadrupolar Nuclei in Solids:â€‰ Satellite-Transition MAS with Self-Compensation for Magic-Angle Misset. Journal of the American Chemical Society, 2002, 124, 11602-11603.	6.6	24
58	High-resolution 17O MAS NMR spectroscopy of forsterite (Â-Mg2SiO4), wadsleyite (Â-Mg2SiO4), and ringwoodite (Â-Mg2SiO4). American Mineralogist, 2005, 90, 1861-1870.	0.9	24
59	A Multinuclear Solid-State NMR Study of Templated and Calcined Chabazite-Type GaPO-34. Journal of Physical Chemistry C, 2012, 116, 15048-15057.	1.5	24
60	Optimum detection of biexponential relaxation using multiple-quantum filtration techniques. Journal of Magnetic Resonance, 1990, 88, 440-447.	0.5	23
61	Second-order quadrupole-shielding effects in magic-angle spinning solid-state nuclear magnetic resonance. Journal of Chemical Physics, 2003, 118, 3131-3140.	1.2	22
62	Use of composite refocusing pulses to form spin echoes. Journal of Magnetic Resonance, 2012, 214, 68-75.	1.2	22
63	A multiple-quantum 23Na MAS NMR study of amorphous sodium gallium silicate zeolite precursors. Journal of Materials Chemistry, 2002, 12, 1469-1474.	6.7	21
64	Novel two-dimensional NMR methods that combine single-quantum cross-polarization and multiple-quantum MAS of quadrupolar nuclei. Chemical Physics Letters, 2001, 340, 500-508.	1.2	20
65	27Al Multiple-Quantum MAS NMR of Mechanically Treated Bayerite (Î±-Al(OH)3) and Silica Mixtures. Solid State Nuclear Magnetic Resonance, 2001, 20, 87-99.	1.5	19
66	Use of SPAM and FAM pulses in high-resolution MAS NMR spectroscopy of quadrupolar nuclei. Journal of Magnetic Resonance, 2007, 187, 343-351.	1.2	19
67	Improved background suppression in 1H MAS NMR using composite pulses. Journal of Magnetic Resonance, 2012, 221, 41-50.	1.2	19
68	Nuclear Overhauser Effect (NOE) Enhancement of 11B NMR Spectra of Borane Adducts in the Solid State. Journal of the American Chemical Society, 2006, 128, 6782-6783.	6.6	17
69	Imaging of the B1 distribution and background signal in a MAS NMR probehead using inhomogeneous B0 and B1 fields. Journal of Magnetic Resonance, 2013, 231, 95-99.	1.2	17
70	Iterative schemes for phase-distortionless composite 180Â° pulses. Journal of Magnetic Resonance, 1991, 93, 199-206.	0.5	16
71	Sodium Ions in Ordered Environments in Biological Systems: Analysis of 23Na NMR Spectra. Journal of Magnetic Resonance, 1999, 140, 351-362.	1.2	16
72	SCAM-STMAS: satellite-transition MAS NMR of quadrupolar nuclei with self-compensation for magic-angle misset. Journal of Magnetic Resonance, 2003, 162, 402-416.	1.2	16

#	Article	IF	Citations
73	Three- and five-quantum filtration experiments in 25Mg NMR of a macromolecular system. Chemical Physics Letters, 1990, 172, 94-98.	1.2	15
74	In Vivo NMR of Sodium Ions in Ordered Environments. Journal of Magnetic Resonance Series B, 1994, 105, 199-203.	1.6	15
75	Three-Dimensional Triple-Quantum Filtration 23Na NMR Imaging. Journal of Magnetic Resonance Series B, 1995, 108, 280-284.	1.6	15
76	Multiple-quantum filtered 17O and 23Na NMR analysis of mitochondrial suspensions. Biophysical Chemistry, 1998, 73, 137-143.	1.5	15
77	Effects of spin diffusion on spinâ€“lattice relaxation in solid-state 2H MAS NMR spectroscopy. Chemical Physics Letters, 2007, 449, 86-91.	1.2	15
78	Second-order quadrupolar shifts as an NMR probe of fast molecular-scale dynamics in solids. Chemical Physics Letters, 2009, 467, 412-416.	1.2	15
79	A Solid-State NMR Study of the Immobilization of Î±-Chymotrypsin on Mesoporous Silica. Journal of Physical Chemistry C, 2014, 118, 1042-1048.	1.5	14
80	High-Resolution Structural Characterization of a Heterogeneous Biocatalyst Using Solid-State NMR. Journal of Physical Chemistry C, 2016, 120, 28717-28726.	1.5	14
81	Composite pulses with rectangular excitation and inversion profiles. Journal of Magnetic Resonance, 1989, 83, 509-524.	0.5	13
82	NMR measurement of spin-3/2 transverse relaxation in an inhomogeneous B1 field. Chemical Physics Letters, 1994, 224, 508-516.	1.2	13
83	NMR excitation of quadrupolar order using adiabatic demagnetization in the rotating frame. Journal of Chemical Physics, 1998, 108, 876-889.	1.2	13
84	STARTMAS: A MAS-based method for acquiring isotropic NMR spectra of spin I=3/2 nuclei in real time. Chemical Physics Letters, 2006, 431, 390-396.	1.2	13
85	Sequences which discriminate between direct and long-range CH couplings. Compensation for a range of 1JCH values. Journal of Magnetic Resonance, 1985, 62, 147-152.	0.5	12
86	Observation of longitudinal three-spin order for measuring dipole-dipole cross correlation. Journal of Magnetic Resonance, 1988, 77, 589-595.	0.5	12
87	High-resolution NMR spectroscopy in inhomogeneous B0 and B1 fields by two-dimensional correlation. Chemical Physics Letters, 2003, 381, 634-641.	1.2	12
88	Five-coordinate Pd(ii) orthometallated triarylphosphite complexes. Dalton Transactions, 2007, , 459-466.	1.6	12
89	Solid-State Dynamics in the closo-Carboranes: A 11B MAS NMR and Molecular Dynamics Study. Journal of Physical Chemistry B, 2015, 119, 4309-4320.	1.2	12
90	A solvent suppression technique giving NMR spectra with minimal amplitude and phase distortion. Journal of Magnetic Resonance, 1989, 84, 620-626.	0.5	11

#	Article	IF	Citations
91	Experimental Observations of Waterâ^'Framework Interactions in a Hydrated Microporous Aluminum Phosphate. Journal of Physical Chemistry B, 2005, 109, 4464-4469.	1.2	10
92	Deuterium MAS NMR Studies of Dynamics on Multiple Timescales: Histidine and Oxalic Acid. ChemPhysChem, 2015, 16, 204-215.	1.0	10
93	Inhomogeneous broadening of two-dimensional NMR lineshapes. Chemical Physics Letters, 1995, 237, 509-515.	1.2	9
94	NMR Spectroscopy and Imaging of Sodium in Ordered Environments. The Return of the Central Transition. Journal of Magnetic Resonance Series B, 1996, 111, 189-193.	1.6	9
95	Solid-state NMR spectroscopy. Physical Chemistry Chemical Physics, 2009, 11, 6875.	1.3	9
96	Measurement of23Na Transverse Relaxationin Vivo.The Flip-Angle-Independent Experiment*. Journal of Magnetic Resonance Series B, 1995, 109, 223-228.	1.6	8
97	Satellite transitions acquired in real time by magic angle spinning (STARTMAS): â€˜â€˜Ultrafastâ€™â€™ high-resolution MAS NMR spectroscopy of spin I=3â^•2 nuclei. Journal of Chemical Physics, 2008, 128, 034507.	1.2	8
98	Two-dimensional 1H and 1H-detected NMR study of a heterogeneous biocatalyst using fast MAS at high magnetic fields. Solid State Nuclear Magnetic Resonance, 2018, 92, 7-11.	1.5	8
99	Triple-quantum sodium imaging. Journal of Magnetic Resonance, 1991, 95, 428-436.	0.5	7
100	B1-Selective Pulses. Journal of Magnetic Resonance Series A, 1996, 123, 230-236.	1.6	7
101	Bounds on spin dynamics and the design of multiple-pulse NMR experiments. Journal of Chemical Physics, 1997, 106, 2105-2117.	1.2	7
102	A high-resolution natural abundance ³³S MAS NMR study of the cementitious mineral ettringite. Physical Chemistry Chemical Physics, 2017, 19, 24082-24089.	1.3	7
103	Extraction of Homogeneous23Na NMR Linewidths from Two-Dimensional Jeenerâ€“Broekaert Spectra*. Journal of Magnetic Resonance Series B, 1995, 109, 291-300.	1.6	6
104	The ambient hydration of the aluminophosphate JDF-2 to AlPO-53(A): insights from NMR crystallography. Acta Crystallographica Section C, Structural Chemistry, 2017, 73, 191-201.	0.2	6
105	Correlation of connected double-quantum and single-quantum transitions. Two-dimensional double-quantum spectroscopy with simplified in-phase direct connectivity multiplets. Journal of Magnetic Resonance, 1990, 87, 174-182.	0.5	5
106	Triple-quantum-filtration NMR imaging of 200 mM sodium at 1.9 Tesla. Journal of Magnetic Resonance, 1992, 98, 628-636.	0.5	5
107	17O NMR of water in ordered environments. Biophysical Chemistry, 1998, 73, 129-136.	1.5	5
108	Broadband Excitation of Multiple-Quantum Coherence in NMR of Multispin and High-Spin Systems. Journal of Magnetic Resonance Series A, 1993, 102, 302-313.	1.6	4

#	Article	IF	Citations
109	Criteria for the accuracy of composite pulses in multiple-quantum NMR. Journal of Magnetic Resonance, 1987, 71, 355-359.	0.5	3
110	Uniform excitation of double-quantum coherence in two-dimensional correlation spectroscopy. Journal of Magnetic Resonance, 1988, 79, 197-205.	0.5	3
111	Spin Topology from "Taylored" TOCSY. Journal of Magnetic Resonance Series A, 1995, 114, 188-200.	1.6	2
112	Suppression of J cross peaks in NOESY spectra by the maximum-entropy method. Journal of Magnetic Resonance, 1990, 89, 415-422.	0.5	1
113	Spin-locking of half-integer quadrupolar nuclei in NMR of solids: The far off-resonance case. Solid State Nuclear Magnetic Resonance, 2017, 84, 4-13.	1.5	1
114	Reply to Comment on â€œ27Al Multiple-Quantum Magic Angle Spinning NMR Study of the Thermal Transformation between the Microporous Aluminum Methylphosphonates AlMePO-Î² and AlMePO-Î±â€• Journal of Physical Chemistry B, 2000, 104, 9767-9767.	1.2	0
115	High-Resolution17O NMR Spectroscopy of Wadsleyite (Î²-Mg2SiO4).. ChemInform, 2003, 34, no.	0.1	0
116	High-Resolution NMR of Quadrupolar Nuclei in Solids: The Satellite-Transition Magic Angle Spinning (STMAS) Experiment. ChemInform, 2004, 35, no.	0.1	0