

Sabine Hediger

List of Publications by Year in descending order

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68
papers

3,773
citations

117625

34
h-index

123424

61
g-index

70
all docs

70
docs citations

70
times ranked

2987
citing authors

#	ARTICLE	IF	CITATIONS
1	NMR cross polarization by adiabatic passage through the Hartmann-Hahn condition (APHH). <i>Chemical Physics Letters</i> , 1994, 223, 283-288.	2.6	258
2	Adiabatic passage Hartmann-Hahn cross polarization in NMR under magic angle sample spinning. <i>Chemical Physics Letters</i> , 1995, 240, 449-456.	2.6	246
3	Experimental aspects of proton NMR spectroscopy in solids using phase-modulated homonuclear dipolar decoupling. <i>Journal of Magnetic Resonance</i> , 2003, 163, 105-113.	2.1	169
4	Rapid Natural Abundance 2D ^{13}C - ^{13}C Correlation Spectroscopy Using Dynamic Nuclear Polarization Enhanced Solid-State NMR and Matrix-Free Sample Preparation. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 11766-11769.	13.8	154
5	NMR analysis of the transformation of wood constituents by torrefaction. <i>Fuel</i> , 2012, 92, 271-280.	6.4	154
6	Nuclear depolarization and absolute sensitivity in magic-angle spinning cross effect dynamic nuclear polarization. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 21824-21836.	2.8	144
7	Efficient ^{15}N - ^{13}C Polarization Transfer by Adiabatic-Passage Hartmann-Hahn Cross Polarization. <i>Journal of Magnetic Resonance Series A</i> , 1996, 118, 140-144.	1.6	130
8	Solid-State NMR on Bacterial Cells: Selective Cell Wall Signal Enhancement and Resolution Improvement using Dynamic Nuclear Polarization. <i>Journal of the American Chemical Society</i> , 2013, 135, 5105-5110.	13.7	117
9	Perhydrocarbyl ReVII Complexes: Comparison of Molecular and Surface Complexes. <i>Journal of the American Chemical Society</i> , 2003, 125, 492-504.	13.7	116
10	High-Resolution NMR Correlation Spectra of Disordered Solids. <i>Journal of the American Chemical Society</i> , 2003, 125, 4376-4380.	13.7	110
11	Is solid-state NMR enhanced by dynamic nuclear polarization?. <i>Solid State Nuclear Magnetic Resonance</i> , 2015, 66-67, 6-20.	2.3	108
12	Computationally Assisted Design of Polarizing Agents for Dynamic Nuclear Polarization Enhanced NMR: The AsymPol Family. <i>Journal of the American Chemical Society</i> , 2018, 140, 11013-11019.	13.7	92
13	Cross polarization under fast magic angle sample spinning using amplitude-modulated spin-lock sequences. <i>Chemical Physics Letters</i> , 1993, 213, 627-635.	2.6	89
14	Matrix-free dynamic nuclear polarization enables solid-state NMR ^{13}C - ^{13}C correlation spectroscopy of proteins at natural isotopic abundance. <i>Chemical Communications</i> , 2013, 49, 9479.	4.1	88
15	Dynamics Characterization of Fully Hydrated Bacterial Cell Walls by Solid-State NMR: Evidence for Cooperative Binding of Metal Ions. <i>Journal of the American Chemical Society</i> , 2010, 132, 10911-10919.	13.7	86
16	Dietary fibre in cocoa shell: characterisation of component polysaccharides. <i>Food Chemistry</i> , 2003, 81, 103-112.	8.2	81
17	Well-Defined Surface Tungstenocarbonyl Complexes through the Reaction of $[\text{W}(\text{CtBu})(\text{CH}_2\text{tBu})_3]$ with Silica. <i>Organometallics</i> , 2005, 24, 4274-4279.	2.3	79
18	Efficient cross-effect dynamic nuclear polarization without depolarization in high-resolution MAS NMR. <i>Chemical Science</i> , 2017, 8, 8150-8163.	7.4	76

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19	Pushing NMR sensitivity limits using dynamic nuclear polarization with closed-loop cryogenic helium sample spinning. <i>Chemical Science</i> , 2015, 6, 6806-6812.	7.4	72
20	A New Tool for NMR Crystallography: Complete ¹³ C/ ¹⁵ N Assignment of Organic Molecules at Natural Isotopic Abundance Using DNP-Enhanced Solid-State NMR. <i>Journal of the American Chemical Society</i> , 2015, 137, 13796-13799.	13.7	67
21	Ultra-low temperature MAS-DNP. <i>Journal of Magnetic Resonance</i> , 2016, 264, 116-124.	2.1	67
22	Spin-state selection in solid-state NMR. <i>Journal of Magnetic Resonance</i> , 2003, 164, 187-195.	2.1	66
23	Resolution Enhancement in Multidimensional Solid-State NMR Spectroscopy of Proteins Using Spin-State Selection. <i>Journal of the American Chemical Society</i> , 2003, 125, 11816-11817.	13.7	66
24	Rotor-synchronized amplitude-modulated nuclear magnetic resonance spin-lock sequences for improved cross polarization under fast magic angle sample spinning. <i>Journal of Chemical Physics</i> , 1995, 102, 4000-4011.	3.0	57
25	Solid-state NMR characterization of hydration effects on polymer mobility in onion cell-wall material. <i>Carbohydrate Research</i> , 1999, 322, 102-112.	2.3	57
26	Investigation with ¹³ C NMR, EPR and magnetic susceptibility measurements of char residues obtained by pyrolysis of biomass. <i>Fuel</i> , 2007, 86, 1966-1976.	6.4	54
27	Matrix-Free DNP-Enhanced NMR Spectroscopy of Liposomes Using a Lipid-Anchored Biradical. <i>Chemistry - A European Journal</i> , 2015, 21, 4512-4517.	3.3	53
28	Toward the Characterization of Peptidoglycan Structure and Protein~Peptidoglycan Interactions by Solid-State NMR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2008, 130, 5618-5619.	13.7	52
29	Optimization of an absolute sensitivity in a glassy matrix during DNP-enhanced multidimensional solid-state NMR experiments. <i>Journal of Magnetic Resonance</i> , 2014, 239, 91-99.	2.1	51
30	Welcoming natural isotopic abundance in solid-state NMR: probing π -stacking and supramolecular structure of organic nanoassemblies using DNP. <i>Chemical Science</i> , 2017, 8, 974-987.	7.4	48
31	A Combination of Slow and Fast RF Field Modulation for Improved Cross Polarization in Solid-State MAS NMR. <i>Journal of Magnetic Resonance</i> , 1997, 125, 291-301.	2.1	42
32	Heteronuclear decoupling in NMR of Liquid Crystals using continuous phase modulation. <i>Chemical Physics Letters</i> , 2003, 368, 511-522.	2.6	42
33	Nuclear magnetic resonance polarization and coherence echoes in static and rotating solids. <i>Journal of Chemical Physics</i> , 1996, 105, 10672-10681.	3.0	36
34	Carbon-13 lineshapes in solid-state NMR of labeled compounds. Effects of coherent CSA~dipolar cross-correlation. <i>Journal of Magnetic Resonance</i> , 2003, 162, 90-101.	2.1	34
35	Study of interactions between polyethylene glycol and archaeological wood components by ¹³ C high-resolution solid-state CP-MAS NMR. <i>Journal of Archaeological Science</i> , 2007, 34, 1670-1676.	2.4	32
36	<i>De novo</i> prediction of cross-effect efficiency for magic angle spinning dynamic nuclear polarization. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 2166-2176.	2.8	32

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37	The surface chemistry of a nanocellulose drug carrier unravelled by MAS-DNP. <i>Chemical Science</i> , 2020, 11, 3868-3877.	7.4	32
38	Experimental observation of periodic quasi-equilibria in solid-state NMR. <i>Chemical Physics Letters</i> , 1999, 308, 381-389.	2.6	30
39	Highly Efficient Polarizing Agents for MAS-DNP of Proton-Dense Molecular Solids. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	13.8	30
40	Biomolecular and Biological Applications of Solid-State NMR with Dynamic Nuclear Polarization Enhancement. <i>Chemical Reviews</i> , 2022, 122, 9795-9847.	47.7	29
41	A New NMR Method for the Study of Local Mobility in Solids and Application to Hydration of Biopolymers in Plant Cell Walls. <i>Macromolecules</i> , 2002, 35, 5078-5084.	4.8	27
42	Correlation of fast and slow chemical shift spinning sideband patterns under fast magic-angle spinning. <i>Journal of Magnetic Resonance</i> , 2003, 160, 40-46.	2.1	27
43	Natural Isotopic Abundance ^{13}C and ^{15}N Multidimensional Solid-State NMR Enabled by Dynamic Nuclear Polarization. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 4652-4662.	4.6	26
44	Targeted DNP for biomolecular solid-state NMR. <i>Chemical Science</i> , 2021, 12, 6223-6237.	7.4	25
45	Nuclear Magnetic Resonance and Electron Paramagnetic Resonance as Analytical Tools To Investigate Structural Features of Archaeological Leathers. <i>Analytical Chemistry</i> , 2009, 81, 1505-1511.	6.5	23
46	Structural Fingerprinting of Protein Aggregates by Dynamic Nuclear Polarization-Enhanced Solid-State NMR at Natural Isotopic Abundance. <i>Journal of the American Chemical Society</i> , 2018, 140, 14576-14580.	13.7	22
47	Dynamics property recovery of archaeological-wood fibers treated with polyethylene glycol demonstrated by high-resolution solid-state NMR. <i>Cellulose</i> , 2012, 19, 1537-1545.	4.9	21
48	Water vapour transport through large defects in flexible packaging: modeling, gravimetric measurement and magnetic resonance imaging. <i>Packaging Technology and Science</i> , 2000, 13, 139-147.	2.8	20
49	Dynamics of CHFCIBr and CDFCIBr Inside a Thiomethylated Cryptophane, Studied by ^{19}F CSA-DD Cross-Correlated Relaxation and ^2H Quadrupolar Relaxation Measurements. <i>Journal of Physical Chemistry A</i> , 2003, 107, 10233-10240.	2.5	19
50	Structural characterization of metal-metal bonded polymer $[\text{Ru}(\text{L})(\text{CO})_2]_n$ ($\text{L} = 2,2'$ -bipyridine) in the solid state using high-resolution NMR and DFT chemical shift calculations. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 15428.	2.8	19
51	Windowed R-PDLF recoupling: A flexible and reliable tool to characterize molecular dynamics. <i>Journal of Magnetic Resonance</i> , 2013, 234, 154-164.	2.1	19
52	Multi-dimensional magnetic resonance imaging in a stray magnetic field. <i>Journal of Magnetic Resonance</i> , 2005, 172, 79-84.	2.1	18
53	Selective high-resolution DNP-enhanced NMR of biomolecular binding sites. <i>Chemical Science</i> , 2019, 10, 3366-3374.	7.4	18
54	Spin-coated and PECVD low dielectric constant porous organosilicate films studied by 1D and 2D solid-state NMR. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 9729.	2.8	17

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55	Compensated second-order recoupling: application to third spin assisted recoupling. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 7246.	2.8	15
56	Impact of selective excitation on carbon longitudinal relaxation: Towards fast solid-state NMR techniques. <i>Journal of Magnetic Resonance</i> , 2009, 200, 153-160.	2.1	13
57	Li-Rich Mn/Ni Layered Oxide as Electrode Material for Lithium Batteries: A ⁷ Li MAS NMR Study Revealing Segregation into (Nanoscale) Domains with Highly Different Electrochemical Behaviors. <i>Journal of Physical Chemistry C</i> , 2016, 120, 19049-19063.	3.1	13
58	Synthesis and solid-state NMR study of chromium complexes of per(3,6-anhydro)- β -cyclodextrin based polymers. <i>Carbohydrate Polymers</i> , 2008, 73, 64-73.	10.2	11
59	Efficient 2D double-quantum solid-state NMR spectroscopy with large spectral widths. <i>Chemical Communications</i> , 2017, 53, 9155-9158.	4.1	11
60	Study of liquid-liquid interfaces by an easily implemented localized NMR sequence. <i>Magnetic Resonance in Chemistry</i> , 2010, 48, 600-606.	1.9	10
61	Application of ⁷ Li NMR to characterize the evolution of intercalated and non-intercalated lithium in LiFePO ₄ -based materials for Li-ion batteries. <i>Journal of Solid State Electrochemistry</i> , 2013, 17, 1421-1427.	2.5	8
62	Third Spin-Assisted Recoupling in SSNMR. <i>Annual Reports on NMR Spectroscopy</i> , 2015, , 93-142.	1.5	6
63	Segmental mobility in poly(isoprene) rubber studied by deuterium-carbon NMR correlation spectroscopy. <i>Polymer Bulletin</i> , 2001, 46, 183-190.	3.3	4
64	High-Field Solid-State NMR with Dynamic Nuclear Polarization. , 2017, , 1-17.		2
65	High-Field Solid-State NMR with Dynamic Nuclear Polarization. , 2018, , 861-877.		2
66	Ultra-Low Temperature Nuclear Magnetic Resonance. <i>IOP Conference Series: Materials Science and Engineering</i> , 2017, 171, 012142.	0.6	1
67	Highly Efficient Polarizing Agents for MAS-DNP of Proton-Dense Molecular Solids. <i>Angewandte Chemie</i> , 0, , .	2.0	1
68	Sonocrystallization of CMONS Needles and Nanocubes: Mechanistic Studies and Advanced Crystallinity Characterization by Combining X-ray and Electron Diffractions with DNP-Enhanced NMR. <i>Crystal Growth and Design</i> , 2022, 22, 2181-2191.	3.0	0