Thomas Theis

List of Publications by Year
in descending order

71	3,568	126708	133063
papers	citations	33 h-index	59 g-index

77	77	77	1227
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Microtesla SABRE Enables 10% Nitrogen-15 Nuclear Spin Polarization. Journal of the American Chemical Society, 2015, 137, 1404-1407.	6.6	275
2	Parahydrogenâ€Based Hyperpolarization for Biomedicine. Angewandte Chemie - International Edition, 2018, 57, 11140-11162.	7.2	251
3	Direct and cost-efficient hyperpolarization of long-lived nuclear spin states on universal ¹⁵ N ₂ -diazirine molecular tags. Science Advances, 2016, 2, e1501438.	4.7	193
4	¹⁵N Hyperpolarization by Reversible Exchange Using SABRE-SHEATH. Journal of Physical Chemistry C, 2015, 119, 8786-8797.	1.5	192
5	LIGHT-SABRE enables efficient in-magnet catalytic hyperpolarization. Journal of Magnetic Resonance, 2014, 248, 23-26.	1.2	151
6	Parahydrogen-enhanced zero-field nuclear magnetic resonance. Nature Physics, 2011, 7, 571-575.	6.5	132
7	Over 20% ¹⁵N Hyperpolarization in Under One Minute for Metronidazole, an Antibiotic and Hypoxia Probe. Journal of the American Chemical Society, 2016, 138, 8080-8083.	6.6	123
8	Generalizing, Extending, and Maximizing Nitrogen-15 Hyperpolarization Induced by Parahydrogen in Reversible Exchange. Journal of Physical Chemistry C, 2017, 121, 6626-6634.	1.5	112
9	¹⁵N Hyperpolarization of Imidazole-¹⁵N₂ for Magnetic Resonance pH Sensing via SABRE-SHEATH. ACS Sensors, 2016, 1, 640-644.	4.0	111
10	Near-Zero-Field Nuclear Magnetic Resonance. Physical Review Letters, 2011, 107, 107601.	2.9	92
11	The Absence of Quadrupolar Nuclei Facilitates Efficient ¹³C Hyperpolarization via Reversible Exchange with Parahydrogen. ChemPhysChem, 2017, 18, 1493-1498.	1.0	87
12	Hyperpolarization of â€œNeatâ€•Liquids by NMR Signal Amplification by Reversible Exchange. Journal of Physical Chemistry Letters, 2015, 6, 1961-1967.	2.1	85
13	Zero-Field NMR Enhanced by Parahydrogen in Reversible Exchange. Journal of the American Chemical Society, 2012, 134, 3987-3990.	6.6	83
14	Invited Review Article: Instrumentation for nuclear magnetic resonance in zero and ultralow magnetic field. Review of Scientific Instruments, 2017, 88, 091101.	0.6	83
15	Direct Hyperpolarization of Nitrogen-15 in Aqueous Media with Parahydrogen in Reversible Exchange. Journal of the American Chemical Society, 2017, 139, 7761-7767.	6.6	80
16	Composite and shaped pulses for efficient and robust pumping of disconnected eigenstates in magnetic resonance. Journal of Chemical Physics, 2014, 140, 014201.	1.2	73
17	Storage of Hydrogen Spin Polarization in Long-Lived ¹³C₂ Singlet Order and Implications for Hyperpolarized Magnetic Resonance Imaging. Journal of the American Chemical Society, 2013, 135, 9632-9635.	6.6	65
18	Long-Lived ¹³C₂ Nuclear Spin States Hyperpolarized by Parahydrogen in Reversible Exchange at Microtesla Fields. Journal of Physical Chemistry Letters, 2017, 8, 3008-3014.	2.1	63

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19	Toward Hyperpolarized ¹⁹F Molecular Imaging via Reversible Exchange with Parahydrogen. ChemPhysChem, 2017, 18, 1961-1965.	1.0	57
20	PLP Labeling in ESR Spectroscopic Analysis of Secondary and Tertiary Acrylate Propagating Radicals. Macromolecules, 2008, 41, 288-291.	2.2	56
21	High-Resolution Zero-Field NMR J-Spectroscopy of Aromatic Compounds. Journal of the American Chemical Society, 2013, 135, 3607-3612.	6.6	54
22	Parawasserstoffâ€basierte Hyperpolarisierung fÃ¼r die Biomedizin. Angewandte Chemie, 2018, 130, 11310-11333.	1.6	54
23	Long-Lived Heteronuclear Spin-Singlet States in Liquids at a Zero Magnetic field. Physical Review Letters, 2014, 112, 077601.	2.9	52
24	Instrumentation for Hydrogenative Parahydrogen-Based Hyperpolarization Techniques. Analytical Chemistry, 2022, 94, 479-502.	3.2	52
25	Diazirines as Potential Molecular Imaging Tags: Probing the Requirements for Efficient and Longâ€Lived SABREâ€Induced Hyperpolarization. Angewandte Chemie - International Edition, 2017, 56, 12112-12116.	7.2	50
26	Hyperpolarizing Concentrated Metronidazole ¹⁵NO₂ Group over Six Chemical Bonds with More than 15â€‰% Polarization and a 20â€…Minute Lifetime. Chemistry - A European Journal, 2019, 25, 8829-8836.	1.7	48
27	Spin Relays Enable Efficient Long-Range Heteronuclear Signal Amplification by Reversible Exchange. Journal of Physical Chemistry C, 2017, 121, 28425-28434.	1.5	46
28	Hyperpolarization of Nitrogenâ€15 Schiff Bases by Reversible Exchange Catalysis with paraâ€Hydrogen. Chemistry - A European Journal, 2016, 22, 10777-10781.	1.7	45
29	Long-lived polarization protected by symmetry. Journal of Chemical Physics, 2014, 141, 134307.	1.2	41
30	Temperature Cycling Enables Efficient ¹³C SABRE-SHEATH Hyperpolarization and Imaging of [1-¹³C]-Pyruvate. Journal of the American Chemical Society, 2022, 144, 282-287.	6.6	39
31	Chemical analysis using J-coupling multiplets in zero-field NMR. Chemical Physics Letters, 2013, 580, 160-165.	1.2	37
32	Unveiling coherentlyÂdriven hyperpolarization dynamics in signal amplification by reversible exchange. Nature Communications, 2019, 10, 395.	5.8	36
33	Quasi-Resonance Signal Amplification by Reversible Exchange. Journal of Physical Chemistry Letters, 2018, 9, 6136-6142.	2.1	35
34	Fundamental Aspects of Parahydrogen Enhanced Low-Field Nuclear Magnetic Resonance. Physical Review Letters, 2013, 110, 137602.	2.9	32
35	Iodonitrene in Action: Direct Transformation of Amino Acids into Terminal Diazirines and ¹⁵N₂-Diazirines and Their Application as Hyperpolarized Markers. Journal of the American Chemical Society, 2019, 141, 13689-13696.	6.6	32
36	Vibrationally resolved transition state spectroscopy of the F + H2 and F + CH4 reactions. Faraday Discussions, 2012, 157, 399.	1.6	30

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37	Orderâ€Unity ¹³C Nuclear Polarization of [1â€¹³C]Pyruvate in Seconds and the Interplay of Water and SABRE Enhancement. ChemPhysChem, 2022, 23, .	1.0	30
38	Chain-Length-Dependent Termination in Acrylate Radical Polymerization Studied via Pulsed-Laser-Initiated RAFT Polymerization. Australian Journal of Chemistry, 2007, 60, 779.	0.5	28
39	Diazirines as Potential Molecular Imaging Tags: Probing the Requirements for Efficient and Longâ€Lived SABREâ€Induced Hyperpolarization. Angewandte Chemie, 2017, 129, 12280-12284.	1.6	28
40	Parahydrogenâ€Induced Hyperpolarization of Gases. Angewandte Chemie - International Edition, 2020, 59, 17788-17797.	7.2	27
41	Micron-Scale NV-NMR Spectroscopy with Signal Amplification by Reversible Exchange. PRX Quantum, 2021, 2, .	3.5	27
42	Measuring long-lived 13C2 state lifetimes at natural abundance. Journal of Magnetic Resonance, 2014, 239, 81-86.	1.2	25
43	Multiplets at zero magnetic field: The geometry of zero-field NMR. Journal of Chemical Physics, 2013, 138, 184202.	1.2	23
44	Quasi-Resonance Fluorine-19 Signal Amplification by Reversible Exchange. Journal of Physical Chemistry Letters, 2019, 10, 4229-4236.	2.1	23
45	Rational ligand choice extends the SABRE substrate scope. Chemical Communications, 2020, 56, 9336-9339.	2.2	23
46	¹⁵ N ₄ -1,2,4,5-tetrazines as potential molecular tags: Integrating bioorthogonal chemistry with hyperpolarization and unearthing para -N ₂. Science Advances, 2018, 4, eaar2978.	4.7	22
47	Parahydrogenâ€Induced Radio Amplification by Stimulated Emission of Radiation. Angewandte Chemie - International Edition, 2020, 59, 8654-8660.	7.2	22
48	Parahydrogen-induced polarization at zero magnetic field. Journal of Chemical Physics, 2013, 138, 234201.	1.2	19
49	Accessing Long-Lived Disconnected Spin-¹/₂ Eigenstates through Spins > ¹/₂. Journal of the American Chemical Society, 2014, 136, 15118-15121.	6.6	19
50	SABRE and PHIP pumped RASER and the route to chaos. Journal of Magnetic Resonance, 2021, 322, 106815.	1.2	19
51	A Versatile Compact Parahydrogen Membrane Reactor. ChemPhysChem, 2021, 22, 2526-2534.	1.0	17
52	Selective hyperpolarization of heteronuclear singlet states via pulsed microtesla SABRE. Journal of Chemical Physics, 2019, 151, 044201.	1.2	16
53	Automated pneumatic shuttle for magnetic field cycling and parahydrogen hyperpolarized multidimensional NMR. Journal of Magnetic Resonance, 2020, 312, 106700.	1.2	16
54	SABRE polarized low field rare-spin spectroscopy. Journal of Chemical Physics, 2020, 152, 184202.	1.2	15

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55	Terminal Diazirines Enable Reverse Polarization Transfer from ¹⁵N₂ Singlets. Angewandte Chemie - International Edition, 2019, 58, 11118-11124.	7.2	14
56	Parahydrogenâ€Induced Radio Amplification by Stimulated Emission of Radiation. Angewandte Chemie, 2020, 132, 8732-8738.	1.6	14
57	Intensified continuous extraction of switchable hydrophilicity solvents triggered by carbon dioxide. Green Chemistry, 2021, 23, 2900-2906.	4.6	13
58	Analysis of parahydrogen polarized spin system in low magnetic fields. Physical Chemistry Chemical Physics, 2014, 16, 15411-15421.	1.3	12
59	Backgroundâ€Free Proton NMR Spectroscopy with Radiofrequency Amplification by Stimulated Emission Radiation. Angewandte Chemie - International Edition, 2021, 60, 26298-26302.	7.2	12
60	RASER MRI: Magnetic resonance images formed spontaneously exploiting cooperative nonlinear interaction. Science Advances, 2022, 8, .	4.7	12
61	Terminal Diazirines Enable Reverse Polarization Transfer from ¹⁵N₂ Singlets. Angewandte Chemie, 2019, 131, 11235-11241.	1.6	9
62	Accessing long lived 1H states via 2H couplings. Journal of Magnetic Resonance, 2016, 263, 108-115.	1.2	8
63	Hyperpolarization of common antifungal agents with SABRE. Magnetic Resonance in Chemistry, 2021, 59, 1225-1235.	1.1	8
64	Density Functional Theory Study of Reaction Equilibria in Signal Amplification by Reversible Exchange. ChemPhysChem, 2021, 22, 1947-1957.	1.0	8
65	Application of ¹⁵N₂-Diazirines as a Versatile Platform for Hyperpolarization of Biological Molecules by d-DNP. Bioconjugate Chemistry, 2020, 31, 537-541.	1.8	6
66	Backgroundâ€Free Proton NMR Spectroscopy with Radiofrequency Amplification by Stimulated Emission Radiation. Angewandte Chemie, 0, , .	1.6	2
67	Density Functional Theory Study of Reaction Equilibria in Signal Amplification by Reversible Exchange. ChemPhysChem, 2021, 22, 1937-1938.	1.0	2
68	NMR Spectroscopy Techniques: Hyperpolarization for Sensitivity Enhancement. , 2018, , 168-168.		1
69	Parawasserstoffâ€induzierte Hyperpolarisation von Gasen. Angewandte Chemie, 2020, 132, 17940-17949.	1.6	1
70	Titelbild: Diazirines as Potential Molecular Imaging Tags: Probing the Requirements for Efficient and Longâ€Lived SABREâ€Induced Hyperpolarization (Angew. Chem. 40/2017). Angewandte Chemie, 2017, 129, 12179-12179.	1.6	0
71	Innentitelbild: Backgroundâ€Free Proton NMR Spectroscopy with Radiofrequency Amplification by Stimulated Emission Radiation (Angew. Chem. 50/2021). Angewandte Chemie, 2021, 133, 26206-26206.	1.6	0