Igor V Koptyug

List of Publications by Year
in descending order

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220 papers	7,198 citations	57758 44 h-index	91884 69 g-index
237 all docs	237 docs citations	237 times ranked	3438 citing authors

#	Article	IF	Citations
1	Gas-Phase NMR of Hyperpolarized Propane with 1H-to-13C Polarization Transfer by PH-INEPT. Applied Magnetic Resonance, 2022, 53, 653-669.	1.2	6
2	Instrumentation for Hydrogenative Parahydrogen-Based Hyperpolarization Techniques. Analytical Chemistry, 2022, 94, 479-502.	6.5	52
3	Mechanisms of Methylenecyclobutane Hydrogenation over Supported Metal Catalysts Studied by Parahydrogenâ€Induced Polarization Technique. ChemPhysChem, 2022, 23, .	2.1	5
4	Anchored complexes of rhodium and iridium for the hydrogenation of alkynes and olefins with parahydrogen. Catalysis Science and Technology, 2022, 12, 3247-3253.	4.1	11
5	Frozen water NMR lineshape analysis enables absolute polarization quantification. Physical Chemistry Chemical Physics, 2022, 24, 5956-5964.	2.8	3
6	Symmetry Constraints on Spin Order Transfer in Parahydrogen-Induced Polarization (PHIP). Symmetry, 2022, 14, 530.	2.2	6
7	Mechanistic in situ investigation of heterogeneous hydrogenation over Rh/TiO₂ catalysts: selectivity, pairwise route and catalyst nature. Faraday Discussions, 2021, 229, 161-175.	3.2	18
8	Magnetic resonance imaging of catalytically relevant processes. Reviews in Chemical Engineering, 2021, 37, 3-29.	4.4	3
9	¹⁵N NMR Hyperpolarization of Radiosensitizing Antibiotic Nimorazole by Reversible Parahydrogen Exchange in Microtesla Magnetic Fields. Angewandte Chemie, 2021, 133, 2436-2443.	2.0	6
10	¹⁵N NMR Hyperpolarization of Radiosensitizing Antibiotic Nimorazole by Reversible Parahydrogen Exchange in Microtesla Magnetic Fields. Angewandte Chemie - International Edition, 2021, 60, 2406-2413.	13.8	33
11	Lowâ€Flammable Parahydrogenâ€Polarized MRI Contrast Agents. Chemistry - A European Journal, 2021, 27, 2774-2781.	3.3	8
12	Heterogeneous Parahydrogenâ€Induced Polarization of Diethyl Ether for Magnetic Resonance Imaging Applications. Chemistry - A European Journal, 2021, 27, 1316-1322.	3.3	12
13	PHIP hyperpolarized [1-13C]pyruvate and [1-13C]acetate esters via PH-INEPT polarization transfer monitored by 13C NMR and MRI. Scientific Reports, 2021, 11, 5646.	3.3	19
14	Pd-based bimetallic catalysts for parahydrogen-induced polarization in heterogeneous hydrogenations. Magnetic Resonance, 2021, 2, 93-103.	1.9	6
15	Synthesis and 15 N NMR Signal Amplification by Reversible Exchange of [15 N]Dalfampridine at Microtesla Magnetic Fields. ChemPhysChem, 2021, 22, 960-967.	2.1	8
16	Bridging the Gap: From Homogeneous to Heterogeneous Parahydrogenâ€Induced Hyperpolarization and Beyond. ChemPhysChem, 2021, 22, 710-715.	2.1	3
17	Synthetic Approaches for ¹⁵Nâ€Labeled Hyperpolarized Heterocyclic Molecular Imaging Agents for ¹⁵N NMR Signal Amplification by Reversible Exchange in Microtesla Magnetic Fields. Chemistry - A European Journal, 2021, 27, 9727-9736.	3.3	9
18	Heterogeneous ¹H and ¹³C Parahydrogenâ€Induced Polarization of Acetate and Pyruvate Esters. ChemPhysChem, 2021, 22, 1389-1396.	2.1	9

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19	Low-Cost High-Pressure Clinical-Scale 50% Parahydrogen Generator Using Liquid Nitrogen at 77 K. Analytical Chemistry, 2021, 93, 8476-8483.	6.5	20
20	Heterogeneous Catalysis and Parahydrogenâ€Induced Polarization. ChemPhysChem, 2021, 22, 1421-1440.	2.1	30
21	Frontispiece: Synthetic Approaches for ¹⁵Nâ€Labeled Hyperpolarized Heterocyclic Molecular Imaging Agents for ¹⁵N NMR Signal Amplification by Reversible Exchange in Microtesla Magnetic Fields. Chemistry - A European Journal, 2021, 27, .	3.3	0
22	Parahydrogen-Induced Polarization Relayed via Proton Exchange. Journal of the American Chemical Society, 2021, 143, 13694-13700.	13.7	18
23	Parawasserstoffâ€Induzierte Polarisation von AminosÃuren. Angewandte Chemie, 2021, 133, 23688.	2.0	2
24	Parahydrogenâ€Induced Polarization of Amino Acids. Angewandte Chemie - International Edition, 2021, 60, 23496-23507.	13.8	34
25	Pd on Nanodiamond/Graphene in Hydrogenation of Propyne with Parahydrogen. Journal of Physical Chemistry C, 2021, 125, 27221-27229.	3.1	5
26	Spatially resolved NMR spectroscopy of heterogeneous gas phase hydrogenation of 1,3-butadiene with parahydrogen. Catalysis Science and Technology, 2020, 10, 99-104.	4.1	16
27	Pairwise Parahydrogen Addition Over Molybdenum Carbide Catalysts. Topics in Catalysis, 2020, 63, 2-11.	2.8	14
28	In Situ Monitoring of Heterogeneous Catalytic Hydrogenation via ¹²⁹Xe NMR Spectroscopy and Proton MRI. ACS Catalysis, 2020, 10, 1417-1422.	11.2	11
29	Pulse-Programmable Magnetic Field Sweeping of Parahydrogen-Induced Polarization by Side Arm Hydrogenation. Analytical Chemistry, 2020, 92, 1340-1345.	6.5	28
30	A Zwitterionic Phosphonium Stannate(II) via Hydrogen Splitting by a Sn/P Frustrated Lewisâ€Pair and Reductive Elimination. Chemistry - A European Journal, 2020, 26, 17381-17385.	3.3	12
31	Quantifying the effects of quadrupolar sinksvia¹⁵N relaxation dynamics in metronidazoles hyperpolarizedviaSABRE-SHEATH. Chemical Communications, 2020, 56, 9098-9101.	4.1	32
32	Parahydrogenâ€Induced Polarization of Diethyl Ether Anesthetic. Chemistry - A European Journal, 2020, 26, 13621-13626.	3.3	11
33	Frontispiece: Parahydrogenâ€Induced Polarization of Diethyl Ether Anesthetic. Chemistry - A European Journal, 2020, 26, .	3.3	0
34	Deciphering the Nature of Ru Sites in Reductively Exsolved Oxides with Electronic and Geometric Metalâ€“Support Interactions. Journal of Physical Chemistry C, 2020, 124, 25299-25307.	3.1	18
35	Pilot multi-site quality assurance study of batch-mode clinical-scale automated xenon-129 hyperpolarizers. Journal of Magnetic Resonance, 2020, 316, 106755.	2.1	9
36	Chemical Reaction Monitoring using Zeroâ€Field Nuclear Magnetic Resonance Enables Study of Heterogeneous Samples in Metal Containers. Angewandte Chemie - International Edition, 2020, 59, 17026-17032.	13.8	26

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37	Parawasserstoffâ€induzierte Hyperpolarisation von Gasen. Angewandte Chemie, 2020, 132, 17940-17949.	2.0	1
38	Chemical Reaction Monitoring using Zeroâ€Field Nuclear Magnetic Resonance Enables Study of Heterogeneous Samples in Metal Containers. Angewandte Chemie, 2020, 132, 17174-17180.	2.0	0
39	Parahydrogenâ€Induced Hyperpolarization of Gases. Angewandte Chemie - International Edition, 2020, 59, 17788-17797.	13.8	27
40	Helium-rich mixtures for improved batch-mode clinical-scale spin-exchange optical pumping of Xenon-129. Journal of Magnetic Resonance, 2020, 315, 106739.	2.1	6
41	Catalytic hydrogenation with parahydrogen: a bridge from homogeneous to heterogeneous catalysis. Pure and Applied Chemistry, 2020, 92, 1029-1046.	1.9	17
42	Robust In Situ Magnetic Resonance Imaging of Heterogeneous Catalytic Hydrogenation with and without Hyperpolarization. ChemCatChem, 2019, 11, 969-973.	3.7	7
43	Singleâ€Site Heterogeneous Catalysts: From Synthesis to NMR Signal Enhancement. Chemistry - A European Journal, 2019, 25, 1420-1431.	3.3	27
44	Quasi-Resonance Fluorine-19 Signal Amplification by Reversible Exchange. Journal of Physical Chemistry Letters, 2019, 10, 4229-4236.	4.6	23
45	Low-valent homobimetallic Rh complexes: influence of ligands on the structure and the intramolecular reactivity of Rhâ€“H intermediates. Chemical Science, 2019, 10, 7937-7945.	7.4	15
46	15 N Hyperpolarization of Dalfampridine at Natural Abundance for Magnetic Resonance Imaging. Chemistry - A European Journal, 2019, 25, 12694-12697.	3.3	18
47	Parahydrogen-induced polarization with a metal-free Pâ€“P biradicaloid. Physical Chemistry Chemical Physics, 2019, 21, 5890-5893.	2.8	13
48	Parahydrogen-Induced Polarization of 1-¹³C-Acetates and 1-¹³C-Pyruvates Using Sidearm Hydrogenation of Vinyl, Allyl, and Propargyl Esters. Journal of Physical Chemistry C, 2019, 123, 12827-12840.	3.1	28
49	Clinical-Scale Batch-Mode Production of Hyperpolarized Propane Gas for MRI. Analytical Chemistry, 2019, 91, 4741-4746.	6.5	23
50	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.	3.3	48
51	Relaxation Dynamics of Nuclear Long-Lived Spin States in Propane and Propane-d6 Hyperpolarized by Parahydrogen. Journal of Physical Chemistry C, 2019, 123, 11734-11744.	3.1	18
52	¹⁵N MRI of SLICâ€SABRE Hyperpolarized ¹⁵Nâ€Labelled Pyridine and Nicotinamide. Chemistry - A European Journal, 2019, 25, 8465-8470.	3.3	33
53	Heterogeneous hydrogenation of phenylalkynes with parahydrogen: hyperpolarization, reaction selectivity, and kinetics. Physical Chemistry Chemical Physics, 2019, 21, 26477-26482.	2.8	12
54	A versatile synthetic route to the preparation of ¹⁵N heterocycles. Journal of Labelled Compounds and Radiopharmaceuticals, 2019, 62, 892-902.	1.0	7

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55	Parahydrogen-Induced Polarization Study of the Silica-Supported Vanadium Oxo Organometallic Catalyst. Journal of Physical Chemistry C, 2018, 122, 4891-4900.	3.1	15
56	Spontaneous ¹⁵N Nuclear Spin Hyperpolarization in Metal-Free Activation of Parahydrogen by Molecular Tweezers. Journal of Physical Chemistry Letters, 2018, 9, 903-907.	4.6	14
57	Selective Singleâ€Site Pdâ^'In Hydrogenation Catalyst for Production of Enhanced Magnetic Resonance Signals using Parahydrogen. Chemistry - A European Journal, 2018, 24, 2547-2553.	3.3	50
58	Quantifying the adsorption of flowing gas mixtures in porous materials by remote detection NMR. Microporous and Mesoporous Materials, 2018, 269, 148-151.	4.4	3
59	Mechanistic Insight into the Heterogeneous Hydrogenation of Furan Derivatives with the use of Parahydrogen. ChemCatChem, 2018, 10, 1178-1183.	3.7	20
60	Effects of Deuteration of ¹³C-Enriched Phospholactate on Efficiency of Parahydrogen-Induced Polarization by Magnetic Field Cycling. Journal of Physical Chemistry C, 2018, 122, 24740-24749.	3.1	12
61	Chemical Exchange Reaction Effect on Polarization Transfer Efficiency in SLIC-SABRE. Journal of Physical Chemistry A, 2018, 122, 9107-9114.	2.5	33
62	¹⁹F Hyperpolarization of ¹⁵N-3-¹⁹F-Pyridine via Signal Amplification by Reversible Exchange. Journal of Physical Chemistry C, 2018, 122, 23002-23010.	3.1	23
63	Hyperpolarized NMR Spectroscopy: dâ€DNP, PHIP, and SABRE Techniques. Chemistry - an Asian Journal, 2018, 13, 1857-1871.	3.3	180
64	Facile Removal of Homogeneous SABRE Catalysts for Purifying Hyperpolarized Metronidazole, a Potential Hypoxia Sensor. Journal of Physical Chemistry C, 2018, 122, 16848-16852.	3.1	69
65	Synthesis of Unsaturated Precursors for Parahydrogen-Induced Polarization and Molecular Imaging of 1-¹³C-Acetates and 1-¹³C-Pyruvates via Side Arm Hydrogenation. ACS Omega, 2018, 3, 6673-6682.	3.5	33
66	Heterogeneous Parahydrogen Pairwise Addition to Cyclopropane. ChemPhysChem, 2018, 19, 2621-2626.	2.1	19
67	Bimetallic Pdâ€“Au/Highly Oriented Pyrolytic Graphite Catalysts: from Composition to Pairwise Parahydrogen Addition Selectivity. Journal of Physical Chemistry C, 2018, 122, 18588-18595.	3.1	17
68	Recent MRI Studies on Heterogeneous Catalysis. Annual Reports on NMR Spectroscopy, 2018, 95, 83-145.	1.5	11
69	The effect of oxidative and reductive treatments of titania-supported metal catalysts on the pairwise hydrogen addition to unsaturated hydrocarbons. Catalysis Today, 2017, 283, 82-88.	4.4	20
70	NMR Hyperpolarization Techniques of Gases. Chemistry - A European Journal, 2017, 23, 724-724.	3.3	1
71	NMR Spin-Lock Induced Crossing (SLIC) dispersion and long-lived spin states of gaseous propane at low magnetic field (0.05 T). Journal of Magnetic Resonance, 2017, 276, 78-85.	2.1	36
72	Extending the Lifetime of Hyperpolarized Propane Gas through Reversible Dissolution. Journal of Physical Chemistry C, 2017, 121, 4481-4487.	3.1	18

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73	2D Mapping of NMR Signal Enhancement and Relaxation for Heterogeneously Hyperpolarized Propane Gas. Journal of Physical Chemistry C, 2017, 121, 10038-10046.	3.1	31
74	Frontispiece: NMR Hyperpolarization Techniques of Gases. Chemistry - A European Journal, 2017, 23, .	3.3	2
75	Heterogeneous Microtesla SABRE Enhancement of ¹⁵N NMR Signals. Angewandte Chemie - International Edition, 2017, 56, 10433-10437.	13.8	58
76	Robust Imidazoleâ€¹⁵N₂ Synthesis for Highâ€Resolution Lowâ€Field (0.05 T) ¹⁵NÂHyperpolarized NMR Spectroscopy. ChemistrySelect, 2017, 2, 4478-4483.	1.5	27
77	Multifunctional human serum albumin-therapeutic nucleotide conjugate with redox and pH-sensitive drug release mechanism for cancer theranostics. Bioorganic and Medicinal Chemistry Letters, 2017, 27, 3925-3930.	2.2	28
78	Pairwise hydrogen addition in the selective semihydrogenation of alkynes on silica-supported Cu catalysts. Chemical Science, 2017, 8, 2426-2430.	7.4	28
79	Imaging of Biomolecular NMR Signals Amplified by Reversible Exchange with Parahydrogen Inside an MRI Scanner. Journal of Physical Chemistry C, 2017, 121, 25994-25999.	3.1	25
80	Efficient Catalytic Microreactors with Atomicâ€Layerâ€Deposited Platinum Nanoparticles on Oxide Support. Chemistry - A European Journal, 2017, 23, 16835-16842.	3.3	8
81	Application of parahydrogen for mechanistic investigations of heterogeneous catalytic processes. Russian Chemical Bulletin, 2017, 66, 273-281.	1.5	1
82	Heterogeneous Microtesla SABRE Enhancement of ¹⁵N NMR Signals. Angewandte Chemie, 2017, 129, 10569-10573.	2.0	27
83	Aqueous, Heterogeneous para-Hydrogen-Induced ¹⁵N Polarization. Journal of Physical Chemistry C, 2017, 121, 15304-15309.	3.1	40
84	Gas-Phase Hydrogenation with Parahydrogen Over Immobilized Vaskaâ€™s Complex. Zeitschrift Fur Physikalische Chemie, 2017, 231, 575-592.	2.8	11
85	NMR Hyperpolarization Techniques of Gases. Chemistry - A European Journal, 2017, 23, 725-751.	3.3	140
86	Xâ€“H Bond Activation on Cr(III),O Sites (X = R, H): Key Steps in Dehydrogenation and Hydrogenation Processes. Organometallics, 2017, 36, 234-244.	2.3	51
87	Nuclear spin hyperpolarization with ansa-aminoboranes: a metal-free perspective for parahydrogen-induced polarization. Physical Chemistry Chemical Physics, 2016, 18, 27784-27795.	2.8	34
88	Production of Pure Aqueous ¹³Câ€Hyperpolarized Acetate by Heterogeneous Parahydrogenâ€Induced Polarization. Chemistry - A European Journal, 2016, 22, 16446-16449.	3.3	36
89	Hyperpolarization of Frozen Hydrocarbon Gases by Dynamic Nuclear Polarization at 1.2 K. Journal of Physical Chemistry Letters, 2016, 7, 3235-3239.	4.6	18
90	Catalysis and Nuclear Magnetic Resonance Signal Enhancement with Parahydrogen. Topics in Catalysis, 2016, 59, 1686-1699.	2.8	24

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91	Efficient Batchâ€Mode Parahydrogenâ€Induced Polarization of Propane. ChemPhysChem, 2016, 17, 3395-3398.	2.1	13
92	Toward production of pure ¹³C hyperpolarized metabolites using heterogeneous parahydrogen-induced polarization of ethyl[1-¹³C]acetate. RSC Advances, 2016, 6, 69728-69732.	3.6	28
93	NMR SLIC Sensing of Hydrogenation Reactions Using Parahydrogen in Low Magnetic Fields. Journal of Physical Chemistry C, 2016, 120, 29098-29106.	3.1	21
94	Câ€“H Activation on Co,O Sites: Isolated Surface Sites versus Molecular Analogs. Journal of the American Chemical Society, 2016, 138, 14987-14997.	13.7	117
95	Hydrogenation of Unsaturated Six-Membered Cyclic Hydrocarbons Studied by the Parahydrogen-Induced Polarization Technique. Journal of Physical Chemistry C, 2016, 120, 13541-13548.	3.1	20
96	Acetylene Oligomerization over Pd Nanoparticles with Controlled Shape: A Parahydrogen-Induced Polarization Study. Journal of Physical Chemistry C, 2016, 120, 4945-4953.	3.1	34
97	A simple analytical model for signal amplification by reversible exchange (SABRE) process. Physical Chemistry Chemical Physics, 2016, 18, 89-93.	2.8	90
98	Gas Phase UTE MRI of Propane and Propene. Tomography, 2016, 2, 49-55.	1.8	21
99	Production of Catalyst-Free Hyperpolarised Ethanol Aqueous Solution via Heterogeneous Hydrogenation with Parahydrogen. Scientific Reports, 2015, 5, 13930.	3.3	41
100	A Mechanistic Study of Thiophene Hydrodesulfurization by the Parahydrogenâ€Induced Polarization Technique. ChemCatChem, 2015, 7, 3508-3512.	3.7	42
101	Strong Metalâ€“Support Interactions for Palladium Supported on TiO₂ Catalysts in the Heterogeneous Hydrogenation with Parahydrogen. ChemCatChem, 2015, 7, 2581-2584.	3.7	54
102	NMR Signal Enhancement for Hyperpolarized Fluids Continuously Generated in Hydrogenation Reactions with Parahydrogen. Journal of Physical Chemistry A, 2015, 119, 996-1006.	2.5	47
103	Singleâ€Atom Gold Catalysis in the Context of Developments in Parahydrogenâ€Induced Polarization. Chemistry - A European Journal, 2015, 21, 7012-7015.	3.3	68
104	Design of protein homocystamides with enhanced tumor uptake properties for 19F magnetic resonance imaging. Bioorganic and Medicinal Chemistry, 2015, 23, 6943-6954.	3.0	30
105	Ultrafast multidimensional Laplace NMR for a rapid and sensitive chemical analysis. Nature Communications, 2015, 6, 8363.	12.8	87
106	Strong ³¹P nuclear spin hyperpolarization produced via reversible chemical interaction with parahydrogen. Chemical Communications, 2015, 51, 2506-2509.	4.1	97
107	Development of new methods in modern selective organic synthesis: preparation of functionalized molecules with atomic precision. Russian Chemical Reviews, 2014, 83, 885-985.	6.5	182
108	Propane-d₆ Heterogeneously Hyperpolarized by Parahydrogen. Journal of Physical Chemistry C, 2014, 118, 28234-28243.	3.1	71

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109	Proton magnetic resonance spectroscopy of brain metabolic shifts induced by acute administration of 2â€deoxyâ€<scp>d</scp>â€glucose and lipopolysaccharides. NMR in Biomedicine, 2014, 27, 399-405.	2.8	27
110	The Feasibility of Formation and Kinetics of NMR Signal Amplification by Reversible Exchange (SABRE) at High Magnetic Field (9.4 T). Journal of the American Chemical Society, 2014, 136, 3322-3325.	13.7	148
111	Tweezers for Parahydrogen: A Metal-Free Probe of Nonequilibrium Nuclear Spin States of H₂ Molecules. Journal of the American Chemical Society, 2014, 136, 598-601.	13.7	36
112	Parahydrogen-induced polarization (PHIP) in heterogeneous hydrogenation over bulk metals and metal oxides. Chemical Communications, 2014, 50, 875-878.	4.1	50
113	Irreversible Catalyst Activation Enables Hyperpolarization and Water Solubility for NMR Signal Amplification by Reversible Exchange. Journal of Physical Chemistry B, 2014, 118, 13882-13889.	2.6	131
114	In Situ and Ex Situ Lowâ€Field NMR Spectroscopy and MRI Endowed by SABRE Hyperpolarization. ChemPhysChem, 2014, 15, 4100-4107.	2.1	58
115	Evaluation of Activation Energies for Pairwise and Non-Pairwise Hydrogen Addition to Propyne Over Pd/Aluminosilicate Fiberglass Catalyst by Parahydrogen-Induced Polarization (PHIP). Applied Magnetic Resonance, 2014, 45, 1051-1061.	1.2	8
116	Nasal aerodynamics protects brain and lung from inhaled dust in subterranean diggers, Ellobius talpinus. Proceedings of the Royal Society B: Biological Sciences, 2014, 281, 20140919.	2.6	7
117	Longâ€Lived Spin States for Lowâ€Field Hyperpolarized Gas MRI. Chemistry - A European Journal, 2014, 20, 14629-14632.	3.3	65
118	High-Resolution Low-Field Molecular Magnetic Resonance Imaging of Hyperpolarized Liquids. Analytical Chemistry, 2014, 86, 9042-9049.	6.5	39
119	Labâ€onâ€aâ€Chip Reactor Imaging with Unprecedented Chemical Resolution by Hadamardâ€Encoded Remote Detection NMR. Angewandte Chemie - International Edition, 2014, 53, 11289-11293.	13.8	15
120	Evaluation of the Mechanism of Heterogeneous Hydrogenation of Î±,Î²-Unsaturated Carbonyl Compounds via Pairwise Hydrogen Addition. ACS Catalysis, 2014, 4, 2022-2028.	11.2	36
121	Highâ€Resolution 3D Proton MRI of Hyperpolarized Gas Enabled by Parahydrogen and Rh/TiO₂ Heterogeneous Catalyst. Chemistry - A European Journal, 2014, 20, 11636-11639.	3.3	72
122	Demonstration of Heterogeneous Parahydrogen Induced Polarization Using Hyperpolarized Agent Migration from Dissolved Rh(I) Complex to Gas Phase. Analytical Chemistry, 2014, 86, 6192-6196.	6.5	27
123	Chapter 1. Magnetic resonance imaging methods in heterogeneous catalysis. Spectroscopic Properties of Inorganic and Organometallic Compounds, 2014, , 1-42.	0.4	11
124	Conversion of Nuclear Spin Isomers of Ethylene. Journal of Physical Chemistry A, 2013, 117, 9673-9683.	2.5	11
125	Magnetic resonance imaging (MRI) study of the water content and transport in rat lenses. Experimental Eye Research, 2013, 113, 162-171.	2.6	6
126	Spin hyperpolarization in NMR to address enzymatic processes in vivo. Mendeleev Communications, 2013, 23, 299-312.	1.6	19

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127	Nuclear Spin Isomers of Ethylene: Enrichment by Chemical Synthesis and Application for NMR Signal Enhancement. Angewandte Chemie - International Edition, 2013, 52, 13251-13255.	13.8	42
128	Toward Continuous Production of Catalyst-Free Hyperpolarized Fluids Based on Biphasic and Heterogeneous Hydrogenations with Parahydrogen. Journal of Physical Chemistry C, 2013, 117, 22887-22893.	3.1	38
129	Generating Parahydrogen-Induced Polarization Using Immobilized Iridium Complexes in the Gas-Phase Hydrogenation of Carbonâ€“Carbon Double and Triple Bonds. Applied Magnetic Resonance, 2013, 44, 289-300.	1.2	32
130	Remote detection NMR imaging of gas phase hydrogenation in microfluidic chips. Lab on A Chip, 2013, 13, 1554.	6.0	20
131	Ligand-Directed Acid-Sensitive Amidophosphate 5-Trifluoromethyl-2â€²-Deoxyuridine Conjugate as a Potential Theranostic Agent. Bioconjugate Chemistry, 2013, 24, 780-795.	3.6	8
132	Kinetic Study of Propylene Hydrogenation over Pt/Al2O3 by Parahydrogen-Induced Polarization. Applied Magnetic Resonance, 2013, 44, 279-288.	1.2	17
133	Selective Hydrogenation of 1,3â€Butadiene and 1â€Butyne over a Rh/Chitosan Catalyst Investigated by using Parahydrogenâ€Induced Polarization. ChemCatChem, 2012, 4, 2031-2035.	3.7	36
134	Parahydrogen-Induced Polarization in Heterogeneous Catalytic Processes. Topics in Current Chemistry, 2012, 338, 123-180.	4.0	100
135	MRI of mass transport in porous media: Drying and sorption processes. Progress in Nuclear Magnetic Resonance Spectroscopy, 2012, 65, 1-65.	7.5	59
136	Quantitative temperature mapping within an operating catalyst by spatially resolved 27Al NMR. Chemical Communications, 2012, 48, 5763.	4.1	15
137	Characterization of Microfluidic Gas Reactors Using Remoteâ€Detection MRI and Parahydrogenâ€Induced Polarization. Angewandte Chemie - International Edition, 2012, 51, 8054-8058.	13.8	51
138	Heterogeneous addition of H2 to double and triple bonds over supported Pd catalysts: a parahydrogen-induced polarization technique study. Physical Chemistry Chemical Physics, 2012, 14, 11008.	2.8	56
139	Role of Different Active Sites in Heterogeneous Alkene Hydrogenation on Platinum Catalysts Revealed by Means of Parahydrogen-Induced Polarization. Journal of Physical Chemistry C, 2011, 115, 13386-13391.	3.1	66
140	The influence of an exothermic reaction on the spatial distribution of the liquid phase in a trickle bed reactor: Direct evidence provided by NMR imaging. Chemical Engineering Journal, 2011, 173, 552-563.	12.7	9
141	Specific features of the crystal and phase structure of binary systems 5,6-(3â€²,4â€²-furazano)-1,2,3,4-tetrazine-1,3-dioxide-2,4-dinitro-2,4-diazapentane. Russian Journal of Applied Chemistry, 2011, 84, 248-255.	0.5	17
142	Parahydrogen-Induced Polarization in Heterogeneous Hydrogenations over Silica-Immobilized Rh Complexes. Applied Magnetic Resonance, 2011, 41, 393-410.	1.2	43
143	Synthesis and characterization of fluorinated homocysteine derivatives as potential molecular probes for 19 F magnetic resonance spectroscopy and imaging. Bioorganic and Medicinal Chemistry Letters, 2011, 21, 4050-4053.	2.2	19
144	A compact layer of alumina modified by CaCl2: The influence of composition and porous structure on water transport. Microporous and Mesoporous Materials, 2010, 131, 358-365.	4.4	11

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145	Application of NMR Spectroscopy and Imaging in Heterogeneous Biocatalysis. Applied Magnetic Resonance, 2010, 37, 483-495.	1.2	5
146	New Perspectives for Parahydrogenâ€Induced Polarization in Liquid Phase Heterogeneous Hydrogenation: An Aqueous Phase and ALTADENA Study. ChemPhysChem, 2010, 11, 3086-3088.	2.1	43
147	Microfluidic Gasâ€Flow Imaging Utilizing Parahydrogenâ€Induced Polarization and Remoteâ€Detection NMR. Angewandte Chemie - International Edition, 2010, 49, 8363-8366.	13.8	60
148	Magnetic resonance imaging as an emerging tool for studying the preparation of supported catalysts. Applied Catalysis A: General, 2010, 374, 126-136.	4.3	25
149	Parahydrogen-Induced Polarization in Heterogeneous Hydrogenations Catalyzed by an Immobilized Au(III) Complex. Journal of Physical Chemistry Letters, 2010, 1, 1705-1708.	4.6	74
150	Magnetic resonance imaging methods for in situ studies in heterogeneous catalysis. Chemical Society Reviews, 2010, 39, 4585.	38.1	103
151	Parahydrogen-induced polarization in alkyne hydrogenation catalyzed by Pd nanoparticles embedded in a supported ionic liquid phase. Chemical Communications, 2010, 46, 5764.	4.1	36
152	An NMR Imaging Study of Steady-State and Periodic Operation Modes of a Trickle Bed Reactor. Topics in Catalysis, 2009, 52, 1371-1380.	2.8	9
153	The generating functions formalism for the analysis of spin response to the periodic trains of RF pulses. Echo sequences with arbitrary refocusing angles and resonance offsets. Journal of Magnetic Resonance, 2009, 196, 164-169.	2.1	19
154	Magnetic Resonance Imaging Studies on Catalyst Impregnation Processes: Discriminating Metal Ion Complexes within Millimeter-Sized Î³-Al₂O₃ Catalyst Bodies. Journal of the American Chemical Society, 2009, 131, 6525-6534.	13.7	39
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