Oleg G Salnikov

List of Publications by Year
in descending order

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60 papers	1,690 citations	257450 24 h-index	302126 39 g-index
67 all docs	67 docs citations	67 times ranked	1073 citing authors

#	Article	IF	Citations
1	Hyperpolarized NMR Spectroscopy: dâ€DNP, PHIP, and SABRE Techniques. Chemistry - an Asian Journal, 2018, 13, 1857-1871.	3.3	180
2	NMR Hyperpolarization Techniques of Gases. Chemistry - A European Journal, 2017, 23, 725-751.	3.3	140
3	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
4	Propane-d₆ Heterogeneously Hyperpolarized by Parahydrogen. Journal of Physical Chemistry C, 2014, 118, 28234-28243.	3.1	71
5	Singleâ€Atom Gold Catalysis in the Context of Developments in Parahydrogenâ€Induced Polarization. Chemistry - A European Journal, 2015, 21, 7012-7015.	3.3	68
6	Strong Metalâ€“Support Interactions for Palladium Supported on TiO₂ Catalysts in the Heterogeneous Hydrogenation with Parahydrogen. ChemCatChem, 2015, 7, 2581-2584.	3.7	54
7	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
8	Parahydrogen-induced polarization (PHIP) in heterogeneous hydrogenation over bulk metals and metal oxides. Chemical Communications, 2014, 50, 875-878.	4.1	50
9	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
10	A Mechanistic Study of Thiophene Hydrodesulfurization by the Parahydrogenâ€Induced Polarization Technique. ChemCatChem, 2015, 7, 3508-3512.	3.7	42
11	Production of Catalyst-Free Hyperpolarised Ethanol Aqueous Solution via Heterogeneous Hydrogenation with Parahydrogen. Scientific Reports, 2015, 5, 13930.	3.3	41
12	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
13	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
14	Production of Pure Aqueous ¹³Câ€Hyperpolarized Acetate by Heterogeneous Parahydrogenâ€Induced Polarization. Chemistry - A European Journal, 2016, 22, 16446-16449.	3.3	36
15	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
16	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
17	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
18	Quantifying the effects of quadrupolar sinksvia¹⁵N relaxation dynamics in metronidazoles hyperpolarizedviaSABRE-SHEATH. Chemical Communications, 2020, 56, 9098-9101.	4.1	32

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19	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
20	Heterogeneous Catalysis and Parahydrogenâ€Induced Polarization. ChemPhysChem, 2021, 22, 1421-1440.	2.1	30
21	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
22	Pairwise hydrogen addition in the selective semihydrogenation of alkynes on silica-supported Cu catalysts. Chemical Science, 2017, 8, 2426-2430.	7.4	28
23	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
24	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
25	Catalysis and Nuclear Magnetic Resonance Signal Enhancement with Parahydrogen. Topics in Catalysis, 2016, 59, 1686-1699.	2.8	24
26	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
27	Clinical-Scale Batch-Mode Production of Hyperpolarized Propane Gas for MRI. Analytical Chemistry, 2019, 91, 4741-4746.	6.5	23
28	NMR SLIC Sensing of Hydrogenation Reactions Using Parahydrogen in Low Magnetic Fields. Journal of Physical Chemistry C, 2016, 120, 29098-29106.	3.1	21
29	Gas Phase UTE MRI of Propane and Propene. Tomography, 2016, 2, 49-55.	1.8	21
30	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
31	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
32	Mechanistic Insight into the Heterogeneous Hydrogenation of Furan Derivatives with the use of Parahydrogen. ChemCatChem, 2018, 10, 1178-1183.	3.7	20
33	Low-Cost High-Pressure Clinical-Scale 50% Parahydrogen Generator Using Liquid Nitrogen at 77 K. Analytical Chemistry, 2021, 93, 8476-8483.	6.5	20
34	Heterogeneous Parahydrogen Pairwise Addition to Cyclopropane. ChemPhysChem, 2018, 19, 2621-2626.	2.1	19
35	Extending the Lifetime of Hyperpolarized Propane Gas through Reversible Dissolution. Journal of Physical Chemistry C, 2017, 121, 4481-4487.	3.1	18
36	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

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37	Parahydrogen-Induced Polarization Relayed via Proton Exchange. Journal of the American Chemical Society, 2021, 143, 13694-13700.	13.7	18
38	Kinetic Study of Propylene Hydrogenation over Pt/Al2O3 by Parahydrogen-Induced Polarization. Applied Magnetic Resonance, 2013, 44, 279-288.	1.2	17
39	Catalytic hydrogenation with parahydrogen: a bridge from homogeneous to heterogeneous catalysis. Pure and Applied Chemistry, 2020, 92, 1029-1046.	1.9	17
40	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
41	Efficient Batchâ€Mode Parahydrogenâ€Induced Polarization of Propane. ChemPhysChem, 2016, 17, 3395-3398.	2.1	13
42	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
43	Heterogeneous hydrogenation of phenylalkynes with parahydrogen: hyperpolarization, reaction selectivity, and kinetics. Physical Chemistry Chemical Physics, 2019, 21, 26477-26482.	2.8	12
44	Heterogeneous Parahydrogenâ€Induced Polarization of Diethyl Ether for Magnetic Resonance Imaging Applications. Chemistry - A European Journal, 2021, 27, 1316-1322.	3.3	12
45	Parahydrogenâ€Induced Polarization of Diethyl Ether Anesthetic. Chemistry - A European Journal, 2020, 26, 13621-13626.	3.3	11
46	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
47	Heterogeneous ¹H and ¹³C Parahydrogenâ€Induced Polarization of Acetate and Pyruvate Esters. ChemPhysChem, 2021, 22, 1389-1396.	2.1	9
48	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
49	Lowâ€Flammable Parahydrogenâ€Polarized MRI Contrast Agents. Chemistry - A European Journal, 2021, 27, 2774-2781.	3.3	8
50	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
51	CHAPTER 6. Catalytic Enhancement of NMR Sensitivity for Advanced Spectroscopic and Imaging Studies in Catalysis and Life Sciences. RSC Smart Materials, 2017, , 142-171.	0.1	7
52	¹⁵N NMR Hyperpolarization of Radiosensitizing Antibiotic Nimorazole by Reversible Parahydrogen Exchange in Microtesla Magnetic Fields. Angewandte Chemie, 2021, 133, 2436-2443.	2.0	6
53	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
54	Mechanisms of Methylenecyclobutane Hydrogenation over Supported Metal Catalysts Studied by Parahydrogenâ€Induced Polarization Technique. ChemPhysChem, 2022, 23, .	2.1	5

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55	The Suzukiâ€“Miyaura reaction as a tool for modification of phenoxyl-nitroxyl radicals of the 4H-imidazole N-oxide series. RSC Advances, 2018, 8, 26099-26107.	3.6	4
56	New aspects of parahydrogen-induced polarization for C2â€”C3 hydrocarbons using metal complexes. Russian Chemical Bulletin, 2021, 70, 2382-2389.	1.5	4
57	Application of parahydrogen for mechanistic investigations of heterogeneous catalytic processes. Russian Chemical Bulletin, 2017, 66, 273-281.	1.5	1
58	Frontispiece: Parahydrogenâ€Induced Polarization of Diethyl Ether Anesthetic. Chemistry - A European Journal, 2020, 26, .	3.3	0
59	Frontispiece: Heterogeneous Parahydrogenâ€Induced Polarization of Diethyl Ether for Magnetic Resonance Imaging Applications. Chemistry - A European Journal, 2021, 27, .	3.3	0
60	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