Andreas BÃ¶smann

List of Publications by Year
in descending order

61 papers	4,549 citations	136950 32 h-index	133252 59 g-index
63 all docs	63 docs citations	63 times ranked	3487 citing authors

#	Article	IF	Citations
1	Deep desulfurization of diesel fuel by extraction with ionic liquids. Chemical Communications, 2001, , 2494-2495.	4.1	543
2	1-n-Butyl-3-methylimidazolium ([bmim]) octylsulfateâ€"an even â€˜greenerâ€™ ionic liquid. Green Chemistry, 2002, 4, 400-404.	9.0	399
3	Evaluation of Industrially Applied Heatâ€Transfer Fluids as Liquid Organic Hydrogen Carrier Systems. ChemSusChem, 2014, 7, 229-235.	6.8	299
4	Synthesis and properties of ionic liquids derived from the â€˜chiral poolâ€™Electronic supplementary information (ESI) available: characterisation of compounds 1a, 2 and 3. See http://www.rsc.org/suppdata/cc/b1/b109493a/. Chemical Communications, 2002, , 200-201.	4.1	231
5	Oxidative Depolymerization of Lignin in Ionic Liquids. ChemSusChem, 2010, 3, 719-723.	6.8	213
6	Activation, Tuning, and Immobilization of Homogeneous Catalysts in an Ionic Liquid/Compressed CO2 Continuous-Flow System. Angewandte Chemie - International Edition, 2001, 40, 2697-2699.	13.8	203
7	Environmental and health impact assessment of Liquid Organic Hydrogen Carrier (LOHC) systems â€“ challenges and preliminary results. Energy and Environmental Science, 2015, 8, 1035-1045.	30.8	188
8	Selective catalytic conversion of biobased carbohydrates to formic acid using molecular oxygen. Green Chemistry, 2011, 13, 2759.	9.0	176
9	Selective oxidation of complex, water-insoluble biomass to formic acid using additives as reaction accelerators. Energy and Environmental Science, 2012, 5, 7956.	30.8	163
10	Hydrogen storage using a hot pressure swing reactor. Energy and Environmental Science, 2017, 10, 1652-1659.	30.8	131
11	Spectroscopic and electrochemical characterization of heteropoly acids for their optimized application in selective biomass oxidation to formic acid. Green Chemistry, 2014, 16, 226-237.	9.0	120
12	Effective Chirality Transfer in Ionic Liquids through Ion-Pairing Effects. Angewandte Chemie - International Edition, 2007, 46, 1293-1295.	13.8	106
13	Chemical utilization of hydrogen from fluctuating energy sources â€“ Catalytic transfer hydrogenation from charged Liquid Organic Hydrogen Carrier systems. International Journal of Hydrogen Energy, 2016, 41, 1010-1017.	7.1	101
14	Dynamic power supply by hydrogen bound to a liquid organic hydrogen carrier. Applied Energy, 2017, 194, 1-8.	10.1	92
15	Benzyltoluene/dibenzyltoluene-based mixtures as suitable liquid organic hydrogen carrier systems for low temperature applications. International Journal of Hydrogen Energy, 2020, 45, 14897-14906.	7.1	89
16	Hydrogenation of the liquid organic hydrogen carrier compound dibenzyltoluene â€“ reaction pathway determination by ¹H NMR spectroscopy. Reaction Chemistry and Engineering, 2016, 1, 313-320.	3.7	87
17	Boosting the activity of hydrogen release from liquid organic hydrogen carrier systems by sulfur-additives to Pt on alumina catalysts. Catalysis Science and Technology, 2019, 9, 3537-3547.	4.1	84
18	Halide-Free Synthesis and Tribological Performance of Oil-Miscible Ammonium and Phosphonium-Based Ionic Liquids. ACS Sustainable Chemistry and Engineering, 2015, 3, 797-808.	6.7	73

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19	Towards an efficient liquid organic hydrogen carrier fuel cell concept. Energy and Environmental Science, 2019, 12, 2305-2314.	30.8	73
20	Efficient hydrogen release from perhydro-N-ethylcarbazole using catalyst-coated metallic structures produced by selective electron beam melting. Energy and Environmental Science, 2015, 8, 641-649.	30.8	71
21	Analysis of reaction mixtures of perhydro-dibenzyltoluene using two-dimensional gas chromatography and single quadrupole gas chromatography. International Journal of Hydrogen Energy, 2018, 43, 5620-5636.	7.1	67
22	Purity of hydrogen released from the Liquid Organic Hydrogen Carrier compound perhydro dibenzyltoluene by catalytic dehydrogenation. International Journal of Hydrogen Energy, 2020, 45, 712-720.	7.1	65
23	Hydrogen Storage: Thermochemical Studies of N-Alkylcarbazoles and Their Derivatives as a Potential Liquid Organic Hydrogen Carriers. Journal of Physical Chemistry C, 2015, 119, 26381-26389.	3.1	62
24	Catalytic production of hydrogen from glucose and other carbohydrates under exceptionally mild reaction conditions. Green Chemistry, 2010, 12, 1150.	9.0	58
25	Hydrogenation of aromatic and heteroaromatic compounds â€“ a key process for future logistics of green hydrogen using liquid organic hydrogen carrier systems. Sustainable Energy and Fuels, 2021, 5, 1311-1346.	4.9	53
26	Quantitative Analysis of Alphaâ€<scp>D</scp>â€glucose in an Ionic Liquid by Using Infrared Spectroscopy. ChemPhysChem, 2008, 9, 1317-1322.	2.1	51
27	Highly efficient, low-temperature hydrogen release from perhydro-benzyltoluene using reactive distillation. Energy and Environmental Science, 2020, 13, 3119-3128.	30.8	50
28	Enhanced Activity and Selectivity in Catalytic Methanol Steam Reforming by Basic Alkali Metal Salt Coatings. Angewandte Chemie - International Edition, 2013, 52, 5028-5032.	13.8	43
29	Operational Stability of a LOHCâ€Based Hot Pressure Swing Reactor for Hydrogen Storage. Energy Technology, 2019, 7, 146-152.	3.8	41
30	Chloroalkylsulfonate ionic liquids by ring opening of sultones with organic chloride salts. Chemical Communications, 2008, , 3867.	4.1	39
31	Hydrogenation of liquid organic hydrogen carrier systems using multicomponent gas mixtures. International Journal of Hydrogen Energy, 2019, 44, 31172-31182.	7.1	39
32	Carbon Dioxideâ€Free Hydrogen Production with Integrated Hydrogen Separation and Storage. ChemSusChem, 2017, 10, 42-47.	6.8	35
33	Charging a Liquid Organic Hydrogen Carrier with Wet Hydrogen from Electrolysis. ACS Sustainable Chemistry and Engineering, 2019, 7, 4186-4194.	6.7	34
34	Influence of the nanoparticle size on hydrogen release and side product formation in liquid organic hydrogen carrier systems with supported platinum catalysts. Catalysis Science and Technology, 2020, 10, 6669-6678.	4.1	34
35	Macrokinetic effects in perhydro-N-ethylcarbazole dehydrogenation and H₂productivity optimization by using egg-shell catalysts. Energy and Environmental Science, 2015, 8, 3013-3021.	30.8	33
36	Experimental determination of the hydrogenation/dehydrogenation - Equilibrium of the LOHC system H0/H18-dibenzyltoluene. International Journal of Hydrogen Energy, 2021, 46, 32583-32594.	7.1	29

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37	Screening of Ionic Liquid/H₂O Working Pairs for Application in Low Temperature Driven Sorption Heat Pump Systems. ACS Sustainable Chemistry and Engineering, 2015, 3, 750-757.	6.7	27
38	Determination of Glucose and Cellobiose Dissolved in the Ionic Liquid 1-Ethyl-3-Methylimidazolium Acetate Using Fourier Transform Infrared Spectroscopy. Applied Spectroscopy, 2009, 63, 1041-1049.	2.2	26
39	MFI-type (ZSM-5) zeolite-filled TiO2nanotubes for enhanced photocatalytic activity. Nanotechnology, 2009, 20, 225607.	2.6	25
40	Charging a Liquid Organic Hydrogen Carrier System with H₂/CO₂ Gas Mixtures. ChemCatChem, 2018, 10, 4329-4337.	3.7	24
41	Resilience of Liquid Organic Hydrogen Carrier Based Energyâ€Storage Systems. Energy Technology, 2018, 6, 529-539.	3.8	22
42	Dehydrogenation of perhydro-N-ethylcarbazole under reduced total pressure. International Journal of Hydrogen Energy, 2021, 46, 15660-15670.	7.1	21
43	Dehydrogenation of the liquid organic hydrogen carrier system 2-methylindole/2-methylindoline/2-methyloctahydroindole on Pt(111). Journal of Chemical Physics, 2019, 151, 144711.	3.0	19
44	Pressurized hydrogen from charged liquid organic hydrogen carrier systems by electrochemical hydrogen compression. International Journal of Hydrogen Energy, 2021, 46, 15624-15634.	7.1	19
45	Effect of the degree of hydrogenation on the viscosity, surface tension, and density of the liquid organic hydrogen carrier system based on diphenylmethane. International Journal of Hydrogen Energy, 2022, 47, 6111-6130.	7.1	19
46	Chirality Transfer in Imidazolium Camphorsulfonate Ionic Liquids through Ion Pairing Effects. Advanced Synthesis and Catalysis, 2009, 351, 432-440.	4.3	17
47	Thermochemical Properties and Dehydrogenation Thermodynamics of Indole Derivates. Industrial & Engineering Chemistry Research, 2020, 59, 20539-20550.	3.7	17
48	Enhancing Task Specific Ionic Liquidsâ€™ Thermal Stability by Structural Modification. Monatshefte FÃ¼r Chemie, 2007, 138, 1159-1161.	1.8	16
49	Homogeneously-catalysed hydrogen release/storage using the 2-methylindole/2-methylindoline LOHC system in molten salt-organic biphasic reaction systems. Chemical Communications, 2019, 55, 2046-2049.	4.1	16
50	Electrophoretic Deposition of Boehmite on Additively Manufactured, Interpenetrating Periodic Open Cellular Structures for Catalytic Applications. Industrial & Engineering Chemistry Research, 2017, 56, 13402-13410.	3.7	15
51	New Ionic Liquids Based on Alkylsulfate and Alkyl Oligoether Sulfate Anions: Synthesis and Applications. ACS Symposium Series, 2003, , 57-69.	0.5	13
52	Enhancing the feasibility of Pd/C-catalyzed formic acid decomposition for hydrogen generation â€“ catalyst pretreatment, deactivation, and regeneration. Catalysis Science and Technology, 2021, 11, 4259-4271.	4.1	12
53	Low melting Li/K/Cs acetate salt mixtures as new ionic media for catalytic applications â€“ first physico-chemical characterization. Dalton Transactions, 2012, 41, 14433.	3.3	10
54	Interface Properties and Physicochemical Characterization of the Low-Temperature Molten Salt Li/K/Cs Acetate. Journal of Physical Chemistry C, 2013, 117, 22939-22946.	3.1	7

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55	Thermochemical properties of 6,7-benzindole and its perhydrogenated derivative: A model component for liquid organic hydrogen carriers. Fuel, 2022, 324, 124410.	6.4	6
56	CO₂ as a Viscosity Index Improver for Wind Turbine Oils. Industrial & Engineering Chemistry Research, 2015, 54, 5810-5819.	3.7	5
57	Quantitative measurement of complex substances dissolved in an ionic liquid using IR spectroscopy and chemometrics. TM Technisches Messen, 2017, 84, 32-37.	0.7	2
58	Quantitative IR-spektroskopische Detektion von Zucker in ionischen FlÃ¼ssigkeiten. Chemie-Ingenieur-Technik, 2008, 80, 1387-1388.	0.8	0
59	Reaktivextraktion von MilchsÃure aus FermenterbrÃ¼he. Chemie-Ingenieur-Technik, 2009, 81, 1226-1227.	0.8	0
60	Depolymerisation von Lignin in ionischen FlÃ¼ssigkeiten. Chemie-Ingenieur-Technik, 2009, 81, 1052-1052.	0.8	0
61	Dynamische Energiefreisetzung aus WasserstofftrÃgermaterialien. Chemie-Ingenieur-Technik, 2016, 88, 1270-1271.	0.8	0