

Robert GÃ¼ttel

List of Publications by Year in descending order

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citations

279798

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76
all docs

76
docs citations

76
times ranked

2234
citing authors

#	ARTICLE	IF	CITATIONS
1	Model-Independent Size Distribution Determination of Superparamagnetic Nanoparticles. IEEE Transactions on Magnetics, 2022, 58, 1-5.	2.1	1
2	Frequency Response Analysis of the Unsteady-State CO/CO ₂ Methanation Reaction: An Experimental Study. Industrial & Engineering Chemistry Research, 2022, 61, 2045-2054.	3.7	4
3	Process Intensification Strategies for Power-to-X Technologies. ChemEngineering, 2022, 6, 13.	2.4	11
4	Hydrogenation of CO/CO ₂ mixtures under unsteady-state conditions: Effect of the carbon oxides on the dynamic methanation process. Chemical Engineering Science, 2022, 250, 117405.	3.8	8
5	Impact of heat transport properties and configuration of ceramic fibrous catalyst structures for CO ₂ methanation: A simulation study. Journal of Environmental Chemical Engineering, 2022, 10, 107148.	6.7	7
6	Evaluation of the application of different diffusion models for the methanation of CO/CO ₂ mixtures. Results in Engineering, 2022, 13, 100355.	5.1	2
7	Study on the tolerance of low-temperature CO methanation with single pulse experiments. Chemical Engineering Journal, 2022, 443, 136262.	12.7	6
8	The Impact of Support Material of Cobalt-Based Catalysts Prepared by Double Flame Spray Pyrolysis on CO ₂ Methanation Dynamics. ChemCatChem, 2022, 14, .	3.7	11
9	Transient Behavior of CO and CO ₂ Hydrogenation on Fe@SiO ₂ Core-Shell Model Catalysts: A Stoichiometric Analysis of Experimental Data. Reactions, 2022, 3, 374-391.	2.1	1
10	Simulation Study of Ceramic Fibrous Structured Catalysts for CO ₂ Methanation: Enhancement of the Performance and Comparison to Pellet Catalysts. Topics in Catalysis, 2022, 65, 1317-1330.	2.8	1
11	Stability of Cobalt Particles In and Outside HZSM-5 under CO Hydrogenation Conditions Studied by <i>ex situ</i> and <i>in situ</i> Electron Microscopy. ChemCatChem, 2021, 13, 718-729.	3.7	9
12	Iron Based Core-Shell Structures as Versatile Materials: Magnetic Support and Solid Catalyst. Catalysts, 2021, 11, 72.	3.5	9
13	Correction to "Ceramic Fiber-Based Structures as Catalyst Supports: A Study on Mass and Heat Transport Behavior Applied to CO ₂ Methanation. Industrial & Engineering Chemistry Research, 2021, 60, 5721-5722.	3.7	0
14	Bifunctional Cobalt-based Catalysts for Fischer-Tropsch Synthesis: Descriptors Affecting the Product Distribution. ChemCatChem, 2021, 13, 2726-2742.	3.7	10
15	Challenges in transfer of gas-liquid reactions from batch to continuous operation: dimensional analysis and simulations for aerobic oxidation. Journal of Flow Chemistry, 2021, 11, 625-640.	1.9	1
16	Atomization of gold nanoparticles in graphite furnace AAS: Modelling and simulative exploration of experimental results. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2021, 182, 106249.	2.9	4
17	The periodic transient kinetics method for investigation of kinetic process dynamics under realistic conditions: Methanation as an example. Chemical Engineering Research and Design, 2021, 173, 253-266.	5.6	12
18	Cobalt-based Nanoreactors in Combined Fischer-Tropsch Synthesis and Hydroprocessing: Effects on Methane and CO ₂ Selectivity. ChemCatChem, 2021, 13, 5216-5227.	3.7	6

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19	Transient Flow Rate Ramps for Methanation of Carbon Dioxide in an Adiabatic Fixed-Bed Recycle Reactor. <i>Energy Technology</i> , 2020, 8, 1901116.	3.8	23
20	Water Purification and Microplastics Removal Using Magnetic Polyoxometalate-Supported Ionic Liquid Phases (magPOM-SILPs). <i>Angewandte Chemie - International Edition</i> , 2020, 59, 1601-1605.	13.8	153
21	Determination of activation energies for atomization of gold nanoparticles in graphite furnace atomic absorption spectrometry. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2020, 173, 105976.	2.9	5
22	Measuring Adsorption Capacity of Supported Catalysts with a Novel Quasi-Continuous Pulse Chemisorption Method. <i>ChemCatChem</i> , 2020, 12, 4373-4386.	3.7	10
23	<i>Technische Chemie. Nachrichten Aus Der Chemie</i> , 2020, 68, 46-53.	0.0	2
24	Hydrogenation of CO/CO ₂ Mixtures on Nickel Catalysts: Kinetics and Flexibility for Nickel Catalysts. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 14668-14678.	3.7	13
25	Ceramic Fiber-Based Structures as Catalyst Supports: A Study on Mass and Heat Transport Behavior Applied to CO ₂ Methanation. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 16539-16552.	3.7	9
26	Fe based core-shell model catalysts for the reaction of CO ₂ with H ₂ . <i>Reaction Kinetics, Mechanisms and Catalysis</i> , 2020, 131, 119-128.	1.7	4
27	CO ₂ Methanation on Fe Catalysts Using Different Structural Concepts. <i>Chemie-Ingenieur-Technik</i> , 2020, 92, 603-607.	0.8	14
28	Cobalt@Silica Core-Shell Catalysts for Hydrogenation of CO/CO ₂ Mixtures to Methane. <i>ChemCatChem</i> , 2019, 11, 4884-4893.	3.7	29
29	Dynamic Methanation of CO ₂ – Effect of Concentration Forcing. <i>Chemie-Ingenieur-Technik</i> , 2019, 91, 576-582.	0.8	22
30	Performance of diffusion-optimised Fischer-Tropsch catalyst layers in microchannel reactors at integral operation. <i>Catalysis Science and Technology</i> , 2019, 9, 2180-2195.	4.1	13
31	Start-up Time and Load Range for the Methanation of Carbon Dioxide in a Fixed-Bed Recycle Reactor. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 6391-6400.	3.7	53
32	Aerobic Oxidation Catalysis by a Molecular Barium Vanadium Oxide. <i>Chemistry - A European Journal</i> , 2018, 24, 4952-4956.	3.3	19
33	Process Intensification – An Unbroken Trend in Chemical Engineering. <i>Chemie-Ingenieur-Technik</i> , 2018, 90, 1823-1831.	0.8	10
34	Continuous Synthesis of Nanostructured Co ₃ O ₄ @SiO ₂ Core-Shell Particles in a Laminar-Flow Reactor. <i>Chemie-Ingenieur-Technik</i> , 2017, 89, 963-967.	0.8	9
35	Transfer Functions for Periodic Reactor Operation: Fundamental Methodology for Simple Reaction Networks. <i>Chemical Engineering and Technology</i> , 2017, 40, 2096-2103.	1.5	9
36	Improvement of Fischer-Tropsch Synthesis through Structuring on Different Scales. <i>Energy Technology</i> , 2016, 4, 44-54.	3.8	28

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37	Challenges in polyoxometalate-mediated aerobic oxidation catalysis: catalyst development meets reactor design. Dalton Transactions, 2016, 45, 16716-16726.	3.3	75
38	Unsteady-state methanation of carbon dioxide in a fixed-bed recycle reactor – Experimental results for transient flow rate ramps. Fuel Processing Technology, 2016, 153, 87-93.	7.2	45
39	Improving the Accessibility of Fischer-Tropsch Synthesis Catalyst Layers by Insertion of Transport Pores. , 2016, , 43-54.		0
40	Investigations on the Low Temperature Methanation with Pulse Reaction of CO. Chemie-Ingenieur-Technik, 2016, 88, 1833-1838.	0.8	9
41	Experimental evaluation of catalyst layers with bimodal pore structure for Fischer-Tropsch synthesis. Catalysis Today, 2016, 275, 155-163.	4.4	11
42	Enhancing internal mass transport in Fischer-Tropsch catalyst layers utilizing transport pores. Catalysis Science and Technology, 2016, 6, 275-287.	4.1	26
43	Monolithic Honeycombs in Loop Reactor Configuration for Intensification of Multiphase Processes. Chemical Engineering and Technology, 2015, 38, 1726-1732.	1.5	7
44	Nullemissionen-Kraftwerk zur stofflichen Energiespeicherung sowie Strom- und Wärmeerzeugung. Chemie-Ingenieur-Technik, 2015, 87, 419-425.	0.8	4
45	Micro/Macroporous System: MFI-type Zeolite Crystals with Embedded Macropores. Advanced Materials, 2015, 27, 1066-1070.	21.0	93
46	Structuring of Reactors and Catalysts on Multiple Scales: Potential and Limitations for Fischer-Tropsch Synthesis. Chemie-Ingenieur-Technik, 2015, 87, 694-701.	0.8	11
47	Nanostructured Encapsulated Catalysts for Combination of Fischer-Tropsch Synthesis and Hydroprocessing. ChemCatChem, 2015, 7, 1018-1022.	3.7	39
48	Optimization of Catalysts for Fischer-Tropsch Synthesis by Introduction of Transport Pores. Chemie-Ingenieur-Technik, 2014, 86, 544-549.	0.8	22
49	Chemical Process Technology. Von J. A. Moulijn, M. Makkee, A. E. van Diepen. Chemie-Ingenieur-Technik, 2014, 86, 585-585.	0.8	0
50	Chemische Speicherung regenerativer elektrischer Energie durch Methanisierung von Prozessgasen aus der Stahlindustrie. Chemie-Ingenieur-Technik, 2014, 86, 734-739.	0.8	17
51	Study of temperature-programmed calcination of cobalt-based catalysts under NO-containing atmosphere. Catalysis Today, 2013, 215, 8-12.	4.4	9
52	Holdup and Pressure Drop in Micro Packed-Bed Reactors for Fischer-Tropsch Synthesis. Chemie-Ingenieur-Technik, 2013, 85, 455-460.	0.8	30
53	Study of Unsteady-State Operation of Methanation by Modeling and Simulation. Chemical Engineering and Technology, 2013, 36, 1675-1682.	1.5	20
54	Direct dimethyl ether synthesis by spatial patterned catalyst arrangement: A modeling and simulation study. AIChE Journal, 2012, 58, 3468-3473.	3.6	18

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55	Au, @ZrO ₂ yolk-shell catalysts for CO oxidation: Study of particle size effect by ex-post size control of Au cores. <i>Journal of Catalysis</i> , 2012, 289, 100-104.	6.2	54
56	Activity improvement of gold yolk-shell catalysts for CO oxidation by doping with TiO ₂ . <i>Catalysis Science and Technology</i> , 2011, 1, 65.	4.1	65
57	The German Catalyst for Success: Weimar. <i>ChemCatChem</i> , 2011, 3, 1659-1660.	3.7	0
58	High-Temperature Stable, Iron-Based Core-Shell Catalysts for Ammonia Decomposition. <i>Chemistry - A European Journal</i> , 2011, 17, 598-605.	3.3	108
59	Yolk-Shell Gold Nanoparticles as Model Materials for Support-Effect Studies in Heterogeneous Catalysis: Au, @C and Au, @ZrO ₂ for CO Oxidation as an Example. <i>Chemistry - A European Journal</i> , 2011, 17, 8434-8439.	3.3	107
60	Fischer-Tropsch synthesis in milli-structured fixed-bed reactors: Experimental study and scale-up considerations. <i>Chemical Engineering and Processing: Process Intensification</i> , 2010, 49, 958-964.	3.6	65
61	Assessment of micro-structured fixed-bed reactors for highly exothermic gas-phase reactions. <i>Chemical Engineering Science</i> , 2010, 65, 1644-1654.	3.8	50
62	Influence of the Microstructure of Gold-Zirconia Yolk-Shell Catalysts on the CO Oxidation Activity. <i>Journal of Physical Chemistry C</i> , 2010, 114, 19386-19394.	3.1	36
63	Ex-post size control of high-temperature-stable yolk-shell Au, @ZrO ₂ catalysts. <i>Chemical Communications</i> , 2010, 46, 895-897.	4.1	79
64	Correlation of microstructure and catalytic properties of gold-zirconia core-shell nanostructures. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2010, 66, s166-s167.	0.3	0
65	Mikrostrukturierte Festbettreaktoren für stark exotherme Gasphasenreaktionen: Eine Machbarkeitsstudie. <i>Chemie-Ingenieur-Technik</i> , 2009, 81, 495-500.	0.8	4
66	Comparison of different reactor types for low temperature Fischer-Tropsch synthesis: A simulation study. <i>Chemical Engineering Science</i> , 2009, 64, 955-964.	3.8	114
67	Monolith loop reactor for hydrogenation of glucose. <i>Catalysis Today</i> , 2009, 147, S342-S346.	4.4	40
68	Reactors for Fischer-Tropsch Synthesis. <i>Chemical Engineering and Technology</i> , 2008, 31, 746-754.	1.5	156
69	Preparation and Catalytic Evaluation of Cobalt-Based Monolithic and Powder Catalysts for Fischer-Tropsch Synthesis. <i>Industrial & Engineering Chemistry Research</i> , 2008, 47, 6589-6597.	3.7	44
70	Modelling and Simulation of the Monolithic Reactor for Gas-Liquid-Solid Reactions. <i>Chemical Engineering Research and Design</i> , 2005, 83, 811-819.	5.6	29