Gunther Kolb

List of Publications by Year in descending order

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Version: 2024-02-01

61 papers	2,766 citations	201385 27 h-index	197535 49 g-index
69 all docs	69 docs citations	69 times ranked	2246 citing authors

#	Article	IF	Citations
1	Micro-structured reactors for gas phase reactions. Chemical Engineering Journal, 2004, 98, 1-38.	6.6	397
2	Review: Microstructured reactors for distributed and renewable production of fuels and electrical energy. Chemical Engineering and Processing: Process Intensification, 2013, 65, 1-44.	1.8	208
3	Detailed Characterization of Various Porous Alumina-Based Catalyst Coatings Within Microchannels and Their Testing for Methanol Steam Reforming. Chemical Engineering Research and Design, 2003, 81, 721-729.	2.7	113
4	Propane steam reforming in micro-channelsâ€"results from catalyst screening and optimisation. Applied Catalysis A: General, 2004, 277, 155-166.	2.2	113
5	Fuel processing in integrated micro-structured heat-exchanger reactors. Journal of Power Sources, 2007, 171, 198-204.	4.0	93
6	Steam reforming of methanol over Cu/CeO2/Î³-Al2O3 catalysts in a microchannel reactor. Applied Catalysis A: General, 2004, 277, 83-90.	2.2	91
7	Effect of ceria and zirconia promotors on Ni/SBA-15 catalysts for coking and sintering resistant steam reforming of propylene glycol in microreactors. Applied Catalysis B: Environmental, 2017, 203, 859-869.	10.8	89
8	Preferential CO oxidation over a copperâ€“cerium oxide catalyst in a microchannel reactor. Applied Catalysis A: General, 2008, 350, 53-62.	2.2	69
9	Highly active and durable Pt/In2O3/Al2O3 catalysts in methanol steam reforming. International Journal of Hydrogen Energy, 2016, 41, 21990-21999.	3.8	69
10	Selective methanation of carbon oxides in a microchannel reactorâ€"Primary screening and impact of gas additives. Catalysis Today, 2007, 125, 81-87.	2.2	62
11	Methanol steam reforming over bimetallic Pdâ€“In/Al2O3 catalysts in a microstructured reactor. Applied Catalysis A: General, 2010, 380, 15-20.	2.2	60
12	A micro-structured 5kW complete fuel processor for iso-octane as hydrogen supply system for mobile auxiliary power unitsPart IIâ€"Development of waterâ€“gas shift and preferential oxidation catalysts reactors and assembly of the fuel processor. Chemical Engineering Journal, 2008, 138, 474-489.	6.6	57
13	Effects of support composition on the performance of nickel catalysts in CO2 methanation reaction. Catalysis Today, 2020, 357, 468-482.	2.2	56
14	A complete miniaturized microstructured methanol fuel processor/fuel cell system for low power applications. International Journal of Hydrogen Energy, 2008, 33, 1374-1382.	3.8	55
15	Hydrogen production over highly active Pt based catalyst coatings by steam reforming of methanol: Effect of support and co-support. International Journal of Hydrogen Energy, 2020, 45, 1658-1670.	3.8	54
16	A new, versatile field immunosensor for environmental pollutantsDevelopment and proof of principle with TNT, diuron, and atrazine. Biosensors and Bioelectronics, 2005, 21, 354-364.	5.3	52
17	Preparation of Pt/ZSM-5 films on stainless steel microreactors. Catalysis Today, 2007, 125, 2-10.	2.2	52
18	Ethanol Steam Reforming in a Microchannel Reactor. Chemical Engineering Research and Design, 2007, 85, 413-418.	2.7	49

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19	A micro-structured 5kW complete fuel processor for iso-octane as hydrogen supply system for mobile auxiliary power unitsPart I. Development of autothermal reforming catalyst and reactor. Chemical Engineering Journal, 2008, 137, 653-663.	6.6	46
20	Water-gas shift reaction in micro-channelsâ€"Results from catalyst screening and optimisation. Catalysis Today, 2005, 110, 121-131.	2.2	45
21	The development and evaluation of microstructured reactors for the water gas shift and preferential oxidation reactions in the 5kW range. International Journal of Hydrogen Energy, 2010, 35, 2317-2327.	3.8	42
22	Design and operation of a compact microchannel 5 kW el,net methanol steam reformer with novel Pt/In 2 O 3 catalyst for fuel cell applications. Chemical Engineering Journal, 2012, 207-208, 388-402.	6.6	42
23	Temperature control of the water gas shift reaction in microstructured reactors. Chemical Engineering Science, 2007, 62, 4602-4611.	1.9	39
24	Microstructured reactors for diesel steam reforming, water-gas shift and preferential oxidation in the kiloWatt power range. Catalysis Today, 2009, 147, S176-S184.	2.2	37
25	Methanol Steam Reforming over Indium-Promoted Pt/Al₂O₃ Catalyst: Nature of the Active Surface. Journal of Physical Chemistry C, 2013, 117, 6143-6150.	1.5	37
26	Review: Microstructured reactors as efficient tool for the operation of selective oxidation reactions. Catalysis Today, 2016, 278, 3-21.	2.2	35
27	Preferential CO oxidation over catalysts with well-defined inverse opal structure in microchannels. International Journal of Hydrogen Energy, 2008, 33, 797-801.	3.8	33
28	Self-sustained operation and durability testing of a 300 W-class micro-structured LPG fuel processor. International Journal of Hydrogen Energy, 2011, 36, 3496-3504.	3.8	27
29	Microchannel reactor heat-exchangers: A review of design strategies for the effective thermal coupling of gas phase reactions. Chemical Engineering and Processing: Process Intensification, 2020, 157, 108164.	1.8	26
30	Methane reforming in a small-scaled plasma reactor â€“ Industrial application of a plasma process from the viewpoint of the environmental profile. Chemical Engineering Journal, 2015, 262, 766-774.	6.6	25
31	Low temperature catalytic combustion of propane over Pt-based catalyst with inverse opal microstructure in a microchannel reactor. Chemical Communications, 2007, , 260-262.	2.2	24
32	Characterization of Cu/CeO2/Î³-Al2O3 Thin Film Catalysts by Thermal Desorption Spectroscopy. Catalysis Letters, 2005, 105, 35-40.	1.4	23
33	Kinetic study of CO preferential oxidation over Ptâ€"Rh/Î³-Al2O3 catalyst in a micro-structured recycle reactor. Catalysis Today, 2009, 145, 90-100.	2.2	22
34	Microstructured Fuel Processors for Fuel-Cell Applications. Journal of Materials Engineering and Performance, 2006, 15, 389-393.	1.2	21
35	Nano-architectured CeO2 supported Rh with remarkably enhanced catalytic activity for propylene glycol reforming reaction in microreactors. Applied Catalysis B: Environmental, 2018, 226, 403-411.	10.8	19
36	CO 2 Methanation in Microstructured Reactors â€“ Catalyst Development and Process Design. Chemical Engineering and Technology, 2019, 42, 2076-2084.	0.9	18

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37	Entwicklung einer leistungsstarken Mikrorektifikationsapparatur fÃ¼r analytische und prÃparative Anwendungen. Chemie-Ingenieur-Technik, 2011, 83, 465-478.	0.4	17
38	Application of rhodium nanoparticles for steam reforming of propane in microchannels. Catalysis Communications, 2013, 41, 140-145.	1.6	17
39	Control of autothermal reforming reactor of diesel fuel. Journal of Power Sources, 2016, 313, 223-232.	4.0	16
40	Energy-Efficient Routes for the Production of Gasoline from Biogas and Pyrolysis Oilâ€"Process Design and Life-Cycle Assessment. Industrial & Engineering Chemistry Research, 2017, 56, 3373-3387.	1.8	14
41	Novel route to control the size, distribution and location of Ni nanoparticles in mesoporous silica for steam reforming of propylene glycol in microchannel reactor. Catalysis Communications, 2016, 83, 43-47.	1.6	12
42	Nd:YAG-Laser Welding with Dynamic Beam Forming. Laser Technik Journal, 2010, 7, 28-31.	0.4	10
43	Effect of Support and Chelating Ligand on the Synthesis of Ni Catalysts with High Activity and Stability for CO2 Methanation. Catalysts, 2020, 10, 493.	1.6	10
44	Effect of oxygen addition on the waterâ€"gas shift reaction over Pt/CeO 2 catalysts in microchannels â€" Results from catalyst testing and reactor performance in the kW scale. International Journal of Hydrogen Energy, 2014, 39, 18120-18127.	3.8	9
45	Synthesis gas production from methane and propane in a miniaturized GlidArc Â® reformer. International Journal of Hydrogen Energy, 2014, 39, 12657-12666.	3.8	9
46	Promoting effect of Rh on the activity and stability of Pt-based methane combustion catalyst in microreactors. Catalysis Communications, 2021, 149, 106202.	1.6	9
47	Direct Conversion of Carbon Dioxide to Methane over Ceriaâ€•and Aluminaâ€Supported Nickel Catalysts for Biogas Valorization. ChemPlusChem, 2021, 86, 889-903.	1.3	9
48	Investigation on the Combined Operation of Water Gas Shift and Preferential Oxidation Reactor System on the kW Scale. Industrial & Engineering Chemistry Research, 2010, 49, 10917-10923.	1.8	7
49	Operation of a Smallâ€Scale Demonstration Plant for Biodiesel Synthesis under Supercritical Conditions. Chemical Engineering and Technology, 2016, 39, 2151-2163.	0.9	7
50	Selective Methanation of Carbon Monoxide in Hydrogen-rich Reformate Using Microstructured Reactor. Chemistry Letters, 2009, 38, 824-825.	0.7	4
51	Automated and Continuous Production ofÂMicrostructured Metallic Plates via Cold Embossing. Chemical Engineering and Technology, 2015, 38, 1308-1314.	0.9	4
52	Thermocatalytic decomposition of propane for pure hydrogen production and subsequent carbon gasification: Activity and long-term stability of Ni/Al2O3 based catalysts. Catalysis Today, 2015, 242, 139-145.	2.2	3
53	CO Total and Preferential Oxidation over Stable Au/TiO2 Catalysts Derived from Preformed Au Nanoparticles. Catalysts, 2020, 10, 1028.	1.6	3
54	Microstructured Plate Heat Exchanger Reactors for High Temperature Applications. Chemie-Ingenieur-Technik, 2013, 85, 1619-1623.	0.4	2

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55	Tanks-in-series model for an auto-thermal reforming reactor with a channeled monolith. Chemical Engineering Science, 2021, 231, 116269.	1.9	2
56	A complete fuel processor for propylene glycol as hydrogen supply for a 5 kw low temperature pem fuel cell â€“ Interim report on single reactors and system performance. Catalysis Today, 2021, , .	2.2	2
57	2D Model of Transfer Processes for Water Boiling Flow in Microchannel. ChemEngineering, 2021, 5, 42.	1.0	2
58	Microreactor Concepts and Processing. , 0, , 85-129.		2
59	BIOGO: contributing to the transformation of the petrochemical industry through advances in nanocatalysts and reactor design. Green Processing and Synthesis, 2015, 4, .	1.3	1
60	Microfabrication for Energy Generating Devices and Fuel Processors. , 0, , 5-38.		0
61	Micro-Structured Evaporators for Laboratory Applications and Mobile Power Generation. , 2008, , .		0