

# T Alexander Nijhuis

## List of Publications by Year in descending order

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111  
papers

6,367  
citations

66315

42  
h-index

71651

76  
g-index

112  
all docs

112  
docs citations

112  
times ranked

5632  
citing authors

#	ARTICLE	IF	CITATIONS
1	Preparation of monolithic catalysts. <i>Catalysis Reviews - Science and Engineering</i> , 2001, 43, 345-380.	5.7	474
2	The Production of Propene Oxide: Catalytic Processes and Recent Developments. <i>Industrial &amp; Engineering Chemistry Research</i> , 2006, 45, 3447-3459.	1.8	456
3	Direct Epoxidation of Propene Using Gold Dispersed on TS-1 and Other Titanium-Containing Supports. <i>Industrial &amp; Engineering Chemistry Research</i> , 1999, 38, 884-891.	1.8	273
4	Glucose dehydration to 5-hydroxymethylfurfural over phosphate catalysts. <i>Journal of Catalysis</i> , 2013, 300, 37-46.	3.1	198
5	Combining operando techniques in one spectroscopic-reaction cell: New opportunities for elucidating the active site and related reaction mechanism in catalysis. <i>Catalysis Today</i> , 2006, 113, 3-15.	2.2	189
6	The effect of solvent addition on fructose dehydration to 5-hydroxymethylfurfural in biphasic system over zeolites. <i>Journal of Catalysis</i> , 2012, 287, 68-75.	3.1	187
7	New non-traditional multiphase catalytic reactors based on monolithic structures. <i>Catalysis Today</i> , 2001, 66, 133-144.	2.2	166
8	Liquid-liquid slug flow: Hydrodynamics and pressure drop. <i>Chemical Engineering Science</i> , 2011, 66, 42-54.	1.9	165
9	Monolithic catalysts as efficient three-phase reactors. <i>Chemical Engineering Science</i> , 2001, 56, 823-829.	1.9	155
10	Propene epoxidation over Au/Ti-SBA-15 catalysts. <i>Journal of Catalysis</i> , 2007, 248, 235-248.	3.1	147
11	The Role of Gold in Gold-Titania Epoxidation Catalysts. <i>Angewandte Chemie - International Edition</i> , 2005, 44, 1115-1118.	7.2	138
12	Fructose Dehydration to 5-Hydroxymethylfurfural over Solid Acid Catalysts in a Biphasic System. <i>ChemSusChem</i> , 2012, 5, 1812-1819.	3.6	134
13	Integration of Microreactors with Spectroscopic Detection for Online Reaction Monitoring and Catalyst Characterization. <i>Industrial &amp; Engineering Chemistry Research</i> , 2012, 51, 14583-14609.	1.8	121
14	Modeling of monolithic and trickle-bed reactors for the hydrogenation of styrene. <i>Chemical Engineering Science</i> , 2003, 58, 1113-1124.	1.9	118
15	Mechanistic Study into the Direct Epoxidation of Propene over Gold/Titania Catalysts. <i>Journal of Physical Chemistry B</i> , 2005, 109, 19309-19319.	1.2	113
16	Support effects in hydrogenation of cinnamaldehyde over carbon nanofiber-supported platinum catalysts: Kinetic modeling. <i>Chemical Engineering Science</i> , 2005, 60, 5682-5695.	1.9	105
17	Biphasic single-reactor process for dehydration of xylose and hydrogenation of produced furfural. <i>Applied Catalysis A: General</i> , 2013, 451, 6-13.	2.2	102
18	Numbered-up gas-liquid micro/milli channels reactor with modular flow distributor. <i>Chemical Engineering Journal</i> , 2012, 207-208, 645-655.	6.6	100

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19	Rotating reactors – A review. <i>Chemical Engineering Research and Design</i> , 2013, 91, 1923-1940.	2.7	99
20	Towards real-time spectroscopic process control for the dehydrogenation of propane over supported chromium oxide catalysts. <i>Chemical Engineering Science</i> , 2004, 59, 5487-5492.	1.9	95
21	BEA coating of structured supports – performance in acylation. <i>Applied Catalysis A: General</i> , 2003, 243, 237-250.	2.2	75
22	Promotion Effects in the Oxidation of CO over Zeolite-Supported Pt Nanoparticles. <i>Journal of Physical Chemistry B</i> , 2005, 109, 3822-3831.	1.2	74
23	Microreactors with integrated UV/Vis spectroscopic detection for online process analysis under segmented flow. <i>Lab on A Chip</i> , 2013, 13, 4855.	3.1	73
24	Monolithic catalysts as more efficient three-phase reactors. <i>Catalysis Today</i> , 2001, 66, 157-165.	2.2	71
25	Optimized palladium catalyst systems for the selective liquid-phase hydrogenation of functionalized alkynes. <i>Applied Catalysis A: General</i> , 2003, 238, 259-271.	2.2	71
26	Zeolite coated structures for the acylation of aromatics. <i>Microporous and Mesoporous Materials</i> , 2001, 48, 279-284.	2.2	66
27	Enhancement of Catalyst Performance in the Direct Propene Epoxidation: A Study into Gold – Titanium Synergy. <i>ChemCatChem</i> , 2013, 5, 467-478.	1.8	66
28	Measurement and modeling of the transient adsorption, desorption and diffusion processes in microporous materials. <i>Chemical Engineering Science</i> , 1999, 54, 4423-4436.	1.9	65
29	Mathematical treatment of transient kinetic data: Combination of parameter estimation with solving the related partial differential equations. <i>Applied Catalysis A: General</i> , 1997, 151, 27-57.	2.2	63
30	Preparation and particle size effects of Ag – Al <sub>2</sub> O <sub>3</sub> catalysts for ethylene epoxidation. <i>Journal of Catalysis</i> , 2017, 356, 65-74.	3.1	63
31	UV – Vis Microspectroscopy: Probing the Initial Stages of Supported Metal Oxide Catalyst Preparation. <i>Journal of the American Chemical Society</i> , 2005, 127, 5024-5025.	6.6	60
32	Design criteria for a barrier-based gas – liquid flow distributor for parallel microchannels. <i>Chemical Engineering Journal</i> , 2012, 181-182, 549-556.	6.6	60
33	Bridging the gap between macroscopic and NMR diffusivities. <i>Chemical Engineering Science</i> , 1997, 52, 3401-3404.	1.9	55
34	Modeling of kinetics and deactivation in the direct epoxidation of propene over gold – titania catalysts. <i>Journal of Catalysis</i> , 2005, 236, 153-163.	3.1	55
35	Gas – liquid mass transfer in rotating solid foam reactors. <i>Chemical Engineering Science</i> , 2010, 65, 472-479.	1.9	55
36	Glucose Dehydration to 5 – Hydroxymethylfurfural in a Biphasic System over Solid Acid Foams. <i>ChemSusChem</i> , 2013, 6, 1697-1707.	3.6	54

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37	Water removal by reactive stripping for a solid-acid catalyzed esterification in a monolithic reactor. <i>Chemical Engineering Science</i> , 2002, 57, 1627-1632.	1.9	52
38	Kinetics of solid acid catalysed etherification of symmetrical primary alcohols: zeolite BEA catalysed etherification of 1-octanol. <i>Applied Catalysis A: General</i> , 2004, 266, 109-116.	2.2	50
39	Performance of phase-pure M1 MoVNbTeO catalysts by hydrothermal synthesis with different post-treatments for the oxidative dehydrogenation of ethane. <i>Applied Catalysis A: General</i> , 2015, 498, 99-106.	2.2	49
40	Direct synthesis of hydrogen peroxide over Au/Pd catalyst in a wall-coated microchannel. <i>Journal of Catalysis</i> , 2014, 309, 325-332.	3.1	48
41	Monolithic Catalysts and Reactors. <i>Advances in Catalysis</i> , 2011, 54, 249-327.	0.1	46
42	Silylation enhances the performance of Au/Ti-SiO <sub>2</sub> catalysts in direct epoxidation of propene using H <sub>2</sub> and O <sub>2</sub> . <i>Journal of Catalysis</i> , 2016, 344, 434-444.	3.1	46
43	Rotating Foam Stirrer Reactor: Effect of Catalyst Coating Characteristics on Reactor Performance. <i>Industrial &amp; Engineering Chemistry Research</i> , 2011, 50, 3184-3193.	1.8	45
44	Reaction kinetics of the esterification of myristic acid with isopropanol and n-propanol using p-toluene sulphonic acid as catalyst. <i>Applied Catalysis A: General</i> , 2009, 365, 141-147.	2.2	43
45	Separation of kinetics and mass-transport effects for a fast reaction: the selective hydrogenation of functionalized alkynes. <i>Catalysis Today</i> , 2003, 79-80, 315-321.	2.2	42
46	Foam supported sulfonated polystyrene as a new acidic material for catalytic reactions. <i>Chemical Engineering Journal</i> , 2012, 207-208, 218-225.	6.6	42
47	Aqueous phase reforming in a microchannel reactor: the effect of mass transfer on hydrogen selectivity. <i>Catalysis Science and Technology</i> , 2013, 3, 2834.	2.1	41
48	Precisely Engineered Supported Gold Clusters as a Stable Catalyst for Propylene Epoxidation. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 18185-18193.	7.2	41
49	Performance of the monolithic stirrer reactor: applicability in multi-phase processes. <i>Chemical Engineering Science</i> , 2004, 59, 4975-4981.	1.9	40
50	Selective Propylene Oxidation to Acrolein by Gold Dispersed on MgCuCr <sub>2</sub> O <sub>4</sub> Spinel. <i>ACS Catalysis</i> , 2015, 5, 1100-1111.	5.5	40
51	A self-redox pure-phase M1 MoVNbTeO /CeO <sub>2</sub> nanocomposite as a highly active catalyst for oxidative dehydrogenation of ethane. <i>Journal of Catalysis</i> , 2015, 329, 471-478.	3.1	40
52	Atomic XAFS as a Tool to Probe the Electronic Properties of Supported Noble Metal Nanoclusters. <i>Journal of the American Chemical Society</i> , 2005, 127, 3272-3273.	6.6	39
53	Esterification in a structured catalytic reactor with counter-current water removal. <i>Catalysis Today</i> , 2001, 66, 175-181.	2.2	37
54	Real-Time Control of a Catalytic Solid in a Fixed-Bed Reactor Based on In Situ Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2007, 46, 5412-5416.	7.2	35

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55	Kinetic study of propylene epoxidation with H <sub>2</sub> and O <sub>2</sub> over Au/TiO <sub>2</sub> /SiO <sub>2</sub> in the explosive regime. <i>Faraday Discussions</i> , 2011, 152, 321.	1.6	35
56	Kinetic study of propene oxide and water formation in hydro-epoxidation of propene on Au/TiO <sub>2</sub> /SiO <sub>2</sub> catalyst. <i>Journal of Catalysis</i> , 2016, 338, 284-294.	3.1	35
57	The role of support oxygen in the epoxidation of propene over gold-titania catalysts investigated by isotopic transient kinetics. <i>Journal of Catalysis</i> , 2009, 265, 161-169.	3.1	34
58	Continuous hydrogen stripping during aqueous phase reforming of sorbitol in a washcoated microchannel reactor with a Pt-Ru bimetallic catalyst. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 18069-18076.	3.8	34
59	Direct synthesis of hydrogen peroxide in a wall-coated microchannel reactor over Au-Pd catalyst: A performance study. <i>Catalysis Today</i> , 2015, 248, 160-168.	2.2	34
60	The Direct Epoxidation of Propene in the Explosive Regime in a Microreactor—A Study into the Reaction Kinetics. <i>Industrial &amp; Engineering Chemistry Research</i> , 2010, 49, 10479-10485.	1.8	33
61	Kinetic study of the selective oxidation of propene with O <sub>2</sub> over Au-Ti catalysts in the presence of water. <i>Journal of Catalysis</i> , 2015, 330, 396-405.	3.1	29
62	Unravelling Electrochemical Lignin Depolymerization. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 7565-7573.	3.2	29
63	Tomography measurements of gas holdup in rotating foam reactors with Newtonian, non-Newtonian and foaming liquids. <i>Chemical Engineering Science</i> , 2011, 66, 3317-3327.	1.9	28
64	How metallic is gold in the direct epoxidation of propene: an FTIR study. <i>Catalysis Science and Technology</i> , 2013, 3, 3042.	2.1	28
65	The role of water in the epoxidation over gold-titania catalysts. <i>Chemical Communications</i> , 2005, , 6002.	2.2	27
66	Modeling of fast pulse responses in the Multitrack: an advanced TAP reactor. <i>Chemical Engineering Science</i> , 2002, 57, 1835-1847.	1.9	26
67	Carbon nanofiber growth on carbon paper for proton exchange membrane fuel cells. <i>Carbon</i> , 2011, 49, 501-507.	5.4	26
68	New insight in the platinum-catalyzed CO oxidation kinetic mechanism by using an advanced TAP reactor system. <i>Applied Catalysis A: General</i> , 1997, 164, 237-249.	2.2	25
69	The direct epoxidation of propene by molten salts. <i>Applied Catalysis A: General</i> , 2000, 196, 217-224.	2.2	25
70	Heterogeneous catalysis in a microchannel using a layer of carbon nanofibers on the channel wall. <i>Chemical Engineering Journal</i> , 2012, 179, 242-252.	6.6	25
71	Mass transfer modeling of a consecutive reaction in rotating foam stirrer reactors: Selective hydrogenation of a functionalized alkyne. <i>Chemical Engineering Science</i> , 2012, 73, 412-420.	1.9	25
72	Hydrodynamics and gas-liquid mass transfer in a horizontal rotating foam stirrer reactor. <i>Chemical Engineering Journal</i> , 2013, 217, 10-21.	6.6	24

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73	Hydrogen Production through Aqueous-Phase Reforming of Ethylene Glycol in a Washcoated Microchannel. <i>ChemSusChem</i> , 2013, 6, 1708-1716.	3.6	24
74	Carbon-Coated Ceramic Membrane Reactor for the Production of Hydrogen by Aqueous-Phase Reforming of Sorbitol. <i>ChemSusChem</i> , 2014, 7, 2007-2015.	3.6	24
75	Effects of hydrogen and propylene presence on decomposition of hydrogen peroxide over palladium catalysts. <i>Journal of Catalysis</i> , 2016, 341, 72-81.	3.1	24
76	Direct Synthesis of Hydrogen Peroxide over Au-Pd Catalyst-The Effect of Co-Solvent Addition. <i>ChemCatChem</i> , 2015, 7, 1161-1176.	1.8	22
77	Determination of adsorption and diffusion parameters in zeolites through a structured approach. <i>Chemical Engineering Science</i> , 2004, 59, 2477-2487.	1.9	21
78	Switching off propene hydrogenation in the direct epoxidation of propene over gold-titania catalysts. <i>Journal of Catalysis</i> , 2012, 285, 324-327.	3.1	21
79	Structured catalysts for the acylation of aromatics. <i>Topics in Catalysis</i> , 2000, 13, 275-280.	1.3	20
80	Direct synthesis of hydrogen peroxide using concentrated H <sub>2</sub> and O <sub>2</sub> mixtures in a wall-coated microchannel - kinetic study. <i>Applied Catalysis A: General</i> , 2015, 505, 249-259.	2.2	19
81	Gas holdup of rotating foam reactors measured by <sup>13</sup> C-tomography-effect of solid foam pore size and liquid viscosity. <i>AIChE Journal</i> , 2013, 59, 146-154.	1.8	17
82	Gas-Phase Epoxidation of Propene with Hydrogen Peroxide Vapor. <i>Industrial &amp; Engineering Chemistry Research</i> , 2013, 52, 10126-10132.	1.8	17
83	TS-1 coated microreactor for selective oxidations. <i>Applied Catalysis A: General</i> , 2015, 490, 139-145.	2.2	17
84	The application of palladium and zeolite incorporated chip-based microreactors. <i>Applied Catalysis A: General</i> , 2016, 515, 72-82.	2.2	17
85	Gold nanoparticles with tailored size through ligand modification for catalytic applications. <i>Chemical Communications</i> , 2021, 57, 10775-10778.	2.2	17
86	The Role of Gold in Gold-Titania Epoxidation Catalysts. <i>Angewandte Chemie</i> , 2005, 117, 1139-1142.	1.6	15
87	Effect of foam stirrer design on the catalytic performance of rotating foam stirrer reactors. <i>Chemical Engineering Journal</i> , 2012, 207-208, 209-217.	6.6	15
88	Zirconium Phosphate Coating on Aluminum Foams by Electrophoretic Deposition for Acidic Catalysis. <i>ChemCatChem</i> , 2012, 4, 129-133.	1.8	15
89	Design and optimization of a catalytic membrane reactor for the direct synthesis of propylene oxide. <i>Chemical Engineering Science</i> , 2015, 138, 465-472.	1.9	15
90	Influence of water on fast hydrogenation reactions with monolithic and slurry catalysts. <i>Catalysis Today</i> , 2001, 69, 265-273.	2.2	14

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91	Modelling sorption and diffusion in activated carbon: a novel low pressure pulse-response technique. <i>Carbon</i> , 2001, 39, 2113-2130.	5.4	14
92	Multilevel rotating foam biphasic reactor for combination of processes in biomass transformation. <i>Chemical Engineering Journal</i> , 2013, 231, 12-17.	6.6	14
93	Propylene epoxidation with hydrogen peroxide in acidic conditions. <i>Chemical Engineering Science</i> , 2016, 156, 36-43.	1.9	14
94	Catalyst Coating on Prefabricated Capillary Microchannels for the Direct Synthesis of Hydrogen Peroxide. <i>Industrial &amp; Engineering Chemistry Research</i> , 2015, 54, 2919-2929.	1.8	13
95	Enhanced liquid–solid mass transfer in microchannels by a layer of carbon nanofibers. <i>Chemical Engineering Journal</i> , 2011, 167, 671-680.	6.6	12
96	Preparation of ZSM-5 zeolite coatings within capillary microchannels. <i>Journal of Materials Chemistry</i> , 2012, 22, 15976.	6.7	12
97	Direct synthesis of propylene oxide in the liquid phase under mild conditions. <i>Applied Catalysis A: General</i> , 2016, 524, 200-205.	2.2	12
98	Direct synthesis of propylene oxide in a packed bed membrane reactor. <i>Chemical Engineering Journal</i> , 2017, 307, 9-14.	6.6	12
99	In situ UV–Vis spectroscopy in gas–liquid–solid systems. <i>Chemical Engineering Science</i> , 2010, 65, 267-272.	1.9	11
100	Selective Production of Methane from Aqueous Biocarbohydrate Streams over a Mixture of Platinum and Ruthenium Catalysts. <i>ChemSusChem</i> , 2014, 7, 627-630.	3.6	10
101	Direct Synthesis of Propene Oxide from Propene, Hydrogen and Oxygen in a Catalytic Membrane Reactor. <i>Industrial &amp; Engineering Chemistry Research</i> , 2014, 53, 16275-16284.	1.8	9
102	Electrochemical Membrane Reactor Modeling for Lignin Depolymerization. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 2091-2099.	3.2	9
103	Effect of hydrogen and propylene on the hydrogen peroxide decomposition over Pt, PtO and Au catalysts. <i>Applied Catalysis A: General</i> , 2017, 538, 131-138.	2.2	8
104	Precisely Engineered Supported Gold Clusters as a Stable Catalyst for Propylene Epoxidation. <i>Angewandte Chemie</i> , 2021, 133, 18333-18341.	1.6	7
105	The Epoxidation of Propene over Gold Nanoparticle Catalysts. , 2008, , 339-354.		6
106	Residence time distribution and reaction rate in the horizontal rotating foam stirrer reactor. <i>Chemical Engineering Science</i> , 2014, 117, 8-17.	1.9	6
107	Promotion effects in the oxidation of CO over zeolite-supported Pt nanoparticles. <i>Studies in Surface Science and Catalysis</i> , 2005, , 1239-1246.	1.5	3
108	Zeolite incorporation in chip-based microreactors. <i>Microporous and Mesoporous Materials</i> , 2016, 226, 424-432.	2.2	2

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109	Formal reply to letter to the editor ~Comments on the modeling of a fore void volume in a TAP reactor~™. Chemical Engineering Science, 2001, 56, 3927.	1.9	0
110	Promotion Effects in the Oxidation of CO over Zeolite-Supported Pt Nanoparticles.. ChemInform, 2005, 36, no.	0.1	0
111	Chemical Kinetics of Catalyzed Reactions. , 2017, , 191-220.		0