

Ton V W Janssens

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78 papers	7,295 citations	35 h-index	81 g-index
81 ext. papers	8,061 ext. citations	7.2 avg, IF	5.85 L-index

#	Paper	IF	Citations
78	Conversion of methanol to hydrocarbons: how zeolite cavity and pore size controls product selectivity. <i>Angewandte Chemie - International Edition</i> , 2012 , 51, 5810-31	16.4	1217
77	On the origin of the catalytic activity of gold nanoparticles for low-temperature CO oxidation. <i>Journal of Catalysis</i> , 2004 , 223, 232-235	7.3	1017
76	Catalytic activity of Au nanoparticles. <i>Nano Today</i> , 2007 , 2, 14-18	17.9	927
75	Insights into the reactivity of supported Au nanoparticles: combining theory and experiments. <i>Topics in Catalysis</i> , 2007 , 44, 15-26	2.3	356
74	A Consistent Reaction Scheme for the Selective Catalytic Reduction of Nitrogen Oxides with Ammonia. <i>ACS Catalysis</i> , 2015 , 5, 2832-2845	13.1	319
73	Atomic and macroscopic reaction rates of a surface-catalyzed reaction. <i>Science</i> , 1997 , 278, 1931-4	33.3	314
72	Structure–deactivation relationship for ZSM-5 catalysts governed by framework defects. <i>Journal of Catalysis</i> , 2011 , 280, 196-205	7.3	212
71	The adhesion and shape of nanosized Au particles in a Au/TiO ₂ catalyst. <i>Journal of Catalysis</i> , 2004 , 225, 86-94	7.3	208
70	Umwandlung von Methanol in Kohlenwasserstoffe: Wie Zeolith-Hohlräume und Porengröße die Produktselektivität bestimmen. <i>Angewandte Chemie</i> , 2012 , 124, 5910-5933	3.6	148
69	Catalyst deactivation by coke formation in microporous and desilicated zeolite H-ZSM-5 during the conversion of methanol to hydrocarbons. <i>Journal of Catalysis</i> , 2013 , 307, 62-73	7.3	146
68	Sintering of Nickel Steam-Reforming Catalysts on MgAl ₂ O ₄ Spinel Supports. <i>Journal of Catalysis</i> , 2001 , 197, 200-209	7.3	135
67	Zeolites by confined space synthesis – characterization of the acid sites in nanosized ZSM-5 by ammonia desorption and ²⁷ Al/ ²⁹ Si-MAS NMR spectroscopy. <i>Microporous and Mesoporous Materials</i> , 2000 , 39, 393-401	5.3	134
66	Relation between nanoscale Au particle structure and activity for CO oxidation on supported gold catalysts. <i>Journal of Catalysis</i> , 2006 , 240, 108-113	7.3	124
65	A new approach to the modeling of deactivation in the conversion of methanol on zeolite catalysts. <i>Journal of Catalysis</i> , 2009 , 264, 130-137	7.3	107
64	Influence of lattice stability on hydrothermal deactivation of Cu-ZSM-5 and Cu-IM-5 zeolites for selective catalytic reduction of NO _x by NH ₃ . <i>Journal of Catalysis</i> , 2014 , 309, 477-490	7.3	88
63	Reflection absorption infrared spectroscopy and kinetic studies of the reactivity of ethylene on Pt(111) surfaces. <i>Surface Science</i> , 1996 , 368, 371-376	1.8	82
62	Solid-State Ion-Exchange of Copper into Zeolites Facilitated by Ammonia at Low Temperature. <i>ACS Catalysis</i> , 2015 , 5, 16-19	13.1	79

61	New insights into catalyst deactivation and product distribution of zeolites in the methanol-to-hydrocarbons (MTH) reaction with methanol and dimethyl ether feeds. <i>Catalysis Science and Technology</i> , 2017 , 7, 2700-2716	5.5	77
60	Activation of oxygen on (NH ₃ CuNH ₃) ⁺ in NH ₃ -SCR over Cu-CHA. <i>Journal of Catalysis</i> , 2018 , 358, 179-186	7.3	74
59	Hydrogen Transfer versus Methylation: On the Genesis of Aromatics Formation in the Methanol-To-Hydrocarbons Reaction over H-ZSM-5. <i>ACS Catalysis</i> , 2017 , 7, 5773-5780	13.1	73
58	Reversible and irreversible deactivation of Cu-CHA NH ₃ -SCR catalysts by SO ₂ and SO ₃ . <i>Applied Catalysis B: Environmental</i> , 2018 , 226, 38-45	21.8	65
57	A Complete Multisite Reaction Mechanism for Low-Temperature NH ₃ -SCR over Cu-CHA. <i>ACS Catalysis</i> , 2020 , 10, 5646-5656	13.1	58
56	Kinetic modeling of deactivation profiles in the methanol-to-hydrocarbons (MTH) reaction: A combined autocatalytic hydrocarbon pool approach. <i>Journal of Catalysis</i> , 2013 , 308, 122-130	7.3	57
55	Product yield in methanol conversion over ZSM-5 is predominantly independent of coke content. <i>Microporous and Mesoporous Materials</i> , 2012 , 164, 190-198	5.3	54
54	Benzene co-reaction with methanol and dimethyl ether over zeolite and zeotype catalysts: Evidence of parallel reaction paths to toluene and diphenylmethane. <i>Journal of Catalysis</i> , 2017 , 349, 136-148	7.3	52
53	Structure and Reactivity of Oxygen-Bridged Diamino Dicopper(II) Complexes in Cu-Ion-Exchanged Chabazite Catalyst for NH ₃ -Mediated Selective Catalytic Reduction. <i>Journal of the American Chemical Society</i> , 2020 , 142, 15884-15896	16.4	51
52	New method for analysis of nanoparticle geometry in supported fcc metal catalysts with scanning transmission electron microscopy. <i>Journal of Physical Chemistry B</i> , 2006 , 110, 5286-93	3.4	50
51	Kinetics and mechanism for the H/D exchange between ethylene and deuterium over Pt(111). <i>Journal of Catalysis</i> , 1998 , 177, 284-295	7.3	48
50	Chemistry of Ethylidene Moieties on Platinum Surfaces: 1,1-Diiodoethane on Pt(111). <i>The Journal of Physical Chemistry</i> , 1996 , 100, 14118-14129		46
49	The energies of formation and mobilities of Cu surface species on Cu and ZnO in methanol and water gas shift atmospheres studied by DFT. <i>Journal of Catalysis</i> , 2012 , 293, 205-214	7.3	43
48	The role of hydrogen-deuterium exchange reactions in the conversion of ethylene to ethylidyne on Pt(111). <i>Surface Science</i> , 1995 , 344, 77-84	1.8	43
47	The interaction of CO with the Cu ₃ Pt(111) surface. <i>Surface Science</i> , 1992 , 269-270, 321-325	1.8	41
46	Importance of the Cu oxidation state for the SO ₂ -poisoning of a Cu-SAPO-34 catalyst in the NH ₃ -SCR reaction. <i>Applied Catalysis B: Environmental</i> , 2018 , 236, 377-383	21.8	40
45	Impact of SO ₂ -poisoning over the lifetime of a Cu-CHA catalyst for NH ₃ -SCR. <i>Applied Catalysis B: Environmental</i> , 2018 , 238, 104-110	21.8	40
44	Nitrate/nitrite equilibrium in the reaction of NO with a Cu-CHA catalyst for NH ₃ -SCR. <i>Catalysis Science and Technology</i> , 2016 , 6, 8314-8324	5.5	39

43	Effect of Al-distribution on oxygen activation over Cu-CHA. <i>Catalysis Science and Technology</i> , 2018 , 8, 2131-2136	5.5	35
42	Selectivity among Dehydrogenation Steps for Alkyl Groups on Metal Surfaces: Comparison between Nickel and Platinum. <i>Langmuir</i> , 1998 , 14, 1320-1327	4	35
41	The Cu Promoter in an Iron-Chromium-Oxide Based Water-Gas Shift Catalyst under Industrial Conditions Studied by in-Situ XAFS. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 15410-15416	3.8	34
40	Dynamic Cu ^I /Cu ^{II} speciation in Cu-CHA catalysts by in situ Diffuse Reflectance UV-Vis-NIR spectroscopy. <i>Applied Catalysis A: General</i> , 2019 , 578, 1-9	5.1	33
39	Temperature-dependent dynamics of NH ₃ -derived Cu species in the Cu-CHA SCR catalyst. <i>Reaction Chemistry and Engineering</i> , 2019 , 4, 1067-1080	4.9	33
38	Interpretation of NH ₃ -TPD Profiles from Cu-CHA Using First-Principles Calculations. <i>Topics in Catalysis</i> , 2019 , 62, 93-99	2.3	32
37	Investigating the Low Temperature Formation of Cu ⁺ -(N,O) Species on Cu-CHA Zeolites for the Selective Catalytic Reduction of NO. <i>Chemistry - A European Journal</i> , 2018 , 24, 12044-12053	4.8	31
36	A comparative test of different density functionals for calculations of NH-SCR over Cu-Chabazite. <i>Physical Chemistry Chemical Physics</i> , 2019 , 21, 10923-10930	3.6	29
35	Activation of Oxygen and NO in NH ₃ -SCR over Cu-CHA Catalysts Evaluated by Density Functional Theory. <i>Topics in Catalysis</i> , 2016 , 59, 861-865	2.3	29
34	Direct Observation of Surface Reactions of Acetylene on Pd(111) with Scanning Tunneling Microscopy. <i>Journal of Physical Chemistry B</i> , 1998 , 102, 6521-6528	3.4	29
33	Xe adsorption on the Cu ₃ Pt(111) surface. <i>Surface Science</i> , 1992 , 269-270, 316-320	1.8	27
32	Surface potential around potassium promoter atoms on Rh(111) measured with photoemission of adsorbed Xe, Kr, and Ar. <i>Physical Review B</i> , 1994 , 49, 14599-14609	3.3	26
31	Support effects and catalytic trends for water gas shift activity of transition metals. <i>Journal of Molecular Catalysis A</i> , 2010 , 315, 163-170		25
30	Change in Reaction Pathway Induced by Deuteration: Thermal Decomposition of Neopentyl Groups on Pt(111) Surfaces. <i>Journal of the American Chemical Society</i> , 1997 , 119, 1169-1170	16.4	25
29	The Effect of Pt Particle Size on the Oxidation of CO, C ₃ H ₆ , and NO Over Pt/Al ₂ O ₃ for Diesel Exhaust Aftertreatment. <i>Topics in Catalysis</i> , 2017 , 60, 1333-1344	2.3	24
28	Evidence of Mixed-Ligand Complexes in Cu-CHA by Reaction of Cu Nitrates with NO/NH ₃ at Low Temperature. <i>ChemCatChem</i> , 2019 , 11, 3828-3838	5.2	22
27	Role of internal coke for deactivation of ZSM-5 catalysts after low temperature removal of coke with NO ₂ . <i>Catalysis Science and Technology</i> , 2012 , 2, 1196	5.5	22
26	Location and activity of VO _x species on TiO ₂ particles for NH ₃ -SCR catalysis. <i>Applied Catalysis B: Environmental</i> , 2020 , 278, 119337	21.8	18

25	Integration of Vanadium and Zeolite Type SCR Functionality into DPF in Exhaust Aftertreatment Systems - Advantages and Challenges 2014 ,		17
24	Geometric and Electronic Structure of Potassium on Rh(111). <i>Physica Scripta</i> , 1992 , T41, 208-212	2.6	17
23	Temperature-programmed reduction with NO as a characterization of active Cu in Cu-CHA catalysts for NH ₃ -SCR. <i>Catalysis Science and Technology</i> , 2019 , 9, 2608-2619	5.5	14
22	Synthesis and characterization of mesoporous ZSM-5 core-shell particles for improved catalytic properties. <i>Studies in Surface Science and Catalysis</i> , 2008 , 117-122	1.8	14
21	1,1- and 1,3-Diiodo Neopentanes on Pt(111): Intermediates during Hydrocarbon Catalytic Conversion Reactions. <i>Journal of Catalysis</i> , 2002 , 208, 345-358	7.3	14
20	Long and short range effect of alkali promoters on metal surfaces: K on Rh(111). <i>Catalysis Letters</i> , 1993 , 19, 263-272	2.8	13
19	The Role of H ⁺ - and Cu ⁺ -Sites for N ₂ O Formation during NH ₃ -SCR over Cu-CHA. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 4595-4601	3.8	13
18	Local effects in the interaction of potassium with Rh(111). <i>Surface Science</i> , 1992 , 269-270, 664-668	1.8	12
17	Xenon adsorption on Al(110). <i>Surface Science</i> , 1991 , 251-252, 551-555	1.8	12
16	Site selective adsorption and relocation of SO _x in deactivation of Cu-CHA catalysts for NH ₃ -SCR. <i>Reaction Chemistry and Engineering</i> , 2019 , 4, 1081-1089	4.9	11
15	Neopentyl iodide on Pt() I. Adsorption and thermal decomposition. <i>Surface Science</i> , 2002 , 501, 1-15	1.8	11
14	Neopentyl iodide on Pt(111). <i>Surface Science</i> , 2002 , 501, 16-30	1.8	10
13	First-Principles Microkinetic Model for Low-Temperature NH ₃ -Assisted Selective Catalytic Reduction of NO over Cu-CHA. <i>ACS Catalysis</i> , 2021 , 11, 14395-14407	13.1	10
12	The Role of Protons and Formation Cu(NH ₃) ₂ ⁺ During Ammonia-Assisted Solid-State Ion Exchange of Copper(I) Oxide into Zeolites. <i>Topics in Catalysis</i> , 2019 , 62, 100-107	2.3	8
11	Detailed Study of Cu Migration in the Course of NH ₃ -Facilitated Solid-State Ion-Exchange into *BEA Zeolites. <i>Topics in Catalysis</i> , 2017 , 60, 255-259	2.3	7
10	Hierarchical Vanadia Model Catalysts for Ammonia Selective Catalytic Reduction. <i>Topics in Catalysis</i> , 2017 , 60, 1631-1640	2.3	6
9	A molecular dance to cleaner air. <i>Science</i> , 2017 , 357, 866-867	33.3	5
8	Effect of adsorbed potassium on the electrostatic potential on Rh clusters in relation with photoemission of adsorbed noble gases. <i>Journal of Chemical Physics</i> , 1994 , 101, 2995-3000	3.9	5

7	Direct measurement of enthalpy and entropy changes in NH ₃ promoted O ₂ activation over Cu-CHA at low temperature. <i>ChemCatChem</i> , 2021 , 13, 2577-2582	5.2	5
6	Surface chemical sensitivity of reflection electron energy loss spectra from metal surfaces. <i>Surface Science</i> , 1991 , 251-252, 243-247	1.8	4
5	Heterogeneity of oxygen-potassium-covered Rh(111): detection with photoemission of adsorbed noble gases. <i>Surface Science</i> , 1998 , 399, 15-28	1.8	3
4	Investigating the role of Cu-oxo species in Cu-nitrate formation over Cu-CHA catalysts. <i>Physical Chemistry Chemical Physics</i> , 2021 , 23, 18322-18337	3.6	3
3	In situ X-ray absorption study of Cu species in Cu-CHA catalysts for NH ₃ -SCR during temperature-programmed reduction in NO/NH ₃ . <i>Research on Chemical Intermediates</i> , 2021 , 47, 357-375 ^{2.8}		3
2	Modeling and Optimization of Multi-functional Ammonia Slip Catalysts for Diesel Exhaust Aftertreatment. <i>Emission Control Science and Technology</i> , 2021 , 7, 7-25	2	2
1	SO Poisoning of Cu-CHA deNO Catalyst: The Most Vulnerable Cu Species Identified by X-ray Absorption Spectroscopy.. <i>Jacs Au</i> , 2022 , 2, 787-792		0