

Eric van Steen

List of Publications by Year in descending order

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107
papers

4,279
citations

117625

34
h-index

114465

63
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110
all docs

110
docs citations

110
times ranked

3567
citing authors

#	ARTICLE	IF	CITATIONS
1	Liquid Phase Oxidation of Benzyl Alcohol over Pt and Ptâ€“Ni Alloy Supported on TiO ₂ : Using O ₂ or H ₂ O ₂ as Oxidant?. Catalysis Letters, 2022, 152, 1760-1768.	2.6	6
2	Insights into promoter-enhanced aqueous phase CO hydrogenation over Co@TiO ₂ mesoporous nanocomposites. Fuel, 2022, 310, 122402.	6.4	8
3	Manganese promotion of a cobalt Fischer-Tropsch catalyst to improve operation at high conversion. Journal of Catalysis, 2022, 411, 97-108.	6.2	12
4	Insights into the unusual role of chlorine in product selectivity for direct hydrogenation of CO/CO ₂ to short-chain olefins. Chemical Engineering Journal, 2021, 413, 127424.	12.7	15
5	Tuning catalytic performance in Fischer-Tropsch synthesis by metal-support interactions. Journal of Catalysis, 2021, 395, 70-79.	6.2	11
6	Steam Reforming of Glycerol for Syngas Production using Ptâ€“Ni Nanoparticles Supported on Bimodal Porous MgAl ₂ O ₄ . Energy & Fuels, 2021, 35, 5217-5230.	5.1	7
7	Formation of Pt-Based Alloy Nanoparticles Assisted by Molybdenum Hexacarbonyl. Nanomaterials, 2021, 11, 1825.	4.1	2
8	Comparison of mechanisms for the direct, gas phase, partial oxidation of methane to methanol. Chemical Engineering Science, 2021, 241, 116718.	3.8	7
9	An automated coating process to produce TiO ₂ -coated optical fibre for photocatalytic reactor systems. Chemical Engineering and Processing: Process Intensification, 2021, 166, 108479.	3.6	2
10	Effect of Crystallite Size Distribution on the Oxidation and Re-reduction of Cobalt in the Fischerâ€“Tropsch Synthesis: A Thermodynamic Analysis. Catalysis Letters, 2021, 151, 2631-2637.	2.6	3
11	Novel single pass biogas-to-diesel process using a Fischerâ€“Tropsch catalyst designed for high conversion. Sustainable Energy and Fuels, 2021, 5, 5717-5732.	4.9	9
12	Oxidation of HÃgg Carbide during High-Temperature Fischerâ€“Tropsch Synthesis: Size-Dependent Thermodynamics and <i>In Situ</i> Observations. ACS Catalysis, 2021, 11, 13866-13879.	11.2	12
13	Visible-Light Responsive Cuâ€“MOFâ€“NH ₂ for Highly Efficient Aerobic Photocatalytic Oxidation of Benzyl Alcohol. Kinetics and Catalysis, 2021, 62, S9-S20.	1.0	3
14	Activity and selectivity of a cobalt-based Fischer-Tropsch catalyst operating at high conversion for once-through biomass-to-liquid operation. Catalysis Today, 2020, 342, 115-123.	4.4	26
15	Surface modification of Co ₃ O ₄ nanocubes with TEOS for an improved performance in the Fischer-Tropsch synthesis. Catalysis Today, 2020, 343, 176-182.	4.4	11
16	Mechanistic pathways for oxygen removal on Pt-doped Co(111) in the Fischer-Tropsch reaction. Catalysis Today, 2020, 342, 142-151.	4.4	16
17	Sintering of cobalt during FTS: Insights from industrial and model systems. Catalysis Today, 2020, 342, 59-70.	4.4	25
18	Topographical and compositional engineering of coreâ€“shell Ni@Pt ORR electro-catalysts. RSC Advances, 2020, 10, 29268-29277.	3.6	11

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19	Decoupling the deactivation mechanisms of a cobalt Fischer-Tropsch catalyst operated at high conversion and $\hat{\sim}$ simulated $\hat{\sim}$ high conversion. Catalysis Science and Technology, 2020, 10, 7056-7066.	4.1	13
20	Performance of a NiFe ₂ O ₄ @Co Core-Shell Fischer-Tropsch Catalyst: Effect of Low Temperature Reduction. ACS Omega, 2020, 5, 32975-32983.	3.5	4
21	High-Index Core-Shell Ni-Pt Nanoparticles as Oxygen Reduction Electrocatalysts. ACS Applied Nano Materials, 2020, 3, 5718-5731.	5.0	17
22	Liquid Phase, Aerobic Oxidation of Benzyl Alcohol over the Catalyst System (Pt/TiO ₂ +H ₂ O). ChemCatChem, 2020, 12, 4760-4764.	3.7	10
23	Morphological and compositional changes of MFe ₂ O ₄ @Co ₃ O ₄ (M = Ni, Zn) core-shell nanoparticles after mild reduction. Materials Characterization, 2019, 155, 109806.	4.4	5
24	Thermal Properties and Segregation Behavior of Pt Nanowires Modified with Au, Ag, and Pd Atoms: A Classical Molecular Dynamics Study. Journal of Physical Chemistry C, 2019, 123, 20522-20531.	3.1	2
25	Cobalt-Based Fischer-Tropsch Synthesis: A Kinetic Evaluation of Metal-Support Interactions Using an Inverse Model System. Catalysts, 2019, 9, 794.	3.5	23
26	Micro-Kinetic Modelling of CO-TPD from Fe(100) Incorporating Lateral Interactions. Catalysts, 2019, 9, 310.	3.5	10
27	Effect of Alumina Modification on the Reducibility of Co ₃ O ₄ Crystallites Studied on Inverse-Model Catalysts. Catalysis Letters, 2018, 148, 1215-1227.	2.6	9
28	Comparing nickel and cobalt perovskites for steam reforming of glycerol. Molecular Catalysis, 2018, 452, 60-67.	2.0	40
29	Probing the edge effect on the ORR activity using platinum nanorods: A DFT study. Catalysis Today, 2018, 312, 126-131.	4.4	12
30	Metal based gas diffusion layers for enhanced fuel cell performance at high current densities. Journal of Power Sources, 2017, 337, 18-24.	7.8	22
31	Role of Transient Co-Subcarbonyls in Ostwald Ripening Sintering of Cobalt Supported on $\hat{3}$ -Alumina Surfaces. Journal of Physical Chemistry C, 2017, 121, 16739-16753.	3.1	22
32	Metal-support interaction on cobalt based FT catalysts – a DFT study of model inverse catalysts. Faraday Discussions, 2017, 197, 87-99.	3.2	13
33	Investigating the Stability of Ru-promoted Fe-based Fischer-tropsch Catalyst at high Synthesis Gas Conversion. Energy Procedia, 2016, 100, 210-216.	1.8	4
34	Synthesis and characterization of NiFe ₂ O ₄ @Co ₃ O ₄ core-shell nanoparticles. Materials Characterization, 2016, 121, 93-102.	4.4	10
35	Hydrogen spillover in the Fischer-Tropsch synthesis: An analysis of gold as a promoter for cobalt-alumina catalysts. Catalysis Today, 2016, 275, 27-34.	4.4	35
36	Pt ₃₈ cluster on OH- and COOH-functionalised graphene as a model for Pt/C-catalysts. Physical Chemistry Chemical Physics, 2016, 18, 25693-25704.	2.8	7

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37	Enhanced olefin production in Fischer-Tropsch synthesis using ammonia containing synthesis gas feeds. <i>Catalysis Today</i> , 2016, 275, 94-99.	4.4	21
38	Hydrogen spillover in the Fischer-Tropsch synthesis: An analysis of platinum as a promoter for cobalt-alumina catalysts. <i>Catalysis Today</i> , 2016, 261, 17-27.	4.4	91
39	Promoting $\gamma\text{-Fe}_5\text{C}_2(100)_{0.25}$ with copper – a DFT study. <i>Journal of Lithic Studies</i> , 2015, 1, 11-18.	0.5	6
40	A DFT perspective of potassium promotion of $\gamma\text{-Fe}_5\text{C}_2(100)$. <i>Applied Catalysis A: General</i> , 2015, 496, 64-72.	4.3	30
41	Formation of nitrogen containing compounds from ammonia co-fed to the Fischer-Tropsch synthesis. <i>Applied Catalysis A: General</i> , 2015, 502, 150-156.	4.3	10
42	Impact of Process Conditions on the Sintering Behavior of an Alumina-Supported Cobalt Fischer-Tropsch Catalyst Studied with an in Situ Magnetometer. <i>ACS Catalysis</i> , 2015, 5, 841-852.	11.2	83
43	Pt/Au Alloys as Reduction Promoters for Co/TiO_2 Fischer-Tropsch Catalysts. <i>Advanced Materials Research</i> , 2014, 1019, 365-371.	0.3	2
44	In situ magnetometer study on the formation and stability of cobalt carbide in Fischer-Tropsch synthesis. <i>Journal of Catalysis</i> , 2014, 318, 193-202.	6.2	126
45	Size-Dependent Phase Transformation of Catalytically Active Nanoparticles Captured In-Situ. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 1342-1345.	13.8	77
46	Enhanced Activity via Surface Modification of Fe-Based Fischer-Tropsch Catalyst Precursor with Titanium Butoxide. <i>Topics in Catalysis</i> , 2014, 57, 572-581.	2.8	5
47	Choosing a suitable support for Co_3O_4 as an NH_3 oxidation catalyst. <i>Catalysis Science and Technology</i> , 2013, 3, 1905.	4.1	16
48	Comparing silver and copper as promoters in Fe-based Fischer-Tropsch catalysts using delafossite as a model compound. <i>Journal of Catalysis</i> , 2013, 307, 283-294.	6.2	47
49	Copper ferrites: A model for investigating the role of copper in the dynamic iron-based Fischer-Tropsch catalyst. <i>Journal of Catalysis</i> , 2013, 308, 363-373.	6.2	46
50	Structure sensitivity of the Fischer-Tropsch activity and selectivity on alumina supported cobalt catalysts. <i>Journal of Catalysis</i> , 2013, 299, 67-80.	6.2	113
51	Further Investigation into the Formation of Alcohol during Fischer Tropsch Synthesis on Fe-based Catalysts. <i>APCBEE Procedia</i> , 2012, 3, 110-115.	0.5	6
52	Redispersion of Cobalt on a Model Fischer-Tropsch Catalyst During Reduction-Oxidation-Reduction Cycles. <i>ChemCatChem</i> , 2012, 4, 1411-1419.	3.7	39
53	Effective Utilization of the Catalytically Active Phase: NH_3 Oxidation Over Unsupported and Supported Co_3O_4 . <i>Catalysis Letters</i> , 2012, 142, 445-451.	2.6	13
54	Metal Support Interactions in $\text{Co}_3\text{O}_4/\text{Al}_2\text{O}_3$ Catalysts Prepared from w/o Microemulsions. <i>Catalysis Letters</i> , 2012, 142, 830-837.	2.6	22

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55	Identification of the active species in oxidation reactions on mixed oxide catalysts: Supra-surface or bulk surface species. <i>Journal of Catalysis</i> , 2012, 289, 1-10.	6.2	19
56	Strong-metal-support interaction by molecular design: Fe-silicate interactions in Fischer-Tropsch catalysts. <i>Journal of Catalysis</i> , 2012, 289, 140-150.	6.2	101
57	Cobalt Fischer-Tropsch Catalyst Regeneration: The Crucial Role of the Kirkendall Effect for Cobalt Redispersion. <i>Topics in Catalysis</i> , 2011, 54, 811-816.	2.8	39
58	Preparation of supported nano-sized cobalt oxide and fcc cobalt crystallites. <i>Catalysis Today</i> , 2011, 171, 174-179.	4.4	74
59	On the Product Formation in 1-Butene Metathesis over Supported Tungsten Catalysts. <i>Catalysis Letters</i> , 2010, 137, 123-131.	2.6	29
60	A DFT Study of Hydrogen Dissociation on CO- and C-Precovered Fe(100) Surfaces. <i>Journal of Physical Chemistry C</i> , 2010, 114, 5932-5940.	3.1	33
61	Nanorod Calculations on Body-Centered Cubic Iron: A Method for Estimation of Size-Dependent Surface Energies of Metal Nanocrystals. <i>Journal of Physical Chemistry C</i> , 2009, 113, 644-649.	3.1	5
62	Migration of Potassium in an Fe ₂ O ₃ /H-ZSM-5 Composite Catalyst. <i>Chemical Engineering and Technology</i> , 2009, 32, 826-829.	1.5	5
63	Rate of Oxidation of a Cobalt Catalyst in Water and Water/Hydrogen Mixtures: Influence of Platinum as a Reduction Promoter. <i>Catalysis Letters</i> , 2009, 133, 8-13.	2.6	7
64	Interaction of graphene with FCC-Co(111). <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 803-807.	2.8	53
65	GC-MS: A novel technique for investigating selectivity in the Fischer-Tropsch synthesis. <i>Catalysis Communications</i> , 2009, 10, 1674-1680.	3.3	16
66	Fischer-Tropsch Catalysts for the Biomass-to-Liquid (BTL) Process. <i>Chemical Engineering and Technology</i> , 2008, 31, 655-666.	1.5	312
67	Evaluation of molybdenum-modified alumina support materials for Co-based Fischer-Tropsch catalysts. <i>Applied Catalysis A: General</i> , 2008, 335, 56-63.	4.3	21
68	Theoretical feasibility of CO-activation and Fischer-Tropsch chain growth on mono- and diatomic Ru complexes. <i>Journal of Molecular Catalysis A</i> , 2008, 288, 75-82.	4.8	4
69	New aspects for heterogeneous cobalt-catalyzed hydroamination of ethanol. <i>Journal of Catalysis</i> , 2008, 253, 111-118.	6.2	29
70	Coadsorption of CO and H on Fe(100). <i>Journal of Physical Chemistry C</i> , 2008, 112, 16505-16513.	3.1	24
71	Intermediates in the Formation of Graphitic Carbon on a Flat FCC-Co(111) Surface. <i>Journal of Physical Chemistry C</i> , 2008, 112, 12899-12904.	3.1	48
72	Fischer-Tropsch CO-Hydrogenation on SiO ₂ -supported Osmium Complexes. <i>Zeitschrift Fur Naturforschung - Section B Journal of Chemical Sciences</i> , 2008, 63, 289-292.	0.7	9

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73	Surface Energy Estimation of Catalytically Relevant fcc Transition Metals Using DFT Calculations on Nanorods. <i>Journal of Physical Chemistry C</i> , 2007, 111, 4998-5005.	3.1	36
74	Some insights in the sonochemical preparation of cobalt nano-particles. <i>Ultrasonics Sonochemistry</i> , 2007, 14, 732-738.	8.2	11
75	A DFT-study on the acidity of MoO ₄ ²⁻ -Al-clusters. <i>Journal of Molecular Catalysis A</i> , 2007, 266, 254-259.	4.8	7
76	Intrinsic reactivity of gold nanoparticles: Classical, semi-empirical and DFT studies. <i>Gold Bulletin</i> , 2007, 40, 150-153.	2.7	55
77	Importance of the Usage Ratio in Iron-Based Fischer-Tropsch Synthesis with Recycle. <i>Industrial & Engineering Chemistry Research</i> , 2006, 45, 8629-8633.	3.7	18
78	Novel synthesis route for egg-shell, egg-white and egg-yolk type of cobalt on silica catalysts. <i>Applied Catalysis A: General</i> , 2006, 301, 138-142.	4.3	32
79	Vapour-phase synthesis of 2-methyl- and 4-methylquinoline over BEA zeolites. <i>Journal of Catalysis</i> , 2006, 239, 362-368.	6.2	27
80	Experimental approaches to the preparation of supported metal nanoparticles. <i>Pure and Applied Chemistry</i> , 2006, 78, 1759-1769.	1.9	67
81	The nature of the oxidation states of gold on ZnO. <i>Physical Chemistry Chemical Physics</i> , 2005, 7, 2440.	2.8	35
82	Stability of Nanocrystals: A Thermodynamic Analysis of Oxidation and Re-reduction of Cobalt in Water/Hydrogen Mixtures. <i>Journal of Physical Chemistry B</i> , 2005, 109, 3575-3577.	2.6	265
83	The synthesis and testing of thin film ZSM-5 catalysts. <i>Chemical Engineering Science</i> , 2004, 59, 2647-2657.	3.8	34
84	Origin of catalyst deactivation in Fries rearrangement of phenyl acetate over zeolite H-Beta. <i>Journal of Molecular Catalysis A</i> , 2004, 216, 61-65.	4.8	13
85	Intracrystalline diffusivity of hydroxybenzenes in TS-1 and Al-free Ti-beta. <i>Microporous and Mesoporous Materials</i> , 2004, 69, 181-186.	4.4	9
86	A DFT study of hydrogen and carbon monoxide chemisorption onto small gold clusters. <i>Chemical Physics Letters</i> , 2004, 395, 33-37.	2.6	108
87	The synthesis and testing of thin film ZSM-5 catalysts. <i>Chemical Engineering Science</i> , 2004, 59, 2647-2647.	3.8	0
88	Silica supported cobalt Fischer-Tropsch catalysts: effect of pore diameter of support. <i>Catalysis Today</i> , 2002, 71, 395-402.	4.4	171
89	On the effect of water during Fischer-Tropsch synthesis with a ruthenium catalyst. <i>Catalysis Today</i> , 2002, 71, 419-427.	4.4	106
90	Comparison of preparation methods for carbon nanotubes supported iron Fischer-Tropsch catalysts. <i>Catalysis Today</i> , 2002, 71, 327-334.	4.4	185

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91	Some evidence refuting the alkenyl mechanism for chain growth in iron-based Fischer-Tropsch synthesis. <i>Catalysis Today</i> , 2002, 71, 343-349.	4.4	24
92	Active Sites Characterization in Mixed Vanadium and Iron Antimonate Oxide Catalysts for Propane Ammoxidation. <i>Journal of Catalysis</i> , 2002, 205, 97-106.	6.2	49
93	Influence of Pore and Crystal Size of Crystalline Titanosilicates on Phenol Hydroxylation in Different Solvents. <i>Journal of Catalysis</i> , 2001, 203, 201-212.	6.2	115
94	Synthesis of resorcinol from meta-phenylenediamine in the presence of zeolites. <i>Journal of Molecular Catalysis A</i> , 2000, 154, 73-83.	4.8	4
95	Synthesis of resorcinol from meta-phenylenediamine in the presence of zirconium phosphates. <i>Microporous and Mesoporous Materials</i> , 2000, 41, 149-159.	4.4	5
96	The effect of the adsorption properties of steamed zeolite rho on its methanol amination activity. <i>Microporous and Mesoporous Materials</i> , 2000, 35-36, 163-172.	4.4	6
97	Improved selectivity to lower substituted methylamines using hydrothermally treated zeolite Rho. <i>Catalysis Today</i> , 1999, 49, 229-235.	4.4	11
98	Polymerisation kinetics of the Fischer-Tropsch CO hydrogenation using iron and cobalt based catalysts. <i>Applied Catalysis A: General</i> , 1999, 186, 309-320.	4.3	157
99	Cobalt Cluster Effects in Zirconium Promoted Co/SiO ₂ Fischer-Tropsch Catalysts. <i>Journal of Catalysis</i> , 1999, 185, 120-130.	6.2	98
100	Effect of Activation Procedure and Support on the Reductive Amination of Ethanol Using Supported Cobalt Catalysts. <i>Journal of Catalysis</i> , 1997, 167, 513-521.	6.2	26
101	Time on stream behaviour in the partial oxidation of propene over iron antimony oxide. <i>Applied Catalysis A: General</i> , 1997, 165, 349-356.	4.3	23
102	TPR Study on the Preparation of Impregnated Co/SiO ₂ Catalysts. <i>Journal of Catalysis</i> , 1996, 162, 220-229.	6.2	290
103	Reductive amination of ethanol with silica-supported cobalt and nickel catalysts. <i>Applied Catalysis A: General</i> , 1995, 125, 99-112.	4.3	66
104	Specific inhibition as the kinetic principle of the Fischer-Tropsch synthesis. <i>Topics in Catalysis</i> , 1995, 2, 223-234.	2.8	49
105	Selectivity and mechanism of Fischer-Tropsch synthesis with iron and cobalt catalysts. <i>Studies in Surface Science and Catalysis</i> , 1994, 81, 455-460.	1.5	122
106	Regularities of selectivity as a key for discriminating FT-surface reactions and formation of the dynamic system. <i>Catalysis Letters</i> , 1990, 7, 157-167.	2.6	27
107	Preparation of Pt-Promoted Co/SiO ₂ Catalysts for CO Hydrogenation by Strong Electrostatic Adsorption (SEA). <i>Advanced Materials Research</i> , 0, 1019, 357-364.	0.3	2