Eric van Steen

List of Publications by Year
in descending order

107 papers	4,279 citations	117625 34 h-index	114465 63 g-index
110 all docs	110 docs citations	110 times ranked	3567 citing authors

#	Article	IF	Citations
1	Fischerâ€Tropsch Catalysts for the Biomassâ€toâ€Liquid (BTL)â€Process. Chemical Engineering and Technology, 2008, 31, 655-666.	1.5	312
2	TPR Study on the Preparation of Impregnated Co/SiO2Catalysts. Journal of Catalysis, 1996, 162, 220-229.	6.2	290
3	Stability of Nanocrystals:Â Thermodynamic Analysis of Oxidation and Re-reduction of Cobalt in Water/Hydrogen Mixtures. Journal of Physical Chemistry B, 2005, 109, 3575-3577.	2.6	265
4	Comparison of preparation methods for carbon nanotubes supported iron Fischerâ€“Tropsch catalysts. Catalysis Today, 2002, 71, 327-334.	4.4	185
5	Silica supported cobalt Fischerâ€“Tropsch catalysts: effect of pore diameter of support. Catalysis Today, 2002, 71, 395-402.	4.4	171
6	Polymerisation kinetics of the Fischerâ€“Tropsch CO hydrogenation using iron and cobalt based catalysts. Applied Catalysis A: General, 1999, 186, 309-320.	4.3	157
7	In situ magnetometer study on the formation and stability of cobalt carbide in Fischerâ€“Tropsch synthesis. Journal of Catalysis, 2014, 318, 193-202.	6.2	126
8	Selectivity and mechanism of Fischer-Tropsch synthesis with iron and cobalt catalysts. Studies in Surface Science and Catalysis, 1994, 81, 455-460.	1.5	122
9	Influence of Pore and Crystal Size of Crystalline Titanosilicates on Phenol Hydroxylation in Different Solvents. Journal of Catalysis, 2001, 203, 201-212.	6.2	115
10	Structure sensitivity of the Fischerâ€“Tropsch activity and selectivity on alumina supported cobalt catalysts. Journal of Catalysis, 2013, 299, 67-80.	6.2	113
11	A DFT study of hydrogen and carbon monoxide chemisorption onto small gold clusters. Chemical Physics Letters, 2004, 395, 33-37.	2.6	108
12	On the effect of water during Fischerâ€“Tropsch synthesis with a ruthenium catalyst. Catalysis Today, 2002, 71, 419-427.	4.4	106
13	Strong-metalâ€“support interaction by molecular design: Feâ€“silicate interactions in Fischerâ€“Tropsch catalysts. Journal of Catalysis, 2012, 289, 140-150.	6.2	101
14	Cobalt Cluster Effects in Zirconium Promoted Co/SiO2 Fischerâ€“Tropsch Catalysts. Journal of Catalysis, 1999, 185, 120-130.	6.2	98
15	Hydrogen spillover in the Fischerâ€“Tropsch synthesis: An analysis of platinum as a promoter for cobaltâ€“alumina catalysts. Catalysis Today, 2016, 261, 17-27.	4.4	91
16	Impact of Process Conditions on the Sintering Behavior of an Alumina-Supported Cobalt Fischerâ€“Tropsch Catalyst Studied with an in Situ Magnetometer. ACS Catalysis, 2015, 5, 841-852.	11.2	83
17	Sizeâ€Dependent Phase Transformation of Catalytically Active Nanoparticles Captured Inâ€…Situ. Angewandte Chemie - International Edition, 2014, 53, 1342-1345.	13.8	77
18	Preparation of supported nano-sized cobalt oxide and fcc cobalt crystallites. Catalysis Today, 2011, 171, 174-179.	4.4	74

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19	Experimental approaches to the preparation of supported metal nanoparticles. Pure and Applied Chemistry, 2006, 78, 1759-1769.	1.9	67
20	Reductive amination of ethanol with silica-supported cobalt and nickel catalysts. Applied Catalysis A: General, 1995, 125, 99-112.	4.3	66
21	Intrinsic reactivity of gold nanoparticles: Classical, semi-empirical and DFT studies. Gold Bulletin, 2007, 40, 150-153.	2.7	55
22	Interaction of graphene with FCCâ€"Co(111). Physical Chemistry Chemical Physics, 2009, 11, 803-807.	2.8	53
23	Specific inhibition as the kinetic principle of the Fischer-Tropsch synthesis. Topics in Catalysis, 1995, 2, 223-234.	2.8	49
24	Active Sites Characterization in Mixed Vanadium and Iron Antimonate Oxide Catalysts for Propane Ammoxidation. Journal of Catalysis, 2002, 205, 97-106.	6.2	49
25	Intermediates in the Formation of Graphitic Carbon on a Flat FCC-Co(111) Surface. Journal of Physical Chemistry C, 2008, 112, 12899-12904.	3.1	48
26	Comparing silver and copper as promoters in Fe-based Fischerâ€"Tropsch catalysts using delafossite as a model compound. Journal of Catalysis, 2013, 307, 283-294.	6.2	47
27	Copper ferrites: A model for investigating the role of copper in the dynamic iron-based Fischerâ€"Tropsch catalyst. Journal of Catalysis, 2013, 308, 363-373.	6.2	46
28	Comparing nickel and cobalt perovskites for steam reforming of glycerol. Molecular Catalysis, 2018, 452, 60-67.	2.0	40
29	Cobalt Fischerâ€"Tropsch Catalyst Regeneration: The Crucial Role of the Kirkendall Effect for Cobalt Redispersion. Topics in Catalysis, 2011, 54, 811-816.	2.8	39
30	Reâ€dispersion of Cobalt on a Model Fischerâ€"Tropsch Catalyst During Reductionâ€"Oxidationâ€"Reduction Cycles. ChemCatChem, 2012, 4, 1411-1419.	3.7	39
31	Surface Energy Estimation of Catalytically Relevant fcc Transition Metals Using DFT Calculations on Nanorods. Journal of Physical Chemistry C, 2007, 111, 4998-5005.	3.1	36
32	The nature of the oxidation states of gold on ZnO. Physical Chemistry Chemical Physics, 2005, 7, 2440.	2.8	35
33	Hydrogen spillover in the Fischerâ€"Tropsch synthesis: An analysis of gold as a promoter for cobaltâ€"alumina catalysts. Catalysis Today, 2016, 275, 27-34.	4.4	35
34	The synthesis and testing of thin film ZSM-5 catalysts. Chemical Engineering Science, 2004, 59, 2647-2657.	3.8	34
35	A DFT Study of Hydrogen Dissociation on CO- and C-Precovered Fe(100) Surfaces. Journal of Physical Chemistry C, 2010, 114, 5932-5940.	3.1	33
36	Novel synthesis route for egg-shell, egg-white and egg-yolk type of cobalt on silica catalysts. Applied Catalysis A: General, 2006, 301, 138-142.	4.3	32

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37	A DFT perspective of potassium promotion of Ï‡-Fe5C2(100). Applied Catalysis A: General, 2015, 496, 64-72.	4.3	30
38	New aspects for heterogeneous cobalt-catalyzed hydroamination of ethanol. Journal of Catalysis, 2008, 253, 111-118.	6.2	29
39	On the Product Formation in 1-Butene Metathesis over Supported Tungsten Catalysts. Catalysis Letters, 2010, 137, 123-131.	2.6	29
40	Regularities of selectivity as a key for discriminating FT-surface reactions and formation of the dynamic system. Catalysis Letters, 1990, 7, 157-167.	2.6	27
41	Vapour-phase synthesis of 2-methyl- and 4-methylquinoline over BEA zeolites. Journal of Catalysis, 2006, 239, 362-368.	6.2	27
42	Effect of Activation Procedure and Support on the Reductive Amination of Ethanol Using Supported Cobalt Catalysts. Journal of Catalysis, 1997, 167, 513-521.	6.2	26
43	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
44	Sintering of cobalt during FTS: Insights from industrial and model systems. Catalysis Today, 2020, 342, 59-70.	4.4	25
45	Some evidence refuting the alkenyl mechanism for chain growth in iron-based Fischerâ€“Tropsch synthesis. Catalysis Today, 2002, 71, 343-349.	4.4	24
46	Coadsorption of CO and H on Fe(100). Journal of Physical Chemistry C, 2008, 112, 16505-16513.	3.1	24
47	Time on stream behaviour in the partial oxidation of propene over iron antimony oxide. Applied Catalysis A: General, 1997, 165, 349-356.	4.3	23
48	Cobalt-Based Fischerâ€“Tropsch Synthesis: A Kinetic Evaluation of Metalâ€“Support Interactions Using an Inverse Model System. Catalysts, 2019, 9, 794.	3.5	23
49	Metal Support Interactions in Co3O4/Al2O3 Catalysts Prepared from w/o Microemulsions. Catalysis Letters, 2012, 142, 830-837.	2.6	22
50	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
51	Role of Transient Co-Subcarbonyls in Ostwald Ripening Sintering of Cobalt Supported on Î³-Alumina Surfaces. Journal of Physical Chemistry C, 2017, 121, 16739-16753.	3.1	22
52	Evaluation of molybdenum-modified alumina support materials for Co-based Fischer-Tropsch catalysts. Applied Catalysis A: General, 2008, 335, 56-63.	4.3	21
53	Enhanced olefin production in Fischerâ€“Tropsch synthesis using ammonia containing synthesis gas feeds. Catalysis Today, 2016, 275, 94-99.	4.4	21
54	Identification of the active species in oxidation reactions on mixed oxide catalysts: Supra-surface or bulk surface species. Journal of Catalysis, 2012, 289, 1-10.	6.2	19

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55	Importance of the Usage Ratio in Iron-Based Fischerâ˘'Tropsch Synthesis with Recycle. Industrial & Engineering Chemistry Research, 2006, 45, 8629-8633.	3.7	18
56	High-Index Coreâ€"Shell Niâ€"Pt Nanoparticles as Oxygen Reduction Electrocatalysts. ACS Applied Nano Materials, 2020, 3, 5718-5731.	5.0	17
57	GC Ã— GC: A novel technique for investigating selectivity in the Fischerâ€"Tropsch synthesis. Catalysis Communications, 2009, 10, 1674-1680.	3.3	16
58	Choosing a suitable support for Co3O4 as an NH3 oxidation catalyst. Catalysis Science and Technology, 2013, 3, 1905.	4.1	16
59	Mechanistic pathways for oxygen removal on Pt-doped Co(111) in the Fischer-Tropsch reaction. Catalysis Today, 2020, 342, 142-151.	4.4	16
60	Insights into the unusual role of chlorine in product selectivity for direct hydrogenation of CO/CO2 to short-chain olefins. Chemical Engineering Journal, 2021, 413, 127424.	12.7	15
61	Origin of catalyst deactivation in Fries rearrangement of phenyl acetate over zeolite H-Beta. Journal of Molecular Catalysis A, 2004, 216, 61-65.	4.8	13
62	Effective Utilization of the Catalytically Active Phase: NH3 Oxidation Over Unsupported and Supported Co3O4. Catalysis Letters, 2012, 142, 445-451.	2.6	13
63	Metalâ€"support interaction on cobalt based FT catalysts â€" a DFT study of model inverse catalysts. Faraday Discussions, 2017, 197, 87-99.	3.2	13
64	Decoupling the deactivation mechanisms of a cobalt Fischerâ€"Tropsch catalyst operated at high conversion and â€˜simulatedâ€™ high conversion. Catalysis Science and Technology, 2020, 10, 7056-7066.	4.1	13
65	Probing the edge effect on the ORR activity using platinum nanorods: A DFT study. Catalysis Today, 2018, 312, 126-131.	4.4	12
66	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
67	Manganese promotion of a cobalt Fischer-Tropsch catalyst to improve operation at high conversion. Journal of Catalysis, 2022, 411, 97-108.	6.2	12
68	Improved selectivity to lower substituted methylamines using hydrothermally treated zeolite Rho. Catalysis Today, 1999, 49, 229-235.	4.4	11
69	Some insights in the sonochemical preparation of cobalt nano-particles. Ultrasonics Sonochemistry, 2007, 14, 732-738.	8.2	11
70	Surface modification of Co3O4 nanocubes with TEOS for an improved performance in the Fischer-Tropsch synthesis. Catalysis Today, 2020, 343, 176-182.	4.4	11
71	Topographical and compositional engineering of coreâ€"shell Ni@Pt ORR electro-catalysts. RSC Advances, 2020, 10, 29268-29277.	3.6	11
72	Tuning catalytic performance in Fischer-Tropsch synthesis by metal-support interactions. Journal of Catalysis, 2021, 395, 70-79.	6.2	11

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73	Formation of nitrogen containing compounds from ammonia co-fed to the Fischerâ€“Tropsch synthesis. Applied Catalysis A: General, 2015, 502, 150-156.	4.3	10
74	Synthesis and characterization of NiFe2O4@Co3O4 core-shell nanoparticles. Materials Characterization, 2016, 121, 93-102.	4.4	10
75	Micro-Kinetic Modelling of CO-TPD from Fe(100)â€"Incorporating Lateral Interactions. Catalysts, 2019, 9, 310.	3.5	10
76	Liquid Phase, Aerobic Oxidation of Benzyl Alcohol over the Catalyst System (Pt/TiO₂+H₂O). ChemCatChem, 2020, 12, 4760-4764.	3.7	10
77	Intracrystalline diffusivity of hydroxybenzenes in TS-1 and Al-free Ti-beta. Microporous and Mesoporous Materials, 2004, 69, 181-186.	4.4	9
78	Fischer-Tropsch CO-Hydrogenation on SiO2-supported Osmium Complexes. Zeitschrift Fur Naturforschung - Section B Journal of Chemical Sciences, 2008, 63, 289-292.	0.7	9
79	Effect of Alumina Modification on the Reducibility of Co3O4 Crystallites Studied on Inverse-Model Catalysts. Catalysis Letters, 2018, 148, 1215-1227.	2.6	9
80	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
81	Insights into promoter-enhanced aqueous phase CO hydrogenation over Co@TiO2 mesoporous nanocomposites. Fuel, 2022, 310, 122402.	6.4	8
82	A DFT-study on the acidity of Moâ€“Oâ€“Al-clusters. Journal of Molecular Catalysis A, 2007, 266, 254-259.	4.8	7
83	Rate of Oxidation of a Cobalt Catalyst in Water and Water/Hydrogen Mixtures: Influence of Platinum as a Reduction Promoter. Catalysis Letters, 2009, 133, 8-13.	2.6	7
84	Pt₃₈cluster on OH- and COOH-functionalised graphene as a model for Pt/C-catalysts. Physical Chemistry Chemical Physics, 2016, 18, 25693-25704.	2.8	7
85	Steam Reforming of Glycerol for Syngas Production using Ptâ€“Ni Nanoparticles Supported on Bimodal Porous MgAl₂O₄. Energy & Fuels, 2021, 35, 5217-5230.	5.1	7
86	Comparison of mechanisms for the direct, gas phase, partial oxidation of methane to methanol. Chemical Engineering Science, 2021, 241, 116718.	3.8	7
87	The effect of the adsorption properties of steamed zeolite rho on its methanol amination activity. Microporous and Mesoporous Materials, 2000, 35-36, 163-172.	4.4	6
88	Further Investigation into the Formation of Alcohol during Fischer Tropsch Synthesis on Fe-based Catalysts. APCBEE Procedia, 2012, 3, 110-115.	0.5	6
89	Promoting Ï‡-Fe₅C₂(100)_{0.25} with copper â€“ a DFT study. Journal of Lithic Studies, 2015, 1, 11-18.	0.5	6
90	Liquid Phase Oxidation of Benzyl Alcohol over Pt and Ptâ€“Ni Alloy Supported on TiO2: Using O2 or H2O2 as Oxidant?. Catalysis Letters, 2022, 152, 1760-1768.	2.6	6

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91	Synthesis of resorcinol from meta-phenylenediamine in the presence of zirconium phosphates. Microporous and Mesoporous Materials, 2000, 41, 149-159.	4.4	5
92	Nanorod Calculations on Body-Centered Cubic Iron: A Method for Estimation of Size-Dependent Surface Energies of Metal Nanocrystals. Journal of Physical Chemistry C, 2009, 113, 644-649.	3.1	5
93	Migration of Potassium in an Fe2O3/H-ZSM-5 Composite Catalyst. Chemical Engineering and Technology, 2009, 32, 826-829.	1.5	5
94	Enhanced Activity via Surface Modification of Fe-Based Fischerâ€“Tropsch Catalyst Precursor with Titanium Butoxide. Topics in Catalysis, 2014, 57, 572-581.	2.8	5
95	Morphological and compositional changes of MFe2O4@Co3O4 (Mâ€¯=â€¯Ni, Zn) core-shell nanoparticles after mild reduction. Materials Characterization, 2019, 155, 109806.	4.4	5
96	Synthesis of resorcinol from meta-phenylenediamine in the presence of zeolites. Journal of Molecular Catalysis A, 2000, 154, 73-83.	4.8	4
97	Theoretical feasibility of CO-activation and Fischerâ€“Tropsch chain growth on mono- and diatomic Ru complexes. Journal of Molecular Catalysis A, 2008, 288, 75-82.	4.8	4
98	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
99	Performance of a NiFe₂O₄@Co Coreâ€“Shell Fischerâ€“Tropsch Catalyst: Effect of Low Temperature Reduction. ACS Omega, 2020, 5, 32975-32983.	3.5	4
100	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
101	Visible-Light Responsive Cuâ€“MOFâ€“NH2 for Highly Efficient Aerobic Photocatalytic Oxidation of Benzyl Alcohol. Kinetics and Catalysis, 2021, 62, S9-S20.	1.0	3
102	Pt/Au Alloys as Reduction Promoters for Co/TiO₂ Fischer-Tropsch Catalysts. Advanced Materials Research, 2014, 1019, 365-371.	0.3	2
103	Preparation of Pt-Promoted Co/SiO₂ Catalysts for CO Hydrogenation by Strong Electrostatic Adsorption (SEA). Advanced Materials Research, 0, 1019, 357-364.	0.3	2
104	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
105	Formation of Pt-Based Alloy Nanoparticles Assisted by Molybdenum Hexacarbonyl. Nanomaterials, 2021, 11, 1825.	4.1	2
106	An automated coating process to produce TiO2-coated optical fibre for photocatalytic reactor systems. Chemical Engineering and Processing: Process Intensification, 2021, 166, 108479.	3.6	2
107	The synthesis and testing of thin film ZSM-5 catalysts. Chemical Engineering Science, 2004, 59, 2647-2647.	3.8	0