Michiel Makkee

List of Publications by Year
in descending order

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133 papers	10,003 citations	47006 47 h-index	36028 97 g-index
139 all docs	139 docs citations	139 times ranked	9477 citing authors

#	Article	IF	Citations
1	Challenges in the Greener Production of Formates/Formic Acid, Methanol, and DME by Heterogeneously Catalyzed CO₂Hydrogenation Processes. Chemical Reviews, 2017, 117, 9804-9838.	47.7	1,058
2	Science and technology of catalytic diesel particulate filters. Catalysis Reviews - Science and Engineering, 2001, 43, 489-564.	12.9	496
3	The Production of Propene Oxide:Â Catalytic Processes and Recent Developments. Industrial & Engineering Chemistry Research, 2006, 45, 3447-3459.	3.7	456
4	Electronic Metalâ€“Support Interactions in Singleâ€Atom Catalysts. Angewandte Chemie - International Edition, 2014, 53, 3418-3421.	13.8	347
5	Diesel particulate emission control. Fuel Processing Technology, 1996, 47, 1-69.	7.2	326
6	Metal organic framework-mediated synthesis of highly active and stable Fischer-Tropsch catalysts. Nature Communications, 2015, 6, 6451.	12.8	325
7	Role of gold cations in the oxidation of carbon monoxide catalyzed by iron oxide-supported gold. Journal of Catalysis, 2006, 242, 71-81.	6.2	322
8	Syngas production from electrochemical reduction of CO₂: current status and prospective implementation. Green Chemistry, 2017, 19, 2326-2346.	9.0	281
9	The role of NO2 and O2 in the accelerated combustion of soot in diesel exhaust gases. Applied Catalysis B: Environmental, 2004, 50, 185-194.	20.2	278
10	Direct Epoxidation of Propene Using Gold Dispersed on TS-1 and Other Titanium-Containing Supports. Industrial & Engineering Chemistry Research, 1999, 38, 884-891.	3.7	273
11	Kinetics of the oxidation of diesel soot. Fuel, 1997, 76, 1129-1136.	6.4	258
12	Stability and Selectivity of Au/TiO2 and Au/TiO2/SiO2 Catalysts in Propene Epoxidation: An in Situ FT-IR Study. Journal of Catalysis, 2001, 201, 128-137.	6.2	244
13	Catalysts for the oxidation of soot from diesel exhaust gases II. Contact between soot and catalyst under practical conditions. Applied Catalysis B: Environmental, 1997, 12, 21-31.	20.2	219
14	CeO2 catalysed soot oxidation. Applied Catalysis B: Environmental, 2004, 51, 9-19.	20.2	209
15	Hierarchical H-ZSM-5-supported cobalt for the direct synthesis of gasoline-range hydrocarbons from syngas: Advantages, limitations, and mechanistic insight. Journal of Catalysis, 2013, 305, 179-190.	6.2	192
16	XPS and MÃ¶ssbauer Characterization of Au/TiO2Propene Epoxidation Catalysts. Journal of Physical Chemistry B, 2002, 106, 9853-9862.	2.6	187
17	Elucidating the Nature of Fe Species during Pyrolysis of the Fe-BTC MOF into Highly Active and Stable Fischerâ€Tropsch Catalysts. ACS Catalysis, 2016, 6, 3236-3247.	11.2	176
18	Cracking of a rapeseed vegetable oil under realistic FCC conditions. Applied Catalysis B: Environmental, 2007, 72, 44-61.	20.2	175

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19	Catalysis engineering of bifunctional solids for the one-step synthesis of liquid fuels from syngas: a review. Catalysis Science and Technology, 2014, 4, 893-907.	4.1	148
20	Soot oxidation catalyzed by a Cu/K/Mo/Cl catalyst: evaluation of the chemistry and performance of the catalyst. Applied Catalysis B: Environmental, 1995, 6, 339-352.	20.2	131
21	Gold on titania: Effect of preparation method in the liquid phase oxidation. Applied Catalysis A: General, 2006, 311, 185-192.	4.3	126
22	Cellulose Conversion to Isosorbide in Molten Salt hydrate Media. ChemSusChem, 2010, 3, 325-328.	6.8	118
23	Comparison of the Performance of Activated Carbon-Supported Noble Metal Catalysts in the Hydrogenolysis of CCl2F2. Journal of Catalysis, 1998, 177, 29-39.	6.2	117
24	Breaking the Fischerâ€“Tropsch synthesis selectivity: direct conversion of syngas to gasoline over hierarchical Co/H-ZSM-5 catalysts. Catalysis Science and Technology, 2013, 3, 572-575.	4.1	114
25	Mechanistic Insight into the Synthesis of Higher Alcohols from Syngas: The Role of K Promotion on MoS₂ Catalysts. ACS Catalysis, 2013, 3, 1634-1637.	11.2	113
26	DRIFTS study of the waterâ€“gas shift reaction over Au/Fe2O3. Journal of Catalysis, 2006, 243, 171-182.	6.2	106
27	An optimal NOx assisted abatement of diesel soot in an advanced catalytic filter design. Applied Catalysis B: Environmental, 2003, 42, 35-45.	20.2	93
28	Selective oxidation of CO in the presence of H2, H2O and CO2utilising Au/Î±-Fe2O3catalysts for use in fuel cells. Journal of Materials Chemistry, 2006, 16, 199-208.	6.7	92
29	The influence of NOx on soot oxidation rate: molten salt versus platinum. Applied Catalysis B: Environmental, 2002, 35, 159-166.	20.2	89
30	The effects of heat and mass transfer in thermogravimetrical analysis. A case study towards the catalytic oxidation of soot. Thermochimica Acta, 1996, 287, 261-278.	2.7	87
31	A â€œSmartâ€•Hollandite DeNO_x Catalyst: Selfâ€Protection against Alkali Poisoning. Angewandte Chemie - International Edition, 2013, 52, 660-664.	13.8	85
32	On the mechanism of model diesel soot-O2 reaction catalysed by Pt-containing La3+-doped CeO2A TAP study with isotopic O2. Catalysis Today, 2007, 121, 237-245.	4.4	80
33	Hydrogenation of d-fructose and d-fructose/d-glucose mixtures. Carbohydrate Research, 1985, 138, 225-236.	2.3	72
34	Production of clean transportation fuels and lower olefins from Fischer-Tropsch Synthesis waxes under fluid catalytic cracking conditions. Applied Catalysis B: Environmental, 2006, 63, 277-295.	20.2	70
35	Shaping Covalent Triazine Frameworks for the Hydrogenation of Carbon Dioxide to Formic Acid. ChemCatChem, 2016, 8, 2217-2221.	3.7	65
36	Sorbitol dehydration into isosorbide in a molten salt hydrate medium. Catalysis Science and Technology, 2013, 3, 1540.	4.1	64

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37	Combined action of enzyme and metal catalyst, applied to the preparation of D-mannitol. Journal of the Chemical Society Chemical Communications, 1980, , 930.	2.0	63
38	Application of NO storage/release materials based on alkali-earth oxides supported on Al2O3 for high-temperature diesel soot oxidation. Applied Catalysis B: Environmental, 2009, 88, 263-271.	20.2	61
39	Covalent organic frameworks as supports for a molecular Ni based ethylene oligomerization catalyst for the synthesis of long chain olefins. Journal of Catalysis, 2017, 345, 270-280.	6.2	60
40	Selection of activated carbon for the selective hydrogenolysis of CCl2F2 (CFC-12) into CH2F2 (HFC-32) over palladium-supported catalysts. Applied Catalysis A: General, 1998, 173, 161-173.	4.3	56
41	Increasing the low propene epoxidation product yield of gold/titania-based catalysts. Applied Catalysis A: General, 2004, 270, 49-56.	4.3	55
42	Contact dynamics for a solidâ€“solid reaction mediated by gas-phase oxygen: Study on the soot oxidation over ceria-based catalysts. Applied Catalysis B: Environmental, 2016, 199, 96-107.	20.2	55
43	Fluid catalytic cracking: Processing opportunities for Fischerâ€“Tropsch waxes and vegetable oils to produce transportation fuels and light olefins. Microporous and Mesoporous Materials, 2012, 164, 148-163.	4.4	53
44	Feasibility study towards a Cu/K/Mo/(Cl) soot oxidation catalyst for application in diesel exhaust gases. Applied Catalysis B: Environmental, 1997, 11, 365-382.	20.2	50
45	TAP reactor study of the deep oxidation of propane using cobalt oxide and gold-containing cobalt oxide catalysts. Applied Catalysis A: General, 2009, 365, 222-230.	4.3	50
46	Are Fischerâ€“Tropsch waxes good feedstocks for fluid catalytic cracking units?. Catalysis Today, 2005, 106, 288-292.	4.4	49
47	Synthesis of highly dispersed Pd nanoparticles supported on multi-walled carbon nanotubes and their excellent catalytic performance for oxidation of benzyl alcohol. Catalysis Science and Technology, 2015, 5, 4144-4153.	4.1	49
48	Acrylate and propoxy-groups: Contributors to deactivation of Au/TiO2 in the epoxidation of propene. Journal of Catalysis, 2009, 266, 286-290.	6.2	47
49	Kinetics of propane dehydrogenation over Ptâ€“Sn/Al₂O₃. Catalysis Science and Technology, 2013, 3, 962-971.	4.1	46
50	Efficient Electrochemical Production of Syngas from CO₂ and H₂O by using a Nanostructured Ag/gâ€C₃N₄ Catalyst. ChemElectroChem, 2016, 3, 1497-1502.	3.4	46
51	Combined action of an enzyme and a metal catalyst on the conversion of d-glucose/d-fructose mixtures into d-mannitol. Carbohydrate Research, 1985, 138, 237-245.	2.3	44
52	Direct gas-phase epoxidation of propene over bimetallic Au catalysts. Catalysis Today, 2002, 72, 59-62.	4.4	44
53	Enhancement of biphenyl hydrogenation over gold catalysts supported on Fe-, Ce- and Ti-modified mesoporous silica (HMS). Journal of Catalysis, 2009, 267, 30-39.	6.2	44
54	Scaling down trickle bed reactors. Catalysis Today, 2005, 106, 227-232.	4.4	43

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55	Facile Method for the Preparation of Covalent Triazine Framework coated Monoliths as Catalyst Support: Applications in C1 Catalysis. ACS Applied Materials & Interfaces, 2017, 9, 26060-26065.	8.0	41
56	XPS characterisation of carbon-coated alumina support. Surface and Interface Analysis, 2006, 38, 917-921.	1.8	40
57	Catalyst testing in a multiple-parallel, gasâ€“liquid, powder-packed bed microreactor. Applied Catalysis A: General, 2009, 365, 199-206.	4.3	40
58	Transient Behavior and Stability in Miniaturized Multiphase Packed Bed Reactors. Industrial & Engineering Chemistry Research, 2010, 49, 1033-1040.	3.7	40
59	Inhibition of a Gold-Based Catalyst in Benzyl Alcohol Oxidation: Understanding and Remediation. Catalysts, 2014, 4, 89-115.	3.5	40
60	Deep desulphurization of diesel fuels on bifunctional monolithic nanostructured Pt-zeolite catalysts. Catalysis Today, 2009, 144, 235-250.	4.4	39
61	Metal oxides as catalysts for the oxidation of soot. The Chemical Engineering Journal and the Biochemical Engineering Journal, 1996, 64, 295-302.	0.1	38
62	Catalysed ethylbenzene dehydrogenation in CO2 or N2â€”Carbon deposits as the active phase. Applied Catalysis A: General, 2012, 417-418, 163-173.	4.3	36
63	Catalyst Performance Testing in Multiphase Systems: Implications of Using Small Catalyst Particles in Hydrodesulfurization. Industrial & Engineering Chemistry Research, 2013, 52, 9069-9085.	3.7	36
64	Structural and elemental influence from various MOFs on the performance of Fe@C catalysts for Fischerâ€“Tropsch synthesis. Faraday Discussions, 2017, 197, 225-242.	3.2	36
65	Development of a palladium on activated carbon for a conceptual process in the selective hydrogenolysis of CCl2F2 (CFC-12) into CH2F2 (HFC-32). Catalysis Today, 2000, 55, 125-137.	4.4	34
66	Catalyst testing in multiphase micro-packed-bed reactors; criterion for radial mass transport. Catalysis Today, 2016, 259, 354-359.	4.4	34
67	In situ visible microscopic study of molten Cs2SO4Â·V2O5â€“soot system: Physical interaction, oxidation rate, and data evaluation. Applied Catalysis B: Environmental, 2005, 60, 233-243.	20.2	33
68	Gold supported on mixed oxides for the oxidation of carbon monoxide. Applied Catalysis A: General, 2008, 347, 208-215.	4.3	33
69	Membrane reactors for biodiesel production with strontium oxide as a heterogeneous catalyst. Fuel Processing Technology, 2019, 185, 1-7.	7.2	33
70	Potential rare-earth modified CeO2 catalysts for soot oxidation. Topics in Catalysis, 2007, 42-43, 221-228.	2.8	32
71	Synergy effects of ZSM-5 addition in fluid catalytic cracking of hydrotreated flashed distillate. Applied Catalysis A: General, 2002, 223, 103-119.	4.3	31
72	Simultaneous hydrolysis and hydrogenation of cellobiose to sorbitol in molten salt hydrate media. Catalysis Science and Technology, 2013, 3, 1565.	4.1	31

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73	The role of rhodium in the mechanism of the waterâ€“gas shift over zirconia supported iron oxide. Journal of Catalysis, 2014, 313, 34-45.	6.2	30
74	Avoiding segregation during the loading of a catalystâ€“inert powder mixture in a packed micro-bed. Applied Catalysis A: General, 2009, 365, 110-121.	4.3	29
75	Oxidative dehydrogenation of ethylbenzene to styrene over alumina: effect of calcination. Catalysis Science and Technology, 2013, 3, 519-526.	4.1	28
76	ROTACAT: A Rotating Device Containing a Designed Catalyst for Highly Selective Hydroformylation. Advanced Synthesis and Catalysis, 2001, 343, 201-206.	4.3	27
77	On the generation of aerosol for diesel particulate filtration studies. Separation and Purification Technology, 2002, 27, 195-209.	7.9	27
78	Kinetic and deactivation modelling of biphenyl liquid-phase hydrogenation over bimetallic Ptâ€“Pd catalyst. Applied Catalysis B: Environmental, 2009, 88, 213-223.	20.2	27
79	Mechanistic study of the selective hydrogenolysis of CCl₂F₂ (CFCâ€12) into CH₂F₂ (HFCâ€32) over palladium on activated carbon. Recueil Des Travaux Chimiques Des Pays-Bas, 1996, 115, 505-510.	0.0	26
80	Next Generation Automotive DeNO_x Catalysts: Ceria What Else?. ChemCatChem, 2016, 8, 102-105.	3.7	25
81	Effective Gasoline Production Strategies by Catalytic Cracking of Rapeseed Vegetable Oil in Refinery Conditions. ChemSusChem, 2010, 3, 807-810.	6.8	24
82	On the stability of conventional and nano-structured carbon-based catalysts in the oxidative dehydrogenation of ethylbenzene under industrially relevant conditions. Carbon, 2014, 77, 329-340.	10.3	24
83	Mechanism of deactivation of Au/Fe2O3 catalysts under waterâ€“gas shift conditions. Topics in Catalysis, 2007, 44, 209-221.	2.8	22
84	Catalytic oxidation of diesel soot: Catalyst development. Studies in Surface Science and Catalysis, 1995, , 549-561.	1.5	20
85	The role of RWGS in the dehydrogenation of ethylbenzene to styrene in CO2. Applied Catalysis A: General, 2012, 423-424, 59-68.	4.3	20
86	Oxygen Vacancies in Reduced Rh/ and Pt/Ceria for Highly Selective and Reactive Reduction of NO into N₂ in excess of O₂. ChemCatChem, 2017, 9, 2935-2938.	3.7	20
87	The influence of CO2 on NO reduction into N2 over reduced ceria-based catalyst. Applied Catalysis B: Environmental, 2018, 221, 196-205.	20.2	20
88	Low-temperature atomic layer deposition delivers more active and stable Pt-based catalysts. Nanoscale, 2017, 9, 10802-10810.	5.6	19
89	NOx reduction in the Di-Air system over noble metal promoted ceria. Applied Catalysis B: Environmental, 2018, 231, 200-212.	20.2	19
90	Application of staged O2 feeding in the oxidative dehydrogenation of ethylbenzene to styrene over Al2O3 and P2O5/SiO2 catalysts. Applied Catalysis A: General, 2014, 476, 204-214.	4.3	18

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91	Sorbitol dehydration in a ZnCl₂molten salt hydrate medium: molecular modeling. Catalysis Science and Technology, 2014, 4, 152-163.	4.1	16
92	High-temperature Fischer-Tropsch synthesis over FeTi mixed oxide model catalysts: Tailoring activity and stability by varying the Ti/Fe ratio. Applied Catalysis A: General, 2017, 533, 38-48.	4.3	16
93	Deep Desulfurization of Fossil Fuels by Air in the Absence of a Catalyst. ChemSusChem, 2008, 1, 817-819.	6.8	15
94	Kinetics of the high temperature waterâ€“gas shift over Fe2O3/ZrO2, Rh/ZrO2 and Rh/Fe2O3/ZrO2. Chemical Engineering Journal, 2015, 263, 427-434.	12.7	15
95	Deactivation of palladium on activated carbon in the selective hydrogenolysis of CCl2F2 (CFC-12) into CH2F2 (HFC-32). Applied Catalysis A: General, 2001, 212, 223-238.	4.3	14
96	Fundamental Understanding of the Di-Air System: The Role of Ceria in NO x Abatement. Topics in Catalysis, 2016, 59, 854-860.	2.8	14
97	The Choice of Instrument (ELPI and/or SMPS) for Diesel Soot Particulate Measurements. , 2003, , .		13
98	Ptâ€“Ce-soot generated from fuel-borne catalysts: soot oxidation mechanism. Topics in Catalysis, 2007, 42-43, 229-236.	2.8	13
99	Influence of Diesel Fuel Characteristics on Soot Oxidation Properties. Industrial & Engineering Chemistry Research, 2012, 51, 7559-7564.	3.7	13
100	Validation of a waterâ€“gas shift reactor model based on a commercial FeCr catalyst for pre-combustion CO 2 capture in an IGCC power plant. International Journal of Greenhouse Gas Control, 2014, 29, 82-91.	4.6	13
101	An Optimal Usage of NOxin a Combined Pt/Ceramic Foam and a Wall-Flow Monolith Filter for an Effective NOx-Assisted Soot Oxidation. Topics in Catalysis, 2004, 30/31, 305-308.	2.8	12
102	Six-flow operations for catalyst development in Fischer-Tropsch synthesis: Bridging the gap between high-throughput experimentation and extensive product evaluation. Review of Scientific Instruments, 2013, 84, 124101.	1.3	12
103	Effect of rhodium on the waterâ€“gas shift performance of Fe2O3/ZrO2 and CeO2/ZrO2: Influence of rhodium precursor. Catalysis Today, 2015, 242, 168-177.	4.4	12
104	An Optimal Usage of Nox in a Combined Pt/Ceramic Foam and a Wall-Flow Monolith Filter for an Effective Nox-Assisted Diesel Soot Oxidation. , 0, , .		11
105	Infinite Dilution Binary Diffusion Coefficients of Hydrotreating Compounds in Tetradecane in the Temperature Range from (310 to 475) K. Journal of Chemical & Engineering Data, 2008, 53, 439-443.	1.9	11
106	On-site low-pressure diesel HDS for fuel cell applications: Deepening the sulfur content to â©½1ppm. Fuel, 2011, 90, 3021-3027.	6.4	11
107	On the thermal stabilization of carbon-supported SiO2 catalysts by phosphorus: Evaluation in the oxidative dehydrogenation of ethylbenzene to styrene and a comparison with relevant catalysts. Applied Catalysis A: General, 2016, 514, 173-181.	4.3	11
108	An in situ reactivation study reveals the supreme stability of Î³-alumina for the oxidative dehydrogenation of ethylbenzene to styrene. Catalysis Science and Technology, 2018, 8, 3733-3736.	4.1	9

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109	Volatile tracer dispersion in multi-phase packed beds. Chemical Engineering Science, 2010, 65, 3972-3985.	3.8	8
110	Fundamental understanding of the Di-Air system (an alternative NO abatement technology). I: The difference in reductant pre-treatment of ceria. Applied Catalysis B: Environmental, 2018, 223, 125-133.	20.2	8
111	Influence of Nox on soot combustion with supported molten salt catalysts. Reaction Kinetics and Catalysis Letters, 1999, 67, 3-7.	0.6	7
112	Prediction of the Performance of Coked and Regenerated Fluid Catalytic Cracking Catalyst Mixtures. Opportunities for Process Flexibility. Industrial & Engineering Chemistry Research, 2001, 40, 1602-1607.	3.7	7
113	Preparation of a monolith-supported Au/TiO2 catalyst active for CO oxidation. Gold Bulletin, 2007, 40, 291-294.	2.7	7
114	NO x Storage and High Temperature Soot Oxidation on Ptâ€“Sr/ZrO2 Catalyst. Topics in Catalysis, 2009, 52, 2058-2062.	2.8	7
115	Revisiting the synthesis of Au/TiO2 P25 catalyst and application in the low temperature waterâ€“gas shift under realistic conditions. Catalysis Today, 2015, 244, 19-28.	4.4	7
116	Tailoring the multiphase flow pattern of gas and liquid through micro-packed bed of pillars. Reaction Chemistry and Engineering, 2019, 4, 838-851.	3.7	7
117	Oxidative thermolysis of Mn(acac)3 on the surface of Î³-alumina support. Thermochimica Acta, 2007, 456, 145-151.	2.7	5
118	Pulmonary challenge with carbon nanoparticles induces a dose-dependent increase in circulating leukocytes in healthy males. BMC Pulmonary Medicine, 2017, 17, 121.	2.0	5
119	Impact of Diesel Fuel Composition on Soot Oxidation Characteristics. , 2009, , .		4
120	(Particle) Emissions of Small 2- & amp; 4-Stroke Scooters with (Hydrous) Ethanol Blends. , 2010, , .		4
121	Prediction of the Performance of Coked and Regenerated FCC Catalyst Mixtures. Studies in Surface Science and Catalysis, 2001, 139, 197-204.	1.5	3
122	Development of a Kinetic Model for the Hydrogenolysis of CCl2F2Over 1 wt % Pd/C. Industrial & Engineering Chemistry Research, 2007, 46, 4158-4165.	3.7	3
123	Innentitelbild: Electronic Metal-Support Interactions in Single-Atom Catalysts (Angew. Chem. 13/2014). Angewandte Chemie, 2014, 126, 3350-3350.	2.0	3
124	Promotion or additive activity? The role of gold on zirconia supported iron oxide in high temperature water-gas shift. Journal of Molecular Catalysis A, 2016, 420, 115-123.	4.8	3
125	Adverse effects of potassium on NOx reduction over Di-Air catalyst (Rh/La-Ce-Zr). Applied Catalysis B: Environmental, 2019, 259, 117895.	20.2	3
126	Unveiling the Structure Sensitivity for Direct Conversion of Syngas to C2-Oxygenates with a Multicomponent-Promoted Rh Catalyst. Catalysis Letters, 2020, 150, 482-492.	2.6	3

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127	Sulfur as a Selectivity Modifier in a Highly Active Rh/Fe₂O₃/ZrO₂ Catalyst for Waterâ€“Gas Shift. ChemCatChem, 2014, 6, 2240-2243.	3.7	2
128	A new dynamic N2O reduction system based on Rh/ceriaâ€“zirconia: from mechanistic insight towards a practical application. Catalysis Science and Technology, 2021, 11, 671-680.	4.1	2
129	Catalyst deactivation in the selective hydrogenolysis of CCl2F2 into CH2F2. Studies in Surface Science and Catalysis, 1999, 126, 349-356.	1.5	1
130	Shaping Covalent Triazine Framework for the Hydrogenation of Carbon Dioxide to Formic Acid. ChemCatChem, 2016, 8, 2173-2173.	3.7	1
131	Reaction Mechanism Study of the Di-Air System and Selectivity and Reactivity of NO Reduction in Excess O2. SAE International Journal of Engines, 2017, 10, 1573-1579.	0.4	1
132	Cracking behaviour of aromatic- and organic sulfur compounds under realistic FCC conditions in a microriser reactor. Studies in Surface Science and Catalysis, 2004, 149, 217-232.	1.5	0
133	Chemical Design of Carbon Coating on the Alumina Support. , 2009, , 119-130.		0