Mark Crocker

List of Publications by Year
in descending order

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125 papers	5,685 citations	66343 42 h-index	91884 69 g-index
146 all docs	146 docs citations	146 times ranked	5542 citing authors

#	Article	IF	Citations
1	Catalytic deoxygenation of fatty acids and their derivatives to hydrocarbon fuels via decarboxylation/decarbonylation. Journal of Chemical Technology and Biotechnology, 2012, 87, 1041-1050.	3.2	262
2	Bio-oil upgrading over platinum catalysts using in situ generated hydrogen. Applied Catalysis A: General, 2009, 358, 150-156.	4.3	240
3	Catalytic removal of formaldehyde at room temperature over supported gold catalysts. Applied Catalysis B: Environmental, 2013, 132-133, 245-255.	20.2	212
4	Conversion of Triglycerides to Hydrocarbons Over Supported Metal Catalysts. Topics in Catalysis, 2010, 53, 820-829.	2.8	183
5	Catalytic deoxygenation of triglycerides and fatty acids to hydrocarbons over carbon-supported nickel. Fuel, 2013, 103, 1010-1017.	6.4	173
6	Investigation into the Catalytic Roles of Various Oxygen Species over Different Crystal Phases of MnO₂ for C₆H₆ and HCHO Oxidation. ACS Catalysis, 2020, 10, 6176-6187.	11.2	172
7	Biodiesel synthesis using calcined layered double hydroxide catalysts. Applied Catalysis B: Environmental, 2008, 82, 120-130.	20.2	149
8	Microalgae as a renewable fuel source: Fast pyrolysis of ScenedesmusÂsp.. Renewable Energy, 2013, 60, 625-632.	8.9	146
9	FeOx-supported gold catalysts for catalytic removal of formaldehyde at room temperature. Applied Catalysis B: Environmental, 2014, 154-155, 73-81.	20.2	137
10	Catalytic deoxygenation of triglycerides to hydrocarbons over supported nickel catalysts. Chemical Engineering Journal, 2012, 189-190, 346-355.	12.7	132
11	Al2O3-based passive NOx adsorbers for low temperature applications. Applied Catalysis B: Environmental, 2015, 170-171, 283-292.	20.2	118
12	A study of the mechanism of low-temperature SCR of NO with NH3 on MnOx/CeO2. Journal of Molecular Catalysis A, 2013, 378, 82-90.	4.8	108
13	Complete oxidation of formaldehyde at ambient temperature over Î³-Al2O3 supported Au catalyst. Catalysis Communications, 2013, 42, 93-97.	3.3	102
14	Effect of Cu and Sn promotion on the catalytic deoxygenation of model and algal lipids to fuel-like hydrocarbons over supported Ni catalysts. Applied Catalysis B: Environmental, 2016, 191, 147-156.	20.2	102
15	Bioplastic feedstock production from microalgae with fuel co-products: A techno-economic and life cycle impact assessment. Algal Research, 2020, 46, 101769.	4.6	94
16	A comparative study of the catalytic oxidation of HCHO and CO over Mn0.75Co2.25O4 catalyst: The effect of moisture. Applied Catalysis B: Environmental, 2014, 160-161, 542-551.	20.2	85
17	Biodiesel production from soybean oil using calcined Liâ€“Al layered double hydroxide catalysts. Catalysis Letters, 2007, 115, 56-61.	2.6	81
18	Catalytic deoxygenation of triglycerides and fatty acids to hydrocarbons over Niâ€“Al layered double hydroxide. Catalysis Today, 2014, 237, 136-144.	4.4	76

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19	Identification and thermochemical analysis of high-lignin feedstocks for biofuel and biochemical production. Biotechnology for Biofuels, 2011, 4, 43.	6.2	72
20	Influence of ceria on the NOx storage/reduction behavior of lean NOx trap catalysts. Catalysis Today, 2008, 136, 146-155.	4.4	71
21	Three-dimensional ordered mesoporous Coâ€“Mn oxide: A highly active catalyst for â€œstorageâ€“oxidationâ€•cycling for the removal of formaldehyde. Catalysis Communications, 2013, 36, 52-57.	3.3	71
22	NOx storage and reduction in model lean NOx trap catalysts studied by in situ DRIFTS. Applied Catalysis B: Environmental, 2009, 91, 329-338.	20.2	69
23	Selective cleavage of the C_{Î±}â€“C_{Î²} linkage in lignin model compounds via Baeyerâ€“Villiger oxidation. Organic and Biomolecular Chemistry, 2015, 13, 3243-3254.	2.8	68
24	Insights into the structure-activity relationships of highly efficient CoMn oxides for the low temperature NH3-SCR of NOx. Applied Catalysis B: Environmental, 2020, 277, 119215.	20.2	68
25	Pt- and Pd-Promoted CeO₂â€“ZrO₂ for Passive NOx Adsorber Applications. Industrial & Engineering Chemistry Research, 2017, 56, 111-125.	3.7	67
26	Global bioenergy potential from high-lignin agricultural residue. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 4014-4019.	7.1	66
27	Effect of Ceria on the Storage and Regeneration Behavior of a Model Lean NO x Trap Catalyst. Catalysis Letters, 2007, 119, 257-264.	2.6	64
28	Activated Carbon, Carbon Nanofiber and Carbon Nanotube Supported Molybdenum Carbide Catalysts for the Hydrodeoxygenation of Guaiacol. Catalysts, 2015, 5, 424-441.	3.5	64
29	A kinetic and DRIFTS study of supported Pt catalysts for NO oxidation. Catalysis Letters, 2006, 110, 29-37.	2.6	61
30	Gold-catalyzed conversion of lignin to low molecular weight aromatics. Chemical Science, 2018, 9, 8127-8133.	7.4	61
31	NOx storage and reduction properties of model ceria-based lean NOx trap catalysts. Applied Catalysis B: Environmental, 2012, 119-120, 183-196.	20.2	58
32	Understanding Lignin Fractionation and Characterization from Engineered Switchgrass Treated by an Aqueous Ionic Liquid. ACS Sustainable Chemistry and Engineering, 2018, 6, 6612-6623.	6.7	56
33	CO2 recycling using microalgae for the production of fuels. Applied Petrochemical Research, 2014, 4, 41-53.	1.3	54
34	Ceria-Based Catalysts for Low Temperature NO x Storage and Release. Catalysis Letters, 2016, 146, 909-917.	2.6	53
35	New sulfur adsorbents derived from layered double hydroxides. Applied Catalysis B: Environmental, 2008, 82, 199-207.	20.2	50
36	Lipid extraction from Scenedesmus sp. microalgae for biodiesel production using hot compressed hexane. Fuel, 2014, 130, 66-69.	6.4	49

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37	Co-processing of hydrothermal liquefaction algal bio-oil and petroleum feedstock to fuel-like hydrocarbons via fluid catalytic cracking. Fuel Processing Technology, 2019, 188, 164-171.	7.2	48
38	Mechanochemical Treatment Facilitates Two-Step Oxidative Depolymerization of Kraft Lignin. ACS Sustainable Chemistry and Engineering, 2018, 6, 5990-5998.	6.7	47
39	Synergy between Î²-Mo2C Nanorods and Non-thermal Plasma for Selective CO2 Reduction to CO. CheM, 2020, 6, 3312-3328.	11.7	47
40	Extraction, characterization, purification and catalytic upgrading of algae lipids to fuel-like hydrocarbons. Fuel, 2016, 180, 668-678.	6.4	45
41	A non-NH3 pathway for NOx conversion in coupled LNT-SCR systems. Applied Catalysis B: Environmental, 2012, 111-112, 562-570.	20.2	44
42	Non-thermal plasma-assisted NOx storage and reduction on a LaMn0.9Fe0.1O3 perovskite catalyst. Catalysis Today, 2013, 211, 96-103.	4.4	44
43	New sulfur adsorbents derived from layered double hydroxides. Applied Catalysis B: Environmental, 2008, 82, 190-198.	20.2	43
44	Understanding on the origins of hydroxyapatite stabilized gold nanoparticles as high-efficiency catalysts for formaldehyde and benzene oxidation. Catalysis Communications, 2015, 59, 195-200.	3.3	43
45	Continuous catalytic deoxygenation of model and algal lipids to fuel-like hydrocarbons over Niâ€“Al layered double hydroxide. Catalysis Today, 2015, 258, 284-293.	4.4	42
46	Hydrophobic functionalization of HY zeolites for efficient conversion of glycerol to solketal. Applied Catalysis A: General, 2020, 592, 117369.	4.3	42
47	NO storage and reduction properties of model manganese-based lean NO trap catalysts. Applied Catalysis B: Environmental, 2015, 165, 232-244.	20.2	41
48	Surface Organometallic Chemistry of Titanium:Â Synthesis, Characterization, and Reactivity of (â‹®Siâ˜’O)nTi(CH2C(CH3)3)4-n(n= 1, 2) Grafted on Aerosil Silica and MCM-41. Organometallics, 2006, 25, 3743-3760.	2.3	39
49	A comparative study of secondary depolymerization methods on oxidized lignins. Green Chemistry, 2019, 21, 3940-3947.	9.0	38
50	New insights into alkaline metal modified CoMn-oxide catalysts for formaldehyde oxidation at low temperatures. Applied Catalysis A: General, 2020, 596, 117512.	4.3	38
51	Carbon nanotube-supported metal catalysts for NOx reduction using hydrocarbon reductants. Part 1: Catalyst preparation, characterization and NOx reduction characteristics. Applied Catalysis B: Environmental, 2011, 102, 1-8.	20.2	36
52	Pyrolysisâ€“GC/MS of sinapyl and coniferyl alcohol. Journal of Analytical and Applied Pyrolysis, 2013, 99, 161-169.	5.5	36
53	Regioselective Baeyerâ€“Villiger oxidation of lignin model compounds with tin beta zeolite catalyst and hydrogen peroxide. RSC Advances, 2017, 7, 25987-25997.	3.6	35
54	Reactions of coordinated ligands. Part 47. Synthesis, structure, and reactivity of [.eta.4(5e)-butadienyl]ruthenium complexes: crystal structures of CpRu:C(Ph)-.eta.3-[C(Ph)C(Ph)CH(Ph)], CpRuC(Ph):C(Ph)-.eta.2-[C(Ph):CH(Ph)]P(OMe)3, and CpRu2[.mu.-(Z)-C(Ph):CH(Ph)](CO)2(.eta.4-C4Ph4). Organometallics, 1990, 9, 1422-1434.	2.3	33

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55	Effect of aging on the NOx storage and regeneration characteristics of fully formulated lean NOx trap catalysts. Applied Catalysis B: Environmental, 2011, 103, 413-427.	20.2	33
56	CeO2-M2O3 Passive NO x Adsorbers for Cold Start Applications. Emission Control Science and Technology, 2017, 3, 59-72.	1.5	33
57	Hybrid catalysts with enhanced C3H6 resistance for NH3-SCR of NOx. Applied Catalysis B: Environmental, 2019, 242, 161-170.	20.2	33
58	Formation of bridging acylium and nitrilium complexes by reaction of carbon monoxide and tert-butyl isocyanide with a bridging diiron methylidyne complex. Evidence for strong electron donation from the Fe2C core onto the .mu.-CHC.tplbond.O and .mu.-CHC.tplbond.NR ligands. Journal of the American Chemical Society, 1988, 110, 6070-6076.	13.7	32
59	NOx storageâ€“reduction characteristics of Ba-based lean NOx trap catalysts subjected to simulated road aging. Catalysis Today, 2010, 151, 362-375.	4.4	31
60	Effect of aging on NOx reduction in coupled LNTâ€“SCR systems. Applied Catalysis B: Environmental, 2014, 148-149, 51-61.	20.2	31
61	Effect of Cu promotion on cracking and methanation during the Ni-catalyzed deoxygenation of waste lipids and hemp seed oil to fuel-like hydrocarbons. Catalysis Today, 2018, 302, 261-271.	4.4	31
62	Pt-free, non-thermal plasma-assisted NO storage and reduction over M/Ba/Al2O3 (M = Mn, Fe, Co, Ni,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	4.4	30
63	Pd-promoted WO3-ZrO2 for low temperature NOx storage. Applied Catalysis B: Environmental, 2020, 264, 118499.	20.2	30
64	Mutagenesis Breeding for Increased 3-Deoxyanthocyanidin Accumulation in Leaves of Sorghum bicolor (L.) Moench: A Source of Natural Food Pigment. Journal of Agricultural and Food Chemistry, 2014, 62, 1227-1232.	5.2	29
65	Simultaneous promotion of photosynthesis and astaxanthin accumulation during two stages of Haematococcus pluvialis with ammonium ferric citrate. Science of the Total Environment, 2021, 750, 141689.	8.0	29
66	Capture and recycle of industrial CO2 emissions using microalgae. Applied Petrochemical Research, 2016, 6, 279-293.	1.3	28
67	Cooperative BrÃ¸nsted-Lewis acid sites created by phosphotungstic acid encapsulated metalâ€“organic frameworks for selective glucose conversion to 5-hydroxymethylfurfural. Fuel, 2022, 310, 122459.	6.4	28
68	Continuous Catalytic Deoxygenation of Waste Free Fatty Acid-Based Feeds to Fuel-Like Hydrocarbons Over a Supported Ni-Cu Catalyst. Catalysts, 2019, 9, 123.	3.5	25
69	Preparation and characterization of cerium oxide templated from activated carbon. Journal of Materials Science, 2007, 42, 3454-3464.	3.7	24
70	Reactions of heteroatom and carbon nucleophiles with the cationic bridging methylidyne complex {[(C5H5)(CO)Fe]2(.mu.-CO)(.mu.-CH)}+ PF6-. Organometallics, 1988, 7, 670-675.	2.3	23
71	Py-GCMS studies of Indian coals and their solvent extracted products. Fuel, 2019, 256, 115981.	6.4	23
72	Catalytic Materials for Low Concentration VOCs Removal through â€œStorageâ€Regenerationâ€•Cycling. ChemCatChem, 2019, 11, 3646-3661.	3.7	23

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73	Tripodal titanium silsesquioxane complexes immobilized in polydimethylsiloxane (PDMS) membrane: Selective catalysts for epoxidation of cyclohexene and 1-octene with aqueous hydrogen peroxide. Journal of Catalysis, 2010, 273, 66-72.	6.2	22
74	Mn-based mixed oxides for low temperature NOx adsorber applications. Applied Catalysis A: General, 2018, 567, 90-101.	4.3	22
75	Application of spaciMS to the study of ammonia formation in lean NOx trap catalysts. Applied Catalysis B: Environmental, 2012, 123-124, 339-350.	20.2	21
76	Oxidation of lignin and lignin Î²-O-4 model compounds via activated dimethyl sulfoxide. RSC Advances, 2015, 5, 105136-105148.	3.6	21
77	Non-thermal plasma enhanced NSR performance over Pt/M/Ba/Al2O3 (M = Mn, Co, Cu) catalysts. Chemical Engineering Journal, 2017, 314, 688-699.	12.7	21
78	Impact of Dilute Sulfuric Acid, Ammonium Hydroxide, and Ionic Liquid Pretreatments on the Fractionation and Characterization of Engineered Switchgrass. Bioenergy Research, 2017, 10, 1079-1093.	3.9	21
79	Promotional Effect of Cu, Fe and Pt on the Performance of Ni/Al2O3 in the Deoxygenation of Used Cooking Oil to Fuel-Like Hydrocarbons. Catalysts, 2020, 10, 91.	3.5	21
80	Effect of Ceria on the Sulfation and Desulfation Characteristics of a Model Lean NO x Trap Catalyst. Catalysis Letters, 2009, 127, 55-62.	2.6	20
81	Single-step synthesis of germanium nanowires encapsulated within multi-walled carbon nanotubes. Carbon, 2009, 47, 1708-1714.	10.3	20
82	The effect of regeneration conditions on the selectivity of NOx reduction in a fully formulated lean NOx trap catalyst. Catalysis Today, 2011, 175, 83-92.	4.4	20
83	Characterization of Endocarp Biomass and Extracted Lignin Using Pyrolysis and Spectroscopic Methods. Bioenergy Research, 2015, 8, 350-368.	3.9	20
84	Non-thermal plasma-assisted NO storage and reduction over cobalt-containing LNT catalysts. Catalysis Today, 2015, 258, 386-395.	4.4	19
85	Positive effects of K+ in hybrid CoMn-K and Pd/Ba/Al2O3 catalysts for NOx storage and reduction. Applied Catalysis B: Environmental, 2019, 249, 333-345.	20.2	19
86	Effect of ceria on the desulfation characteristics of model lean NOx trap catalysts. Catalysis Today, 2010, 151, 338-346.	4.4	18
87	Beneficial re-use of industrial CO2 emissions using microalgae: Demonstration assessment and biomass characterization. Bioresource Technology, 2019, 293, 122014.	9.6	18
88	Reactions of nucleophiles with cationic bridging alkylidyne complexes. Journal of Organometallic Chemistry, 1990, 394, 339-347.	1.8	17
89	Isocyanate formation and reactivity on a Ba-based LNT catalyst studied by DRIFTS. Applied Catalysis B: Environmental, 2013, 140-141, 265-275.	20.2	17
90	Reducing biomass recalcitrance by heterologous expression of a bacterial peroxidase in tobacco (Nicotiana benthamiana). Scientific Reports, 2017, 7, 17104.	3.3	17

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91	Effect of Pt Promotion on the Ni-Catalyzed Deoxygenation of Tristearin to Fuel-Like Hydrocarbons. Catalysts, 2019, 9, 200.	3.5	16
92	Reactions of organocopper reagents with the cationic bridging acylium complex [C5H5(CO)Fe]2(.mu.-CO)(.mu.-CHCO)+. Organometallics, 1989, 8, 278-282.	2.3	15
93	Adsorption and desorption of propene on a commercial Cu-SSZ-13 SCR catalyst. Catalysis Today, 2014, 231, 83-89.	4.4	15
94	A comparison of the oxidation of lignin model compounds in conventional and ionic liquid solvents and application to the oxidation of lignin. RSC Advances, 2016, 6, 104742-104753.	3.6	15
95	Algae-Based Beneficial Re-use of Carbon Emissions Using a Novel Photobioreactor: a Techno-Economic and Life Cycle Analysis. Bioenergy Research, 2021, 14, 292-302.	3.9	15
96	Roles of C3H6 in NH3 generation and NOx reduction over a Cu-chabazite SCR catalyst under lean/rich cycling conditions. Catalysis Today, 2014, 231, 90-98.	4.4	14
97	Structural Evolution of Molybdenum Carbides in Hot Aqueous Environments and Impact on Low-Temperature Hydroprocessing of Acetic Acid. Catalysts, 2015, 5, 406-423.	3.5	14
98	Carbon Nanotube-Supported Metal Catalysts for NOxReduction Using Hydrocarbon Reductants: Gas Switching and Adsorption Studies. Industrial & Engineering Chemistry Research, 2011, 50, 7191-7200.	3.7	13
99	An energy-efficient catalytic process for the tandem removal of formaldehyde and benzene by metal/HZSM-5 catalysts. Catalysis Science and Technology, 2015, 5, 4968-4972.	4.1	13
100	Pt/Ce Pr1â^'O2 (x= 1 or 0.9) NO storageâ€“reduction (NSR) catalysts. Applied Catalysis B: Environmental, 2015, 163, 313-322.	20.2	13
101	Low-temperature H₂-plasma-assisted NO_x storage and reduction over a combined Pt/Ba/Al and LaMnFe catalyst. Catalysis Science and Technology, 2017, 7, 145-158.	4.1	13
102	Effects of Treatment Conditions on Pd Speciation in CHA and Beta Zeolites for Passive NO_x Adsorption. ACS Omega, 2021, 6, 29471-29482.	3.5	12
103	Unveiling the structural, electronic, and optical effects of carbon-doping on multi-layer anatase TiO2 (1 0 1) and the impact on photocatalysis. Applied Surface Science, 2022, 586, 152641.	6.1	12
104	Bi2O3/Al2O3 catalysts for the selective reduction of NO with hydrocarbons in lean conditions. Applied Catalysis B: Environmental, 2006, 65, 44-54.	20.2	11
105	Non-thermal plasma assisted NO storage and reduction over a cobalt-containing Pd catalyst using H2 and/or CO as reductants. Catalysis Today, 2015, 258, 175-182.	4.4	11
106	Application of recycled media and algae-based anaerobic digestate in Scenedesmus cultivation. Journal of Renewable and Sustainable Energy, 2016, 8, 013116.	2.0	11
107	Effect of Pd promotion and catalyst support on the Ni-catalyzed deoxygenation of tristearin to fuel-like hydrocarbons. Renewable Energy, 2022, 195, 1468-1479.	8.9	11
108	Simulated Distillation Approach to the Gas Chromatographic Analysis of Feedstock and Products in the Deoxygenation of Lipids to Hydrocarbon Biofuels. Energy & Fuels, 2014, 28, 2654-2662.	5.1	10

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109	Use of Dual Detection in the Gas Chromatographic Analysis of Oleaginous Biomass Feeds and Biofuel Products To Enable Accurate Simulated Distillation and Lipid Profiling. Energy & Fuels, 2017, 31, 9498-9506.	5.1	10
110	New insights into the size and support effects of Î³-Al2O3 supported Au catalysts for HCHO oxidation at room temperature. Catalysis Science and Technology, 2020, 10, 4571-4579.	4.1	10
111	Effective Model of NOx Adsorption and Desorption on PtPd/CeO2-ZrO2 Passive NOx Adsorber. Catalysis Letters, 2020, 150, 3223-3233.	2.6	10
112	Beneficial Reuse of Industrial CO2 Emissions Using a Microalgae Photobioreactor: Waste Heat Utilization Assessment. Energies, 2019, 12, 2634.	3.1	9
113	Sulfur dioxide as a chemical probe for titanyl groups in titanium silicalites. Journal of Molecular Catalysis A, 1996, 110, L7-L11.	4.8	8
114	N2O Mitigation in a Coupled LNTâ€“SCR System. Catalysis Letters, 2012, 142, 1167-1174.	2.6	8
115	Supported bismuth oxide catalysts for the selective reduction of NO with propene in lean conditions. Catalysis Communications, 2006, 7, 122-126.	3.3	5
116	NOx Reduction on Fully Formulated Lean NOx Trap Catalysts Subjected to Simulated Road Aging: Insights from Steady-State Experiments. Chinese Journal of Catalysis, 2011, 32, 736-745.	14.0	5
117	Proximate composition of enhanced DGAT high oil, high protein soybeans. Biocatalysis and Agricultural Biotechnology, 2019, 21, 101303.	3.1	5
118	Aluminumâ€based Metalâ€Organic Framework as Waterâ€tolerant Lewis Acid Catalyst for Selective Dihydroxyacetone Isomerization to Lactic Acid. ChemCatChem, 2022, 14, .	3.7	5
119	The function of Pt in plasma-assisted NOx storage and reduction. Catalysis Communications, 2017, 102, 81-84.	3.3	4
120	Oxidation of Benzylic Alcohols and Lignin Model Compounds with Layered Double Hydroxide Catalysts. Inorganics, 2018, 6, 75.	2.7	4
121	A Genetic Algorithmic Approach to Determine the Structure of Liâ€“Al Layered Double Hydroxides. Journal of Chemical Information and Modeling, 2020, 60, 4845-4855.	5.4	4
122	Influence of media composition on the growth rate of Chlorella vulgaris and Scenedesmus acutus utilized for CO2 mitigation. , 2012, , .		3
123	Aluminumâ€Containing Metalâ€Organic Frameworks as Selective and Reusable Catalysts for Glucose Isomerization to Fructose. ChemCatChem, 2022, 14, .	3.7	2
124	Photoluminescence of Titanosilsesquioxanes in Solution and Its Relevance for the Understanding of the Emission of Titanosilicates. ChemPhysChem, 2000, 1, 93-97.	2.1	1
125	Evaluation of near-ambient algal biomass fractionation conditions for bioproduct development. Biomass Conversion and Biorefinery, 2020, , 1.	4.6	1