Bert F Sels

List of Publications by Year
in descending order

223 papers	23,920 citations	7568 77 h-index	7950 149 g-index
229 all docs	229 docs citations	229 times ranked	15943 citing authors

#	Article	IF	Citations
1	Chemicals from lignin: an interplay of lignocellulose fractionation, depolymerisation, and upgrading. Chemical Society Reviews, 2018, 47, 852-908.	38.1	1,708
2	Reductive lignocellulose fractionation into soluble lignin-derived phenolic monomers and dimers and processable carbohydrate pulps. Energy and Environmental Science, 2015, 8, 1748-1763.	30.8	688
3	Lactic acid as a platform chemical in the biobased economy: the role of chemocatalysis. Energy and Environmental Science, 2013, 6, 1415.	30.8	651
4	A sustainable wood biorefinery for lowâ€“carbon footprint chemicals production. Science, 2020, 367, 1385-1390.	12.6	631
5	Selective Oxidation of Methane by the Bis(Î¼-oxo)dicopper Core Stabilized on ZSM-5 and Mordenite Zeolites. Journal of the American Chemical Society, 2005, 127, 1394-1395.	13.7	628
6	Potential and challenges of zeolite chemistry in the catalytic conversion of biomass. Chemical Society Reviews, 2016, 45, 584-611.	38.1	619
7	A [Cu ₂ O] ²⁺ core in Cu-ZSM-5, the active site in the oxidation of methane to methanol. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 18908-18913.	7.1	565
8	Recent Advances in the Catalytic Conversion of Cellulose. ChemCatChem, 2011, 3, 82-94.	3.7	517
9	Lignin-first biomass fractionation: the advent of active stabilisation strategies. Energy and Environmental Science, 2017, 10, 1551-1557.	30.8	503
10	Layered double hydroxides exchanged with tungstate as biomimetic catalysts for mild oxidative bromination. Nature, 1999, 400, 855-857.	27.8	496
11	Functionalised heterogeneous catalysts for sustainable biomass valorisation. Chemical Society Reviews, 2018, 47, 8349-8402.	38.1	493
12	Advances in porous and nanoscale catalysts for viable biomass conversion. Chemical Society Reviews, 2019, 48, 2366-2421.	38.1	457
13	Guidelines for performing lignin-first biorefining. Energy and Environmental Science, 2021, 14, 262-292.	30.8	416
14	Review of old chemistry and new catalytic advances in the on-purpose synthesis of butadiene. Chemical Society Reviews, 2014, 43, 7917-7953.	38.1	404
15	Fast and Selective Sugar Conversion to Alkyl Lactate and Lactic Acid with Bifunctional Carbonâ€“Silica Catalysts. Journal of the American Chemical Society, 2012, 134, 10089-10101.	13.7	337
16	The active site of low-temperature methane hydroxylation in iron-containing zeolites. Nature, 2016, 536, 317-321.	27.8	331
17	Tuning the lignin oil OH-content with Ru and Pd catalysts during lignin hydrogenolysis on birch wood. Chemical Communications, 2015, 51, 13158-13161.	4.1	298
18	Bandgap opening in oxygen plasma-treated graphene. Nanotechnology, 2010, 21, 435203.	2.6	289

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19	Shape-selective zeolite catalysis for bioplastics production. Science, 2015, 349, 78-80.	12.6	289
20	Sulfonated silica/carbon nanocomposites as novel catalysts for hydrolysis of cellulose to glucose. Green Chemistry, 2010, 12, 1560.	9.0	286
21	Synthesis, characterisation, and catalytic evaluation of hierarchical faujasite zeolites: milestones, challenges, and future directions. Chemical Society Reviews, 2016, 45, 3331-3352.	38.1	271
22	Reductive catalytic fractionation: state of the art of the lignin-first biorefinery. Current Opinion in Biotechnology, 2019, 56, 193-201.	6.6	264
23	Iron and Copper Active Sites in Zeolites and Their Correlation to Metalloenzymes. Chemical Reviews, 2018, 118, 2718-2768.	47.7	263
24	Integrating lignin valorization and bio-ethanol production: on the role of Ni-Al₂O₃catalyst pellets during lignin-first fractionation. Green Chemistry, 2017, 19, 3313-3326.	9.0	251
25	Spectroscopic Definition of the Copper Active Sites in Mordenite: Selective Methane Oxidation. Journal of the American Chemical Society, 2015, 137, 6383-6392.	13.7	243
26	Efficient catalytic conversion of concentrated cellulose feeds to hexitols with heteropoly acids and Ru on carbon. Chemical Communications, 2010, 46, 3577.	4.1	236
27	Productive sugar isomerization with highly active Sn in dealuminated Î² zeolites. Green Chemistry, 2013, 15, 2777.	9.0	232
28	Oxygen Precursor to the Reactive Intermediate in Methanol Synthesis by Cu-ZSM-5. Journal of the American Chemical Society, 2010, 132, 14736-14738.	13.7	223
29	Review of catalytic systems and thermodynamics for the Guerbet condensation reaction and challenges for biomass valorization. Catalysis Science and Technology, 2015, 5, 3876-3902.	4.1	223
30	Chemocatalytic conversion of cellulose: opportunities, advances and pitfalls. Catalysis Science and Technology, 2011, 1, 714.	4.1	220
31	Influence of bio-based solvents on the catalytic reductive fractionation of birch wood. Green Chemistry, 2015, 17, 5035-5045.	9.0	214
32	Bio-based amines through sustainable heterogeneous catalysis. Green Chemistry, 2017, 19, 5303-5331.	9.0	210
33	Catalytic production of levulinic acid from cellulose and other biomass-derived carbohydrates with sulfonated hyperbranched poly(arylene oxindole)s. Energy and Environmental Science, 2011, 4, 3601.	30.8	208
34	Direct catalytic conversion of cellulose to liquid straight-chain alkanes. Energy and Environmental Science, 2015, 8, 230-240.	30.8	202
35	Influence of Acidic (H₃PO₄) and Alkaline (NaOH) Additives on the Catalytic Reductive Fractionation of Lignocellulose. ACS Catalysis, 2016, 6, 2055-2066.	11.2	191
36	Efficient hydrolytic hydrogenation of cellulose in the presence of Ru-loaded zeolites and trace amounts of mineral acid. Chemical Communications, 2011, 47, 5590-5592.	4.1	181

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37	Selective Bifunctional Catalytic Conversion of Cellulose over Reshaped Ni Particles at the Tip of Carbon Nanofibers. ChemSusChem, 2010, 3, 698-701.	6.8	171
38	Characterization of Fluorescence in Heat-Treated Silver-Exchanged Zeolites. Journal of the American Chemical Society, 2009, 131, 3049-3056.	13.7	170
39	Zeolite-catalysed conversion of C3 sugars to alkyl lactates. Green Chemistry, 2010, 12, 1083.	9.0	170
40	State of the Art and Perspectives of Hierarchical Zeolites: Practical Overview of Synthesis Methods and Use in Catalysis. Advanced Materials, 2020, 32, e2004690.	21.0	168
41	Preparation of sulfonated ordered mesoporous carbon and its use for the esterification of fatty acids. Catalysis Today, 2010, 150, 140-146.	4.4	167
42	Homogeneous and heterogeneous catalysts for hydrogenation of CO₂ to methanol under mild conditions. Chemical Society Reviews, 2021, 50, 4259-4298.	38.1	167
43	Cooperative Catalysis for Multistep Biomass Conversion with Sn/Al Beta Zeolite. ACS Catalysis, 2015, 5, 928-940.	11.2	164
44	Transition-Metal Ions in Zeolites: Coordination and Activation of Oxygen. Inorganic Chemistry, 2010, 49, 3573-3583.	4.0	155
45	Cu-ZSM-5: A biomimetic inorganic model for methane oxidation. Journal of Catalysis, 2011, 284, 157-164.	6.2	155
46	Selective conversion of trioses to lactates over Lewis acid heterogeneous catalysts. Green Chemistry, 2011, 13, 1175.	9.0	152
47	Heterogeneous catalysts for CO₂hydrogenation to formic acid/formate: from nanoscale to single atom. Energy and Environmental Science, 2021, 14, 1247-1285.	30.8	152
48	From rational design of a new bimetallic MOF family with tunable linkers to OER catalysts. Journal of Materials Chemistry A, 2019, 7, 1616-1628.	10.3	148
49	Conversion of sugars to ethylene glycol with nickel tungsten carbide in a fed-batch reactor: high productivity and reaction network elucidation. Green Chemistry, 2014, 16, 695-707.	9.0	147
50	Ternary Ag/MgOâ€SiO₂ Catalysts for the Conversion of Ethanol into Butadiene. ChemSusChem, 2015, 8, 994-1008.	6.8	147
51	Heterogeneous catalysis for bio-based polyester monomers from cellulosic biomass: advances, challenges and prospects. Green Chemistry, 2017, 19, 5012-5040.	9.0	141
52	[Cu₂O]²⁺ Active Site Formation in Cuâ€"ZSM-5: Geometric and Electronic Structure Requirements for N₂O Activation. Journal of the American Chemical Society, 2014, 136, 3522-3529.	13.7	139
53	Selective Nickelâ€Catalyzed Conversion of Model and Ligninâ€Derived Phenolic Compounds to Cyclohexanoneâ€Based Polymer Building Blocks. ChemSusChem, 2015, 8, 1805-1818.	6.8	137
54	Will Zeoliteâ€Based Catalysis be as Relevant in Future Biorefineries as in Crude Oil Refineries?. Angewandte Chemie - International Edition, 2014, 53, 8621-8626.	13.8	132

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55	Tuning the Acid/Metal Balance of Carbon Nanofiberâ€Supported Nickel Catalysts for Hydrolytic Hydrogenation of Cellulose. ChemSusChem, 2012, 5, 1549-1558.	6.8	131
56	Hydrolytic hydrogenation of cellulose with hydrotreated caesium salts of heteropoly acids and Ru/C. Green Chemistry, 2011, 13, 2167.	9.0	125
57	Top Chemical Opportunities from Carbohydrate Biomass: A Chemistâ€™s View of the Biorefinery. Topics in Current Chemistry, 2014, 353, 1-40.	4.0	125
58	Synergetic Effects of Alcohol/Water Mixing on the Catalytic Reductive Fractionation of Poplar Wood. ACS Sustainable Chemistry and Engineering, 2016, 4, 6894-6904.	6.7	120
59	Lactide Synthesis and Chirality Control for Polylactic acid Production. ChemSusChem, 2016, 9, 907-921.	6.8	118
60	Optical Encoding of Silver Zeolite Microcarriers. Advanced Materials, 2010, 22, 957-960.	21.0	115
61	Catalytic lignocellulose biorefining in <i>n</i>-butanol/water: a one-pot approach toward phenolics, polyols, and cellulose. Green Chemistry, 2018, 20, 4607-4619.	9.0	113
62	Conversion of (Ligno)Cellulose Feeds to Isosorbide with Heteropoly Acids and Ru on Carbon. ChemSusChem, 2013, 6, 199-208.	6.8	108
63	Techno-economic analysis and life cycle assessment of a biorefinery utilizing reductive catalytic fractionation. Energy and Environmental Science, 2021, 14, 4147-4168.	30.8	106
64	Metal Sulfide Photocatalysts for Lignocellulose Valorization. Advanced Materials, 2021, 33, e2007129.	21.0	106
65	Alkylphenols to phenol and olefins by zeolite catalysis: a pathway to valorize raw and fossilized lignocellulose. Green Chemistry, 2016, 18, 297-306.	9.0	105
66	Sustainable bisphenols from renewable softwood lignin feedstock for polycarbonates and cyanate ester resins. Green Chemistry, 2017, 19, 2561-2570.	9.0	102
67	Metalâ€“Organic Framework Single Crystals as Photoactive Matrices for the Generation of Metallic Microstructures. Advanced Materials, 2011, 23, 1788-1791.	21.0	100
68	Sulfonated mesoporous carbon and silica-carbon nanocomposites for biomass conversion. Applied Catalysis B: Environmental, 2018, 236, 518-545.	20.2	100
69	Toward Functional Polyester Building Blocks from Renewable Glycolaldehyde with Sn Cascade Catalysis. ACS Catalysis, 2013, 3, 1786-1800.	11.2	97
70	Photoactivation of Silverâ€Exchanged Zeoliteâ€…A. Angewandte Chemie - International Edition, 2008, 47, 2813-2816.	13.8	95
71	Mechanistic Insight into the Conversion of Tetrose Sugars to Novel Î±â€Hydroxy Acid Platform Molecules. ChemCatChem, 2013, 5, 569-575.	3.7	91
72	Post-synthesis SnÎ²: An exploration of synthesis parameters and catalysis. Journal of Catalysis, 2015, 330, 545-557.	6.2	89

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73	An Inner-/Outer-Sphere Stabilized Sn Active Site in Î²-Zeolite: Spectroscopic Evidence and Kinetic Consequences. ACS Catalysis, 2016, 6, 31-46.	11.2	89
74	Lewis acid catalysis on single site Sn centers incorporated into silica hosts. Coordination Chemistry Reviews, 2017, 343, 220-255.	18.8	87
75	Reductive catalytic fractionation of pine wood: elucidating and quantifying the molecular structures in the lignin oil. Chemical Science, 2020, 11, 11498-11508.	7.4	84
76	Spectroscopic Identification of the Î±-Fe/Î±-O Active Site in Fe-CHA Zeolite for the Low-Temperature Activation of the Methane Câ€“H Bond. Journal of the American Chemical Society, 2018, 140, 12021-12032.	13.7	83
77	Tailoring nanohybrids and nanocomposites for catalytic applications. Green Chemistry, 2013, 15, 1398.	9.0	82
78	Protection Strategies Enable Selective Conversion of Biomass. Angewandte Chemie - International Edition, 2020, 59, 11704-11716.	13.8	82
79	Hierarchization of USY Zeolite by NH₄OH. A Postsynthetic Process Investigated by NMR and XRD. Journal of Physical Chemistry C, 2014, 118, 22573-22582.	3.1	81
80	Spectroscopy and Redox Chemistry of Copper in Mordenite. ChemPhysChem, 2014, 15, 91-99.	2.1	79
81	Catalyst Design by NH₄OH Treatment of USY Zeolite. Advanced Functional Materials, 2015, 25, 7130-7144.	14.9	76
82	Shape selectivity vapor-phase conversion of lignin-derived 4-ethylphenol to phenol and ethylene over acidic aluminosilicates: Impact of acid properties and pore constraint. Applied Catalysis B: Environmental, 2018, 234, 117-129.	20.2	75
83	Catalytic Strategies Towards Lignin-Derived Chemicals. Topics in Current Chemistry, 2018, 376, 36.	5.8	75
84	Alkane production from biomass: chemo-, bio- and integrated catalytic approaches. Current Opinion in Chemical Biology, 2015, 29, 40-48.	6.1	74
85	Catalytic Gasâ€Phase Production of Lactide from Renewable Alkyl Lactates. Angewandte Chemie - International Edition, 2018, 57, 3074-3078.	13.8	71
86	Thermally activated LTA(Li)â€“Ag zeolites with water-responsive photoluminescence properties. Journal of Materials Chemistry C, 2015, 3, 11857-11867.	5.5	70
87	Conceptual Frame Rationalizing the Self-Stabilization of H-USY Zeolites in Hot Liquid Water. ACS Catalysis, 2015, 5, 754-768.	11.2	70
88	Titania-Silica Catalysts for Lactide Production from Renewable Alkyl Lactates: Structureâ€“Activity Relations. ACS Catalysis, 2018, 8, 8130-8139.	11.2	70
89	Selective Conversion of Lignin-Derivable 4-Alkylguaiacols to 4-Alkylcyclohexanols over Noble and Non-Noble-Metal Catalysts. ACS Sustainable Chemistry and Engineering, 2016, 4, 5336-5346.	6.7	66
90	Promising bulk production of a potentially benign bisphenol A replacement from a hardwood lignin platform. Green Chemistry, 2018, 20, 1050-1058.	9.0	66

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91	Structural characterization of a non-heme iron active site in zeolites that hydroxylates methane. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 4565-4570.	7.1	66
92	Perspective on Lignin Oxidation: Advances, Challenges, and Future Directions. Topics in Current Chemistry, 2018, 376, 30.	5.8	66
93	Determination and Optimization of the Luminescence External Quantum Efficiency of Silver-Clusters Zeolite Composites. Journal of Physical Chemistry C, 2013, 117, 6998-7004.	3.1	64
94	Unconventional Pretreatment of Lignocellulose with Lowâ€Temperature Plasma. ChemSusChem, 2017, 10, 14-31.	6.8	63
95	Confinement Effects in Lewis Acid-Catalyzed Sugar Conversion: Steering Toward Functional Polyester Building Blocks. ACS Catalysis, 2015, 5, 5803-5811.	11.2	62
96	Cage effects control the mechanism of methane hydroxylation in zeolites. Science, 2021, 373, 327-331.	12.6	61
97	Effect of packing solid material on characteristics of helium dielectric barrier discharge at atmospheric pressure. Physics of Plasmas, 2011, 18, .	1.9	60
98	Propylphenol to Phenol and Propylene over Acidic Zeolites: Role of Shape Selectivity and Presence of Steam. ACS Catalysis, 2018, 8, 7861-7878.	11.2	59
99	Perspective on Overcoming Scale-Up Hurdles for the Reductive Catalytic Fractionation of Lignocellulose Biomass. Industrial & Engineering Chemistry Research, 2020, 59, 17035-17045.	3.7	59
100	Direct upstream integration of biogasoline production into current light straight run naphtha petrorefinery processes. Nature Energy, 2018, 3, 969-977.	39.5	58
101	Second-Sphere Effects on Methane Hydroxylation in Cu-Zeolites. Journal of the American Chemical Society, 2018, 140, 9236-9243.	13.7	58
102	Substrate-Specificity of <i>Candida rugosa</i> Lipase and Its Industrial Application. ACS Sustainable Chemistry and Engineering, 2019, 7, 15828-15844.	6.7	57
103	Molecular design of sulfonated hyperbranched poly(arylene oxindole)s for efficient cellulose conversion to levulinic acid. Green Chemistry, 2016, 18, 1694-1705.	9.0	53
104	In Situ Observation of the Emission Characteristics of Zeoliteâ€Hosted Silver Species During Heat Treatment. ChemPhysChem, 2010, 11, 1627-1631.	2.1	52
105	Bio-based Aromatic Amines from Lignin-Derived Monomers. ACS Sustainable Chemistry and Engineering, 2019, 7, 6906-6916.	6.7	52
106	Catalytic advancements in carboxylic acid ketonization and its perspectives on biomass valorisation. Applied Catalysis B: Environmental, 2021, 283, 119607.	20.2	52
107	Synthesisâ€"Structureâ€"Activity Relations in Fe-CHA for Câ€"H Activation: Control of Al Distribution by Interzeolite Conversion. Chemistry of Materials, 2020, 32, 273-285.	6.7	51
108	Introducing curcumin biosynthesis in Arabidopsis enhances lignocellulosic biomass processing. Nature Plants, 2019, 5, 225-237.	9.3	50

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109	Aerosol Route to TiO₂â€"SiO₂Catalysts with Tailored Pore Architecture and High Epoxidation Activity. Chemistry of Materials, 2019, 31, 1610-1619.	6.7	50
110	Unprecedented Shape Selectivity in Hydrogenation of Triacylglycerol Molecules with Pt/ZSMâ€5 Zeolite. Angewandte Chemie - International Edition, 2011, 50, 3947-3949.	13.8	49
111	X-ray irradiation-induced formation of luminescent silver clusters in nanoporous matrices. Chemical Communications, 2014, 50, 1350-1352.	4.1	49
112	Complementing Vanillin and Cellulose Production by Oxidation of Lignocellulose with Stirring Control. ACS Sustainable Chemistry and Engineering, 2020, 8, 2361-2374.	6.7	49
113	Coordination and activation of nitrous oxide by iron zeolites. Nature Catalysis, 2021, 4, 332-340.	34.4	49
114	Extra-small porous Sn-silicate nanoparticles as catalysts for the synthesis of lactates. Journal of Catalysis, 2014, 314, 56-65.	6.2	47
115	Lowâ€Temperature Reductive Aminolysis of Carbohydrates to Diamines and Aminoalcohols by Heterogeneous Catalysis. Angewandte Chemie - International Edition, 2017, 56, 14540-14544.	13.8	47
116	Toward Replacing Ethylene Oxide in a Sustainable World: Glycolaldehyde as a Bioâ€Based C₂ Platform Molecule. Angewandte Chemie - International Edition, 2021, 60, 12204-12223.	13.8	47
117	Tin triflate-catalyzed conversion of cellulose to valuable (Î±-hydroxy-) esters. Catalysis Today, 2017, 279, 339-344.	4.4	46
118	Aromatics Production from Lignocellulosic Biomass: Shape Selective Dealkylation of Lignin-Derived Phenolics over Hierarchical ZSM-5. ACS Sustainable Chemistry and Engineering, 2020, 8, 8713-8722.	6.7	45
119	Integrated techno-economic assessment of a biorefinery process: The high-end valorization of the lignocellulosic fraction in wood streams. Journal of Cleaner Production, 2020, 266, 122022.	9.3	45
120	Opportunities of Immobilized Homogeneous Metathesis Complexes as Prominent Heterogeneous Catalysts. ChemCatChem, 2016, 8, 3010-3030.	3.7	44
121	Identifying Sn Site Heterogeneities Prevalent Among Snâ€Beta Zeolites. Helvetica Chimica Acta, 2016, 99, 916-927.	1.6	44
122	Spectroscopic Definition of a Highly Reactive Site in Cu-CHA for Selective Methane Oxidation: Tuning a Mono-Î¼-Oxo Dicopper(II) Active Site for Reactivity. Journal of the American Chemical Society, 2021, 143, 7531-7540.	13.7	44
123	Reductive catalytic fractionation of black locust bark. Green Chemistry, 2019, 21, 5841-5851.	9.0	43
124	Bioâ€Acrylates Production: Recent Catalytic Advances and Perspectives of the Use of Lactic Acid and Their Derivates. ChemCatChem, 2019, 11, 180-201.	3.7	43
125	The role of pretreatment in the catalytic valorization of cellulose. Molecular Catalysis, 2020, 487, 110883.	2.0	43
126	Acidic mesostructured silica-carbon nanocomposite catalysts for biofuels and chemicals synthesis from sugars in alcoholic solutions. Applied Catalysis B: Environmental, 2017, 206, 74-88.	20.2	42

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127	Title is missing!. Topics in Catalysis, 2000, 13, 223-229.	2.8	41
128	Potential of Sustainable Hierarchical Zeolites in the Valorization of Î±â€Pinene. ChemSusChem, 2015, 8, 1197-1205.	6.8	41
129	Lignin-Based Additives for Improved Thermo-Oxidative Stability of Biolubricants. ACS Sustainable Chemistry and Engineering, 2021, 9, 12548-12559.	6.7	41
130	Identification and quantification of lignin monomers and oligomers from reductive catalytic fractionation of pine wood with GC Ã— GC â€“ FID/MS. Green Chemistry, 2022, 24, 191-206.	9.0	41
131	Atomic scale reversible opto-structural switching of few atom luminescent silver clusters confined in LTA zeolites. Nanoscale, 2018, 10, 11467-11476.	5.6	40
132	Glycolaldehyde as a Bio-Based C₂ Platform Chemical: Catalytic Reductive Amination of Vicinal Hydroxyl Aldehydes. ACS Catalysis, 2020, 10, 391-404.	11.2	40
133	The use of ultrastable Y zeolites in the Ferrier rearrangement of acetylated and benzylated glycals. Green Chemistry, 2010, 12, 828.	9.0	39
134	Mechanistic Insights into the Kinetic and Regiochemical Control of the Thiol-Promoted Catalytic Synthesis of Diphenolic Acid. ACS Catalysis, 2012, 2, 2700-2704.	11.2	38
135	The Use of Nonâ€Equilibrium Plasmas for the Synthesis of Heterogeneous Catalysts. Plasma Processes and Polymers, 2012, 9, 750-760.	3.0	38
136	Supported MoO_{<i>x</i>} and WO_{<i>x</i>} Solid Acids for Biomass Valorization: Interplay of Coordination Chemistry, Acidity, and Catalysis. ACS Catalysis, 2021, 11, 13603-13648.	11.2	38
137	SnÎ²-zeolite catalyzed oxido-reduction cascade chemistry with biomass-derived molecules. Chemical Communications, 2016, 52, 6712-6715.	4.1	35
138	The importance of pretreatment and feedstock purity in the reductive splitting of (ligno)cellulose by metal supported USY zeolite. Green Chemistry, 2016, 18, 2095-2105.	9.0	35
139	Barriers and Chemistry in a Bottle: Mechanisms in Todayâ€™s Oxygen Barriers for Tomorrowâ€™s Materials. Applied Sciences (Switzerland), 2017, 7, 665.	2.5	35
140	Highly Dispersed Sn-beta Zeolites as Active Catalysts for Baeyerâ€“Villiger Oxidation: The Role of Mobile, <i>In Situ</i> Sn(II)O Species in Solid-State Stannation. ACS Catalysis, 2021, 11, 5984-5998.	11.2	35
141	Advancing the Use of Sustainability Metrics in <i>ACS Sustainable Chemistry & Engineering</i>. ACS Sustainable Chemistry and Engineering, 2018, 6, 1-1.	6.7	34
142	Shaping Effective Practices for Incorporating Sustainability Assessment in Manuscripts Submitted to <i>ACS Sustainable Chemistry & Engineering</i>: Catalysis and Catalytic Processes. ACS Sustainable Chemistry and Engineering, 2021, 9, 4936-4940.	6.7	34
143	Enhanced Acidity and Accessibility in Al-MCM-41 through Aluminum Activation. Chemistry of Materials, 2016, 28, 7731-7743.	6.7	32
144	Vapor-phase assisted hydrothermal carbon from sucrose and its application in acid catalysis. Green Chemistry, 2018, 20, 1345-1353.	9.0	32

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145	Zeolites as sustainable catalysts for the selective synthesis of renewable bisphenols from ligninâ€derived monomers. ChemSusChem, 2017, 10, 2249-2257.	6.8	31
146	BrÃ¸nsted Acid Catalyzed Tandem Defunctionalization of Biorenewable Ferulic acid and Derivates into Bioâ€Catechol. Angewandte Chemie - International Edition, 2020, 59, 3063-3068.	13.8	31
147	Z-Scheme nanocomposite with high redox ability for efficient cleavage of lignin Câ€"C bonds under simulated solar light. Green Chemistry, 2021, 23, 10071-10078.	9.0	30
148	Regioselective synthesis of renewable bisphenols from 2,3-pentanedione and their application as plasticizers. Green Chemistry, 2014, 16, 1999-2007.	9.0	28
149	Regioselective synthesis, isomerisation, <i>in vitro</i> oestrogenic activity, and copolymerisation of bisguaiacol F (BGF) isomers. Green Chemistry, 2019, 21, 6622-6633.	9.0	28
150	Low molecular weight and highly functional RCF lignin products as a full bisphenol a replacer in bio-based epoxy resins. Chemical Communications, 2021, 57, 5642-5645.	4.1	28
151	Efficient demethylation of aromatic methyl ethers with HCl in water. Green Chemistry, 2021, 23, 1995-2009.	9.0	28
152	Bridging racemic lactate esters with stereoselective polylactic acid using commercial lipase catalysis. Green Chemistry, 2013, 15, 2817.	9.0	26
153	Reductive splitting of hemicellulose with stable ruthenium-loaded USY zeolites. Green Chemistry, 2016, 18, 5295-5304.	9.0	26
154	Identification of Î±-Fe in High-Silica Zeolites on the Basis of ab Initio Electronic Structure Calculations. Inorganic Chemistry, 2017, 56, 10681-10690.	4.0	24
155	Catalytic Reductive Aminolysis of Reducing Sugars: Elucidation of Reaction Mechanism. ACS Catalysis, 2018, 8, 4201-4212.	11.2	24
156	Compositional and structural feedstock requirements of a liquid phase cellulose-to-naphtha process in a carbon- and hydrogen-neutral biorefinery context. Green Chemistry, 2016, 18, 5594-5606.	9.0	23
157	Towards Lignin-Derived Chemicals Using Atom-Efficient Catalytic Routes. Trends in Chemistry, 2020, 2, 898-913.	8.5	22
158	Selective Formation of Î±-Fe(II) Sites on Fe-Zeolites through One-Pot Synthesis. Journal of the American Chemical Society, 2021, 143, 16243-16255.	13.7	22
159	Catalytic Hydroconversion of 5â€HMF to Valueâ€Added Chemicals: Insights into the Role of Catalyst Properties and Feedstock Purity. ChemSusChem, 2022, 15, .	6.8	22
160	Boosting PLA melt strength by controlling the chirality of co-monomer incorporation. Chemical Science, 2021, 12, 5672-5681.	7.4	20
161	Synthesis of Novel Renewable Polyesters and Polyamides with Olefin Metathesis. ACS Sustainable Chemistry and Engineering, 2016, 4, 5943-5952.	6.7	19
162	Protection Strategies Enable Selective Conversion of Biomass. Angewandte Chemie, 2020, 132, 11800-11812.	2.0	19

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163	A guide towards safe, functional and renewable BPA alternatives by rational molecular design: structureâ€“property and structureâ€“toxicity relationships. Polymer Chemistry, 2021, 12, 5870-5901.	3.9	19
164	How Trace Impurities Can Strongly Affect the Hydroconversion of Biobased 5-Hydroxymethylfurfural?. ACS Catalysis, 2021, 11, 9204-9209.	11.2	19
165	Ligninâ€First Monomers to Catechol: Rational Cleavage of Câˆ’O and Câˆ’C Bonds over Zeolites. ChemSusChem, 2022, 15, .	6.8	19
166	Straightforward sustainability assessment of sugar-derived molecules from first-generation biomass. Current Opinion in Green and Sustainable Chemistry, 2018, 10, 11-20.	5.9	18
167	Catalytic Gasâ€Phase Production of Lactide from Renewable Alkyl Lactates. Angewandte Chemie, 2018, 130, 3128-3132.	2.0	18
168	Alkali Activation of AOD Stainless Steel Slag Under Steam Curing Conditions. Journal of the American Ceramic Society, 2015, 98, 3062-3074.	3.8	17
169	Mechanism of selective benzene hydroxylation catalyzed by iron-containing zeolites. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 12124-12129.	7.1	17
170	Tree bark characterization envisioning an integrated use in a biorefinery. Biomass Conversion and Biorefinery, 2023, 13, 2029-2043.	4.6	17
171	Tandem Epoxidationâ€Alcoholysis or Epoxidationâ€Hydrolysis of Glycals Catalyzed by Titanium(IV) Isopropoxide or Venturelloâ€™s Phosphotungstate Complex. Advanced Synthesis and Catalysis, 2008, 350, 1557-1568.	4.3	16
172	An Ecoâ€friendly Soft Template Synthesis of Mesostructured Silicaâ€Carbon Nanocomposites for Acid Catalysis. ChemCatChem, 2015, 7, 3047-3058.	3.7	16
173	Depolymerization of 1,4-polybutadiene by metathesis: high yield of large macrocyclic oligo(butadiene)s by ligand selectivity control. Catalysis Science and Technology, 2016, 6, 7708-7717.	4.1	16
174	Conjugated linoleic acids and conjugated vegetable oils: From nutraceutical to bioâ€polymer. European Journal of Lipid Science and Technology, 2013, 115, 717-720.	1.5	15
175	Silicaâ€“Carbon Nanocomposite Acid Catalyst with Large Mesopore Interconnectivity by Vapor-Phase Assisted Hydrothermal Treatment. ACS Sustainable Chemistry and Engineering, 2018, 6, 7859-7870.	6.7	15
176	Advances in the synthesis, characterisation, and mechanistic understanding of active sites in Fe-zeolites for redox catalysts. Dalton Transactions, 2020, 49, 14749-14757.	3.3	15
177	Kinetics of fatty acid ketonization in liquid phase with anatase and rutile TiO2 catalysts. Applied Catalysis B: Environmental, 2022, 305, 121052.	20.2	15
178	Expectations for Manuscripts on Catalysis in <i>ACS Sustainable Chemistry & Engineering</i>. ACS Sustainable Chemistry and Engineering, 2020, 8, 4995-4996.	6.7	14
179	A Cooperative OSDA Blueprint for Highly Siliceous Faujasite Zeolite Catalysts with Enhanced Acidity Accessibility. Angewandte Chemie - International Edition, 2021, 60, 24189-24197.	13.8	14
180	Hydraulic Behavior of Mechanically and Chemically Activated Synthetic Merwinite. Journal of the American Ceramic Society, 2014, 97, 3973-3981.	3.8	13

#	Article	IF	Citations
181	Enhancing lignin depolymerization <i>via</i> a dithionite-assisted organosolv fractionation of birch sawdust. Green Chemistry, 2021, 23, 3268-3276.	9.0	13
182	Kinetics of homogeneous and heterogeneous reactions in the reductive aminolysis of glucose with dimethylamine. Applied Catalysis B: Environmental, 2018, 227, 161-169.	20.2	12
183	Second-Sphere Lattice Effects in Copper and Iron Zeolite Catalysis. Chemical Reviews, 2022, 122, 12207-12243.	47.7	12
184	Heterogeneous conjugation of vegetable oil with alkaline treated highly dispersed Ru/USY catalysts. Applied Catalysis A: General, 2016, 526, 172-182.	4.3	11
185	Lowâ€Temperature Reductive Aminolysis of Carbohydrates to Diamines and Aminoalcohols by Heterogeneous Catalysis. Angewandte Chemie, 2017, 129, 14732-14736.	2.0	11
186	BrÃ¸nsted Acid Catalyzed Tandem Defunctionalization of Biorenewable Ferulic acid and Derivates into Bioâ€Catechol. Angewandte Chemie, 2020, 132, 3087-3092.	2.0	11
187	Catalytic Gasâ€Phase Cyclization of Glycolate Esters: A Novel Route Toward Glycolideâ€Based Bioplastics. ChemCatChem, 2018, 10, 5649-5655.	3.7	10
188	Catalytic Strategies Towards Ligninâ€Derived Chemicals. Topics in Current Chemistry Collections, 2020, , 129-168.	0.5	10
189	Tandem Reductionâ€"Reoxidation Augments the Catalytic Activity of Sn-Beta Zeolites by Redispersion and Respeciation of SnO₂ Clusters. Chemistry of Materials, 2021, 33, 9366-9381.	6.7	10
190	Potassium-Modified ZSM-5 Catalysts for Methyl Acrylate Formation from Methyl Lactate: The Impact of the Intrinsic Properties on Their Stability and Selectivity. ACS Sustainable Chemistry and Engineering, 2022, 10, 6196-6204.	6.7	10
191	Assessment of the environmental sustainability of solvent-less fatty acid ketonization to bio-based ketones for wax emulsion applications. Green Chemistry, 2021, 23, 7137-7161.	9.0	9
192	Four Years of ACS Sustainable Chemistry & Engineering: Reflections and New Developments. ACS Sustainable Chemistry and Engineering, 2017, 5, 1-2.	6.7	8
193	How substituent effects influence the thermodynamics and kinetics of gas-phase transesterification of alkyl lactates to lactide using TiO2/SiO2. Applied Catalysis B: Environmental, 2022, 300, 120747.	20.2	8
194	Suppressing Dormant Ru States in the Presence of Conventional Metal Oxides Promotes the Ru-MACHO-BH-Catalyzed Integration of CO₂ Capture and Hydrogenation to Methanol. ACS Catalysis, 2021, 11, 12682-12691.	11.2	8
195	The RCF biorefinery: Building on a chemical platform from lignin. Advances in Inorganic Chemistry, 2021, , 241-297.	1.0	8
196	Engineering Curcumin Biosynthesis in Poplar Affects Lignification and Biomass Yield. Frontiers in Plant Science, 0, 13, .	3.6	8
197	Synthetic and Catalytic Potential of Amorphous Mesoporous Aluminosilicates Prepared by Postsynthetic Aluminations of Silica in Aqueous Media. ChemCatChem, 2018, 10, 1385-1397.	3.7	7
198	One-Pot Consecutive Reductive Amination Synthesis of Pharmaceuticals: From Biobased Glycolaldehyde to Hydroxychloroquine. ACS Sustainable Chemistry and Engineering, 2022, 10, 6503-6508.	6.7	7

#	Article	IF	Citations
199	Optimization of the Synthesis Conditions of a DBD Plasma Reactor for the Synthesis of Hybrid Silica-Based Catalysts. Plasma Processes and Polymers, 2014, 11, 464-471.	3.0	6
200	Scalable Synthesis of Acidic Mesostructured Silicaâ€"Carbon Nanocomposite Catalysts by Rotary Evaporation. ChemCatChem, 2017, 9, 65-69.	3.7	6
201	The Evolution of ACS Sustainable Chemistry & Engineering. ACS Sustainable Chemistry and Engineering, 2020, 8, 1-1.	6.7	6
202	Fast and Selective Solvent-Free Branching of Unsaturated Fatty Acids with Hierarchical ZSM-5. ACS Sustainable Chemistry and Engineering, 2021, 9, 4357-4362.	6.7	6
203	Branching-First: Synthesizing Câ€"C Skeletal Branched Biobased Chemicals from Sugars. ACS Sustainable Chemistry and Engineering, 2018, 6, 7940-7950.	6.7	5
204	Recrystallization on Alkaline Treated Zeolites in the Presence of Pore-Directing Agents. Crystal Growth and Design, 2018, 18, 2010-2015.	3.0	5
205	Why Wasnâ€™t My <i>ACS Sustainable Chemistry & Engineering</i> Manuscript Sent Out for Review?. ACS Sustainable Chemistry and Engineering, 2019, 7, 1-2.	6.7	5
206	Toward Replacing Ethylene Oxide in a Sustainable World: Glycolaldehyde as a Bioâ€Based C 2 Platform Molecule. Angewandte Chemie, 2021, 133, 12312-12331.	2.0	5
207	A Cooperative OSDA Blueprint for Highly Siliceous Faujasite Zeolite Catalysts with Enhanced Acidity Accessibility. Angewandte Chemie, 2021, 133, 24391.	2.0	5
208	Catalytic Byproduct Valorization in Future Biorefineries. ACS Sustainable Chemistry and Engineering, 2019, 7, 2878-2878.	6.7	4
209	Clean catalytic technology for liquid phase hydrocarbon oxidation. Clean Technologies and Environmental Policy, 1998, 1, 21-29.	4.1	2
210	A Cyclic Catalyst Pretreatment in CO2 for High Yield Production of Carbon Nanofibers with Narrow Diameter Distribution. Catalysis Letters, 2011, 141, 1621-1624.	2.6	2
211	Expectations for Manuscripts in ACS Sustainable Chemistry & Engineering: Scope Summary and Call for Creativity. ACS Sustainable Chemistry and Engineering, 2020, 8, 16046-16047.	6.7	2
212	Expectations for Manuscripts on Biomass Feedstocks and Processing in <i>ACS Sustainable Chemistry & Engineering</i>. ACS Sustainable Chemistry and Engineering, 2020, 8, 11031-11032.	6.7	2
213	Single site spectroscopy of transition metal ions and reactive oxygen complexes in zeolites. , 2023, , 148-164.		2
214	Bridging the gap between cellulose chemistry and heterogeneous catalysis. , 2011, , .		2
215	Preparation of Renewable Thiolâ€¥ne â€œClickâ€• Networks Based on Fractionated Lignin for Anticorrosive Protective Film Applications. Macromolecular Chemistry and Physics, 2022, 223, .	2.2	2
216	Optical encoding of luminescent carbon nanodots in confined spaces. Chemical Communications, 2021, 57, 11952-11955.	4.1	1

#	Article	IF	Citations
217	Establishing the Reaction Pathways of the Catalytic Conversion of Erythrulose to Sulphides of Alphaâ€Hydroxy Thioesters and Esters. ChemCatChem, 2022, 14, .	3.7	1
218	Building Pathways to a Sustainable Planet. ACS Sustainable Chemistry and Engineering, 2022, 10, 1-2.	6.7	1
219	Expectations for Perspectives in ACS Sustainable Chemistry & Engineering. ACS Sustainable Chemistry and Engineering, 2021, 9, 16528-16530.	6.7	1
220	Branched Fatty Acids: The Potential of Zeolite Catalysis. ACS Sustainable Chemistry and Engineering, 0, , .	6.7	1
221	RÃ¼cktitelbild: BrÃ¸nsted Acid Catalyzed Tandem Defunctionalization of Biorenewable Ferulic acid and Derivates into Bioâ€Catechol (Angew. Chem. 8/2020). Angewandte Chemie, 2020, 132, 3364-3364.	2.0	0
222	Remembering Professor, Academician, and Editor Lina Zhang. ACS Sustainable Chemistry and Engineering, 2020, 8, 16385-16385.	6.7	0
223	The Changing Structure of Scientific Communication: Expanding the Nature of Letters Submissions to ACS Sustainable Chemistry & Engineering. ACS Sustainable Chemistry and Engineering, 2020, 8, 8469-8470.	6.7	0