

Michael Renz

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

66
papers

4,958
citations

34
h-index

70
g-index

73
ext. papers

5,324
ext. citations

6.7
avg, IF

5.69
L-index

#	Paper	IF	Citations
66	Methyl ketones from carboxylic acids as valuable target molecules in the biorefinery. <i>Catalysis Today</i> , 2021 , 367, 258-267	5.3	5
65	Evaluation of hydrothermal carbonization in urban mining for the recovery of phosphorus from the organic fraction of municipal solid waste. <i>Resources, Conservation and Recycling</i> , 2019 , 147, 111-118	11.9	13
64	Evaluating climate change mitigation potential of hydrochars: compounding insights from three different indicators. <i>GCB Bioenergy</i> , 2018 , 10, 230-245	5.6	12
63	Making hydrochar suitable for agricultural soil: A thermal treatment to remove organic phytotoxic compounds. <i>Journal of Environmental Chemical Engineering</i> , 2018 , 6, 7029-7034	6.8	31
62	Cerium oxide as a catalyst for the ketonization of aldehydes: mechanistic insights and a convenient way to alkanes without the consumption of external hydrogen. <i>Green Chemistry</i> , 2017 , 19, 1555-1569	10	28
61	High Quality Biowaxes from Fatty Acids and Fatty Esters: Catalyst and Reaction Mechanism for Accompanying Reactions. <i>Industrial & Engineering Chemistry Research</i> , 2017 , 56, 12870-12877	3.9	8
60	Ketone Formation from Carboxylic Acids by Ketonic Decarboxylation: The Exceptional Case of the Tertiary Carboxylic Acids. <i>Chemistry - A European Journal</i> , 2017 , 23, 12900-12908	4.8	11
59	Hydrothermal Carbonization and Its Role in Catalysis 2017 , 715-752		2
58	Fuel and chemicals from wet lignocellulosic biomass waste streams by hydrothermal carbonization. <i>Green Chemistry</i> , 2016 , 18, 1051-1060	10	50
57	Carbon-Carbon Bond Formation and Hydrogen Production in the Ketonization of Aldehydes. <i>ChemSusChem</i> , 2016 , 9, 2430-42	8.3	21
56	Direct conversion of carboxylic acids (C _n) to alkenes (C _{2n-2}) over titanium oxide in absence of noble metals. <i>Journal of Molecular Catalysis A</i> , 2016 , 415, 1-8		13
55	Effect of the C _β substitution on the ketonic decarboxylation of carboxylic acids over m-ZrO ₂ : the role of entropy. <i>Catalysis Science and Technology</i> , 2016 , 6, 5561-5566	5.5	11
54	Environmental Performance of Hydrothermal Carbonization of Four Wet Biomass Waste Streams at Industry-Relevant Scales. <i>ACS Sustainable Chemistry and Engineering</i> , 2016 , 4, 6783-6791	8.3	42
53	The hydrothermal carbonization (HTC) plant as a decentral biorefinery for wet biomass. <i>Catalysis Today</i> , 2015 , 257, 154-159	5.3	90
52	Conversion of levulinic acid derived valeric acid into a liquid transportation fuel of the kerosene type. <i>Journal of Molecular Catalysis A</i> , 2014 , 388-389, 116-122		24
51	Ketonic decarboxylation reaction mechanism: a combined experimental and DFT study. <i>ChemSusChem</i> , 2013 , 6, 141-51	8.3	105
50	From MOFs to zeolites: zirconium sites for epoxide rearrangement. <i>New Journal of Chemistry</i> , 2013 , 37, 3496	3.6	6

49	Effect of Gas Atmosphere on Catalytic Behaviour of Zirconia, Ceria and Ceria/Zirconia Catalysts in Valeric Acid Ketonization. <i>Topics in Catalysis</i> , 2013 , 56, 846-855	2.3	35
48	Production of high quality diesel from cellulose and hemicellulose by the Sylvan process: catalysts and process variables. <i>Energy and Environmental Science</i> , 2012 , 5, 6328	35.4	207
47	High-quality diesel from hexose- and pentose-derived biomass platform molecules. <i>ChemSusChem</i> , 2011 , 4, 1574-7	8.3	103
46	Production of High-Quality Diesel from Biomass Waste Products. <i>Angewandte Chemie</i> , 2011 , 123, 2423-2426	3.8	89
45	Production of high-quality diesel from biomass waste products. <i>Angewandte Chemie - International Edition</i> , 2011 , 50, 2375-8	16.4	308
44	Biomass to chemicals: Rearrangement of pinene epoxide into myrtanal with well-defined single-site substituted molecular sieves as reusable solid Lewis-acid catalysts. <i>Applied Catalysis A: General</i> , 2010 , 380, 165-171	5.1	39
43	Transformation of Biomass Products into Fine Chemicals Catalyzed by Solid Lewis- and Brønsted-acids. <i>Topics in Catalysis</i> , 2009 , 52, 1182-1189	2.3	42
42	Water Resistant, Catalytically Active Nb and Ta Isolated Lewis Acid Sites, Homogeneously Distributed by Direct Synthesis in a Beta Zeolite. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 11306-11315	3.8	99
41	Reactivity in the confined spaces of zeolites: the interplay between spectroscopy and theory to develop structure-activity relationships for catalysis. <i>Physical Chemistry Chemical Physics</i> , 2009 , 11, 2876-2884	3.6	74
40	Coupling fatty acids by ketonic decarboxylation using solid catalysts for the direct production of diesel, lubricants, and chemicals. <i>ChemSusChem</i> , 2008 , 1, 739-41	8.3	59
39	A general method for the preparation of ethers using water-resistant solid lewis acids. <i>Angewandte Chemie - International Edition</i> , 2007 , 46, 298-300	16.4	108
38	A General Method for the Preparation of Ethers Using Water-Resistant Solid Lewis Acids. <i>Angewandte Chemie</i> , 2007 , 119, 302-304	3.6	32
37	Peculiarities of Sn-Beta and potential industrial applications. <i>Catalysis Today</i> , 2007 , 121, 39-44	5.3	50
36	Water-resistant Lewis-acid sites: carbonyl-ene reactions catalyzed by tin-containing, hydrophobic molecular sieves. <i>Arkivoc</i> , 2007 , 2007, 40-48	0.9	5
35	Chapter 38. Catalysis by Lewis Acids: Basic Principles for Highly Stereoselective Heterogeneously Catalyzed Cyclization Reactions 2007 , 639-650		4
34	Predicting the activity of single isolated Lewis acid sites in solid catalysts. <i>Chemistry - A European Journal</i> , 2006 , 12, 7067-77	4.8	86
33	Mechanism of the Meerwein-Ponndorf-Verley-Oppenauer (MPVO) redox equilibrium on Sn- and Zr-beta zeolite catalysts. <i>Journal of Physical Chemistry B</i> , 2006 , 110, 21168-74	3.4	177
32	Determination of the catalytically active oxidation Lewis acid sites in Sn-beta zeolites, and their optimisation by the combination of theoretical and experimental studies. <i>Journal of Catalysis</i> , 2005 , 234, 111-118	7.3	237

31	A new, alternative, halogen-free synthesis for the fragrance compound Melonal using zeolites and mesoporous materials as oxidation catalysts. <i>Journal of Catalysis</i> , 2005 , 234, 96-100	7.3	38
30	Ketonization of Carboxylic Acids by Decarboxylation: Mechanism and Scope. <i>European Journal of Organic Chemistry</i> , 2005 , 2005, 979-988	3.2	219
29	A multisite molecular mechanism for Baeyer-Villiger oxidations on solid catalysts using environmentally friendly H ₂ O ₂ as oxidant. <i>Chemistry - A European Journal</i> , 2005 , 11, 6905-15	4.8	80
28	Experimental Evidence for a Dual Site Mechanism in Sn-Beta and Sn-MCM-41 Catalysts for the Baeyer-Villiger Oxidation. <i>Collection of Czechoslovak Chemical Communications</i> , 2005 , 70, 1727-1736		14
27	One-pot synthesis of phenols from aromatic aldehydes by Baeyer-Villiger oxidation with H ₂ O ₂ using water-tolerant Lewis acids in molecular sieves. <i>Journal of Catalysis</i> , 2004 , 221, 67-76	7.3	68
26	A New Environmentally Benign Catalytic Process for the Asymmetric Synthesis of Lactones: Synthesis of the Flavouring δ-Decalactone Molecule. <i>Advanced Synthesis and Catalysis</i> , 2004 , 346, 257-262 ^{5.6}		42
25	Ketonic Decarboxylation Catalysed by Weak Bases and Its Application to an Optically Pure Substrate. <i>European Journal of Organic Chemistry</i> , 2004 , 2004, 2036-2039	3.2	23
24	Synthesis and characterization of Sn-Beta as a selective oxidation catalyst. <i>Studies in Surface Science and Catalysis</i> , 2004 , 154, 2626-2631	1.8	14
23	Sn-Beta zeolite as diastereoselective water-resistant heterogeneous Lewis-acid catalyst for carbon-carbon bond formation in the intramolecular carbonyl-ene reaction. <i>Chemical Communications</i> , 2004 , 550-1	5.8	109
22	Lewis acidic Sn(IV) centers grafted onto MCM-41s catalytic sites for the Baeyer-Villiger oxidation with hydrogen peroxide. <i>Journal of Catalysis</i> , 2003 , 219, 242-246	7.3	144
21	Selective and shape-selective Baeyer-Villiger oxidations of aromatic aldehydes and cyclic ketones with Sn-beta zeolites and H ₂ O ₂ . <i>Chemistry - A European Journal</i> , 2002 , 8, 4708-17	4.8	225
20	Preparation, characterization and crystal structures of manganese(II), iron(III) and copper(II) complexes of the bi. <i>Journal of Biological Inorganic Chemistry</i> , 2001 , 6, 14-22	3.7	100
19	Sn-zeolite beta as a heterogeneous chemoselective catalyst for Baeyer-Villiger oxidations. <i>Nature</i> , 2001 , 412, 423-5	50.4	765
18	Sn-MCM-41s heterogeneous selective catalyst for the Baeyer-Villiger oxidation with hydrogen peroxide. <i>Chemical Communications</i> , 2001 , 2190-2191	5.8	123
17	Second generation of a polypyridine ligand to mimic enzymes containing non-heme iron centers. <i>Comptes Rendus De L'Academie Des Sciences - Series IIc: Chemistry</i> , 2000 , 3, 735-741		
16	Oxidative degradation of chlorinated phenols catalyzed by a non-heme iron(III) complex. <i>Journal of Molecular Catalysis A</i> , 1999 , 137, 205-212		25
15	100 Years of Baeyer-Villiger Oxidations. <i>European Journal of Organic Chemistry</i> , 1999 , 1999, 737-750	3.2	434
14	Preparation and Crystal Structures of Manganese, Iron, and Cobalt Complexes of the Bis[di(2-pyridyl)methyl]amine (bdpma) Ligand and Its Oxidative Degradation Product 1,3,3-Tris(2-pyridyl)-3H-imidazo[1,5-a]pyridin-4-ium (tpip); Origin of the bdpma Fragility. <i>Chemistry - A European Journal</i> , 1999 , 5, 1766-1774	4.8	35

- 13 Synthesis, characterization and crystal structures of copper(II) complexes containing multidentate polypyridine ligands *Journal of the Chemical Society Dalton Transactions*, **1999**, 3989-3994 8
- 12 Influence of the anion of Fe(III) salts on the product distribution in the oxidative degradation of a tetrapyridyl ligand. *New Journal of Chemistry*, **1999**, 23, 773-776 3.6 9
- 11 Synthesis of Bis[di(2-pyridyl)methyl]amine (BDPMA) by a Novel One-Pot Multi-Step Reductive Amination with Molecular Sieves and Zn/iPrOH. *European Journal of Organic Chemistry*, **1998**, 1998, 1271-1273 21
- 10 Isolation and characterization of an oxidative degradation product of a polypyridine ligand. *Chemical Communications*, **1998**, 1635-1636 5.8 9
- 9 Chemo- and Diastereoselective Epoxidations Catalyzed by Titanium-Containing Zeolites: Evidence for a Hydrogen-Bonded, Peroxy-Type Loaded Complex as Oxidizing Species **1998**, 47-50
- 8 Titanium-Catalyzed Diastereoselective Epoxidations of Ene Diols and Allylic Alcohols with beta-Hydroperoxy Alcohols as Novel Oxygen Donors. *Journal of Organic Chemistry*, **1997**, 62, 3183-3189 4.2 25
- 7 Diastereoselective Catalytic Epoxidation of Chiral Allylic Alcohols by the TS-1 and Ti-Zeolites: Evidence for a Hydrogen-Bonded, Peroxy-Type Loaded Complex as Oxidizing Species. *Journal of Organic Chemistry*, **1997**, 62, 3631-3637 4.2 83
- 6 Diastereoselective epoxidation of allylic alcohols with hydrogen peroxide catalyzed by titanium-containing zeolites or methyltrioxorhenium versus stoichiometric oxidation with dimethyldioxirane: Clues on the active species in the zeolite lattice. *Journal of Molecular Catalysis A*, **1997**, 127, 277-284 4.1
- 5 Chemo- und diastereoselektive Epoxidierung von chiralen Allylkoholen mit dem Wasserstoffperoxid-Harnstoff-Addukt (UHP), katalysiert durch das Titansilicalit TS-1. *Angewandte Chemie*, **1996**, 108, 944-947 3.6 4
- 4 The Mechanism of the Double Bond Cleavage in the Titanium Zeolite-catalyzed Oxidation of p-Methylstyrene by Hydrogen Peroxide: the beta-Hydroperoxy Alcohol as Intermediate. *Chemische Berichte*, **1996**, 129, 1453-1455 14
- 3 Chemo- and Diastereoselective Epoxidation of Chiral Allylic Alcohols with the Urea Hydrogen Peroxide Adduct, Catalyzed by Titanium Silicate 1. *Angewandte Chemie International Edition in English*, **1996**, 35, 880-882 32
- 2 Tridentate beta-Hydroperoxy Alcohols as Novel Oxygen Donors for the Titanium-Catalyzed Epoxidation of alpha-Unsaturated beta-Diols: A Direct Diastereoselective Synthesis of Epoxy Diols. *Angewandte Chemie International Edition in English*, **1994**, 33, 1107-1108 23
- 1 Ein dreizelliger beta-Hydroperoxyalkohol als neuartiger Sauerstoffdonor fuer die Titankatalysierte Epoxidierung von alpha-ungesaetigten beta-Diolen: eine direkte diastereoselektive Synthese von Epoxydiolen. *Angewandte Chemie*, **1994**, 106, 1159-1161 3.6 5