Matthias Vandichel

List of Publications by Year
in descending order

61 papers	4,208 citations	159585 30 h-index	118850 62 g-index
67 all docs	67 docs citations	67 times ranked	5153 citing authors

#	Article	IF	Citations
1	Al2O3 nanofibers prepared from aluminum Di(sec-butoxide)acetoacetic ester chelate exhibits high surface area and acidity. Journal of Catalysis, 2022, 405, 520-533.	6.2	12
2	The First Sulfateâ€Pillared Hybrid Ultramicroporous Material, SOFOURâ€1â€Zn, and Its Acetylene Capture Properties. Angewandte Chemie, 2022, 134, e202116145.	2.0	3
3	The First Sulfateâ€Pillared Hybrid Ultramicroporous Material, SOFOURâ€1â€Zn, and Its Acetylene Capture Properties. Angewandte Chemie - International Edition, 2022, 61, .	13.8	32
4	Surprisingly Low Reactivity of Layered Manganese Oxide toward Water Oxidation in Fe/Ni-Free Electrolyte under Alkaline Conditions. Inorganic Chemistry, 2022, 61, 2292-2306.	4.0	21
5	Modeling Polyzwitterion-Based Drug Delivery Platforms: A Perspective of the Current State-of-the-Art and Beyond. ACS Engineering Au, 2022, 2, 274-294.	5.1	12
6	Chlorine in NiO promotes electroreduction of CO2 to formate. Applied Materials Today, 2022, 28, 101528.	4.3	4
7	Elucidation of Structureâ€"Activity Relations in Proton Electroreduction at Pd Surfaces: Theoretical and Experimental Study. Small, 2022, 18, .	10.0	7
8	Enhanced Photocatalytic Hydrogen Evolution from Water Splitting on Ta₂O₅/SrZrO₃ Heterostructures Decorated with Cu_{<i>x</i>}O/RuO₂ Cocatalysts. ACS Applied Materials & Interfaces, 2022, 14, 31767-31781.	8.0	15
9	Oxygen-Evolution Reaction by a Palladium Foil in the Presence of Iron. Inorganic Chemistry, 2021, 60, 5682-5693.	4.0	26
10	High Working Capacity Acetylene Storage at Ambient Temperature Enabled by a Switching Adsorbent Layered Material. ACS Applied Materials & Interfaces, 2021, 13, 23877-23883.	8.0	17
11	Understanding the Dynamics of Molecular Water Oxidation Catalysts with Liquid-Phase Transmission Electron Microscopy: The Case of Vitamin B₁₂. ACS Sustainable Chemistry and Engineering, 2021, 9, 9494-9505.	6.7	17
12	Efficient Capture of Trace Acetylene by an Ultramicroporous Metalâ€"Organic Framework with Purine Binding Sites. Chemistry of Materials, 2021, 33, 5800-5808.	6.7	22
13	Breaking the trade-off between selectivity and adsorption capacity for gas separation. CheM, 2021, 7, 3085-3098.	11.7	68
14	The importance of identifying the true catalyst when using Randles-Sevcik equation to calculate turnover frequency. International Journal of Hydrogen Energy, 2021, 46, 37774-37781.	7.1	28
15	Synthesis of Colloidal WSe₂ Nanocrystals: Polymorphism Control by Precursor-Ligand Chemistry. Crystal Growth and Design, 2021, 21, 1451-1460.	3.0	15
16	Oxygen Evolution on Metalâ€oxyâ€hydroxides: Beneficial Role of Mixing Fe, Co, Ni Explained via Bifunctional Edge/acceptor Route. ChemCatChem, 2020, 12, 1436-1442.	3.7	21
17	Water Oxidation at Neutral pH using a Highly Active Copperâ€Based Electrocatalyst. ChemSusChem, 2020, 13, 5088-5099.	6.8	17
18	Oxygen Evolution and Reduction on Fe-doped NiOOH: Influence of Solvent, Dopant Position and Reaction Mechanism. Topics in Catalysis, 2020, 63, 833-845.	2.8	19

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19	Microwaveâ€heated Î³â€Alumina Applied to the Reduction of Aldehydes to Alcohols. ChemCatChem, 2020, 12, 6344-6355.	3.7	6
20	A square lattice topology coordination network that exhibits highly selective C 2 H 2 /CO 2 separation performance. SmartMat, 2020, 1, e1008.	10.7	7
21	Engineering of a highly stable metal-organic Co-film for efficient electrocatalytic water oxidation in acidic media. Materials Today Energy, 2020, 17, 100437.	4.7	9
22	Understanding Solidâ€"Gas Reaction Mechanisms by Operando Soft X-Ray Absorption Spectroscopy at Ambient Pressure. Journal of Physical Chemistry C, 2020, 124, 14202-14212.	3.1	19
23	Reversible Switching between Nonporous and Porous Phases of a New SIFSIX Coordination Network Induced by a Flexible Linker Ligand. Journal of the American Chemical Society, 2020, 142, 6896-6901.	13.7	51
24	Viewpoint: Atomic-Scale Design Protocols toward Energy, Electronic, Catalysis, and Sensing Applications. Inorganic Chemistry, 2019, 58, 14939-14980.	4.0	23
25	A dimer path for CO dissociation on PtSn. Catalysis Science and Technology, 2019, 9, 695-701.	4.1	9
26	Initial Fe₃O₄(100) Formation on Fe(100). Journal of Physical Chemistry C, 2019, 123, 16317-16325.	3.1	8
27	CO Oxidation at SnO2/Pt3Sn(111) Interfaces. Topics in Catalysis, 2018, 61, 1458-1464.	2.8	4
28	Favourable band edge alignment and increased visible light absorption in Î²-MoO3/Î±-MoO3 oxide heterojunction for enhanced photoelectrochemical performance. International Journal of Hydrogen Energy, 2018, 43, 15773-15783.	7.1	26
29	A Robust Molecular Catalyst Generated Inâ€...Situ for Photoâ€•and Electrochemical Water Oxidation. ChemSusChem, 2017, 10, 862-875.	6.8	43
30	Catalysis at the Rim: A Mechanism for Low Temperature CO Oxidation over Pt₃Sn. ACS Catalysis, 2017, 7, 7431-7441.	11.2	32
31	Inserting CO2 into Terminal Alkynes via Bis-(NHC)-Metal Complexes. Catalysis Letters, 2017, 147, 463-471.	2.6	26
32	Water coordination and dehydration processes in defective UiO-66 type metal organic frameworks. CrystEngComm, 2016, 18, 7056-7069.	2.6	58
33	Biocompatible Zr-based nanoscale MOFs coated with modified poly(Îµ-caprolactone) as anticancer drug carriers. International Journal of Pharmaceutics, 2016, 509, 208-218.	5.2	96
34	Origin of highly active metalâ€"organic framework catalysts: defects? Defects!. Dalton Transactions, 2016, 45, 4090-4099.	3.3	183
35	Au@UiO-66: a base free oxidation catalyst. RSC Advances, 2015, 5, 22334-22342.	3.6	59
36	Mechanistic studies of aldol condensations in UiO-66 and UiO-66-NH 2 metal organic frameworks. Journal of Catalysis, 2015, 331, 1-12.	6.2	88

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37	Active site engineering in UiO-66 type metalâ€“organic frameworks by intentional creation of defects: a theoretical rationalization. CrystEngComm, 2015, 17, 395-406.	2.6	190
38	Vanadium metalâ€“organic frameworks: structures and applications. New Journal of Chemistry, 2014, 38, 1853-1867.	2.8	57
39	Water-soluble NHC-Cu catalysts: applications in click chemistry, bioconjugation and mechanistic analysis. Organic and Biomolecular Chemistry, 2014, 12, 9350-9356.	2.8	45
40	Catalytic Performance of Vanadium MILâ€47 and Linkerâ€Substituted Variants in the Oxidation of Cyclohexene: A Combined Theoretical and Experimental Approach. ChemPlusChem, 2014, 79, 1183-1197.	2.8	20
41	First principle chemical kinetics in zeolites: the methanol-to-olefin process as a case study. Chemical Society Reviews, 2014, 43, 7326-7357.	38.1	188
42	Base catalytic activity of alkaline earth MOFs: a (micro)spectroscopic study of active site formation by the controlled transformation of structural anions. Chemical Science, 2014, 5, 4517-4524.	7.4	58
43	Metal-dioxidoterephthalate MOFs of the MOF-74 type: Microporous basic catalysts with well-defined active sites. Journal of Catalysis, 2014, 317, 1-10.	6.2	138
44	Hostâ€“guest and guestâ€“guest interactions between xylene isomers confined in the MIL-47(V) pore system. Highlights in Theoretical Chemistry, 2014, , 35-47.	0.0	0
45	Synthesis Modulation as a Tool To Increase the Catalytic Activity of Metalâ€“Organic Frameworks: The Unique Case of UiO-66(Zr). Journal of the American Chemical Society, 2013, 135, 11465-11468.	13.7	871
46	Insight in the activity and diastereoselectivity of various Lewis acid catalysts for the citronellal cyclization. Journal of Catalysis, 2013, 305, 118-129.	6.2	51
47	New Functionalized Metalâ€“Organic Frameworks MIL-47-X (X = â^'Cl, â^'Br, â^'CH₃,) Tj ETQq1 1 0.784314 rgBT /Overlock Adsorption Properties. Journal of Physical Chemistry C, 2013, 117, 22784-22796.	3.1	79
48	New V^{IV}-Based Metalâ€“Organic Framework Having Framework Flexibility and High CO₂ Adsorption Capacity. Inorganic Chemistry, 2013, 52, 113-120.	4.0	68
49	On the Thermodynamics of Framework Breathing: A Free Energy Model for Gas Adsorption in MIL-53. Journal of Physical Chemistry C, 2013, 117, 11540-11554.	3.1	61
50	Synthesis, characterization and sorption properties of NH2-MIL-47. Physical Chemistry Chemical Physics, 2012, 14, 15562.	2.8	27
51	Mechanistic insight into the cyclohexene epoxidation with VO(acac)2 and tert-butyl hydroperoxide. Journal of Catalysis, 2012, 294, 1-18.	6.2	40
52	Efficient Approach for the Computational Study of Alcohol and Nitrile Adsorption in H-ZSM-5. Journal of Physical Chemistry C, 2012, 116, 5499-5508.	3.1	77
53	Ab Initio Parametrized Force Field for the Flexible Metalâ€“Organic Framework MIL-53(Al). Journal of Chemical Theory and Computation, 2012, 8, 3217-3231.	5.3	69
54	Electronic Effects of Linker Substitution on Lewis Acid Catalysis with Metalâ€“Organic Frameworks. Angewandte Chemie - International Edition, 2012, 51, 4887-4890.	13.8	384

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55	Hostâ€“guest and guestâ€“guest interactions between xylene isomers confined in the MIL-47(V) pore system. Theoretical Chemistry Accounts, 2012, 131, 1.	1.4	23
56	The coordinatively saturated vanadium MIL-47 as a low leaching heterogeneous catalyst in the oxidation of cyclohexene. Journal of Catalysis, 2012, 285, 196-207.	6.2	100
57	First Principle Kinetic Studies of Zeolite-Catalyzed Methylation Reactions. Journal of the American Chemical Society, 2011, 133, 888-899.	13.7	153
58	Full Theoretical Cycle for both Ethene and Propene Formation during Methanolâ€toâ€Olefin Conversion in Hâ€ZSMâ€5. ChemCatChem, 2011, 3, 208-212.	3.7	116
59	The remarkable catalytic activity of the saturated metal organic framework V-MIL-47 in the cyclohexene oxidation. Chemical Communications, 2010, 46, 5085.	4.1	109
60	Assembly of cyclic hydrocarbons from ethene and propene in acid zeolite catalysis to produce active catalytic sites for MTO conversion. Journal of Catalysis, 2010, 271, 67-78.	6.2	86
61	The Effect of Confined Space on the Growth of Naphthalenic Species in a Chabaziteâ€Type Catalyst: A Molecular Modeling Study. ChemCatChem, 2009, 1, 373-378.	3.7	45