

Manuel Moliner

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.

118
papers

8,026
citations

46
h-index

88
g-index

127
ext. papers

9,215
ext. citations

9.6
avg, IF

6.46
L-index

#	Paper	IF	Citations
118	NH ₃ -SCR catalysts for heavy-duty diesel vehicles: Preparation of CHA-type zeolites with low-cost templates. <i>Applied Catalysis B: Environmental</i> , 2022 , 303, 120928	21.8	1
117	Coordinatively Unsaturated Hf-MOF-808 Prepared via Hydrothermal Synthesis as a Bifunctional Catalyst for the Tandem N-Alkylation of Amines with Benzyl Alcohol. <i>ACS Sustainable Chemistry and Engineering</i> , 2021 , 9, 15793-15806	8.3	3
116	Data-Driven Design of Biselective Templates for Intergrowth Zeolites. <i>Journal of Physical Chemistry Letters</i> , 2021 , 12, 10689-10694	6.4	1
115	Discovering Relationships between OSDAs and Zeolites through Data Mining and Generative Neural Networks. <i>ACS Central Science</i> , 2021 , 7, 858-867	16.8	21
114	Metalloenzyme-Inspired Ce-MOF Catalyst for Oxidative Halogenation Reactions. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 31021-31030	9.5	3
113	In-Situ-Generated Active Hf-hydride in Zeolites for the Tandem N-Alkylation of Amines with Benzyl Alcohol. <i>ACS Catalysis</i> , 2021 , 11, 8049-8061	13.1	11
112	Single-Site vs. Cluster Catalysis in High Temperature Oxidations. <i>Angewandte Chemie</i> , 2021 , 133, 16090-16098	16.0	0
111	Single-Site vs. Cluster Catalysis in High Temperature Oxidations. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 15954-15962	16.4	7
110	The Limits of the Confinement Effect Associated to Cage Topology on the Control of the MTO Selectivity. <i>ChemCatChem</i> , 2021 , 13, 1578-1586	5.2	6
109	Tailoring Lewis/Bronsted acid properties of MOF nodes hydrothermal and solvothermal synthesis: simple approach with exceptional catalytic implications. <i>Chemical Science</i> , 2021 , 12, 10106-10115	9.4	5
108	Design and Synthesis of the Active Site Environment in Zeolite Catalysts for Selectively Manipulating Mechanistic Pathways. <i>Journal of the American Chemical Society</i> , 2021 , 143, 10718-10726	16.4	4
107	A priori control of zeolite phase competition and intergrowth with high-throughput simulations. <i>Science</i> , 2021 , 374, 308-315	33.3	20
106	Unusually Low Heat of Adsorption of CO on AlPO and SAPO Molecular Sieves. <i>Frontiers in Chemistry</i> , 2020 , 8, 588712	5	4
105	Impact of Zeolite Framework Composition and Flexibility on Methanol-To-Olefins Selectivity: Confinement or Diffusion?. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 19708-19715	16.4	27
104	Deactivation and regeneration studies on Pd-containing medium pore zeolites as passive NO _x adsorbers (PNAs) in cold-start applications. <i>Microporous and Mesoporous Materials</i> , 2020 , 302, 110222	5.3	15
103	Unraveling the Reaction Mechanism and Active Sites of Metal-Organic Frameworks for Glucose Transformations in Water: Experimental and Theoretical Studies. <i>ACS Sustainable Chemistry and Engineering</i> , 2020 , 8, 16143-16155	8.3	9
102	CO ₂ hydrogenation using bifunctional catalysts based on K-promoted iron oxide and zeolite: influence of the zeolite structure and crystal size. <i>Catalysis Science and Technology</i> , 2020 , 10, 5648-5658	5.5	9

101	Production of aromatics from biomass by computer-aided selection of the zeolite catalyst. <i>Green Chemistry</i> , 2020 , 22, 5123-5131	10	9
100	Selective active site placement in Lewis acid zeolites and implications for catalysis of oxygenated compounds. <i>Chemical Science</i> , 2020 , 11, 10225-10235	9.4	12
99	Impact of Zeolite Framework Composition and Flexibility on Methanol-To-Olefins Selectivity: Confinement or Diffusion?. <i>Angewandte Chemie</i> , 2020 , 132, 19876-19883	3.6	8
98	Ge-Based Hybrid Composites from Ge-Rich Zeolites as Highly Conductive and Stable Electronic Materials. <i>Chemistry of Materials</i> , 2019 , 31, 7723-7731	9.6	2
97	Machine Learning Applied to Zeolite Synthesis: The Missing Link for Realizing High-Throughput Discovery. <i>Accounts of Chemical Research</i> , 2019 , 52, 2971-2980	24.3	47
96	From metal-supported oxides to well-defined metal site zeolites: the next generation of passive NOx adsorbers for low-temperature control of emissions from diesel engines. <i>Reaction Chemistry and Engineering</i> , 2019 , 4, 223-234	4.9	41
95	A Machine Learning Approach to Zeolite Synthesis Enabled by Automatic Literature Data Extraction. <i>ACS Central Science</i> , 2019 , 5, 892-899	16.8	96
94	Conceptual similarities between zeolites and artificial enzymes. <i>Chemical Science</i> , 2019 , 10, 8009-8015	9.4	13
93	Chemical and Structural Parameter Connecting Cavity Architecture, Confined Hydrocarbon Pool Species, and MTO Product Selectivity in Small-Pore Cage-Based Zeolites. <i>ACS Catalysis</i> , 2019 , 9, 11542-11551	13.1	25
92	Synthese von Zeolithen aus vorkristallisierten Bausteinen: Architektur im Nanomaßstab. <i>Angewandte Chemie</i> , 2018 , 130, 15554-15578	3.6	10
91	Modeling of EPR Parameters for Cu(II): Application to the Selective Reduction of NOx Catalyzed by Cu-Zeolites. <i>Topics in Catalysis</i> , 2018 , 61, 810-832	2.3	12
90	General Aspects on Structure and Reactivity of Framework and Extra-framework Metals in Zeolite Materials. <i>Structure and Bonding</i> , 2018 , 53-90	0.9	6
89	Building Zeolites from Precrystallized Units: Nanoscale Architecture. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 15330-15353	16.4	81
88	Increasing the stability of the Ge-containing extra-large pore ITQ-33 zeolite by post-synthetic acid treatments. <i>Microporous and Mesoporous Materials</i> , 2018 , 267, 35-42	5.3	13
87	Making Nanosized CHA Zeolites with Controlled Al Distribution for Optimizing Methanol-to-Olefin Performance. <i>Chemistry - A European Journal</i> , 2018 , 24, 14631-14635	4.8	38
86	Synthesis of reaction-adapted zeolites as methanol-to-olefins catalysts with mimics of reaction intermediates as organic structure-directing agents. <i>Nature Catalysis</i> , 2018 , 1, 547-554	36.5	73
85	Nanosized MCM-22 zeolite using simple non-surfactant organic growth modifiers: synthesis and catalytic applications. <i>Chemical Communications</i> , 2018 , 54, 9989-9992	5.8	11
84	Trapping of Metal Atoms and Metal Clusters by Chabazite under Severe Redox Stress. <i>ACS Catalysis</i> , 2018 , 8, 9520-9528	13.1	30

83	Iron-Containing SSZ-39 (AEI) Zeolite: An Active and Stable High-Temperature NH ₃ -SCR Catalyst. <i>ChemCatChem</i> , 2017 , 9, 1754-1757	5.2	37
82	"Ab initio" synthesis of zeolites for preestablished catalytic reactions. <i>Science</i> , 2017 , 355, 1051-1054	33.3	154
81	Cage-based small-pore catalysts for NH ₃ -SCR prepared by combining bulky organic structure directing agents with modified zeolites as reagents. <i>Applied Catalysis B: Environmental</i> , 2017 , 217, 125-136	31.8	49
80	Direct synthesis of the aluminosilicate form of the small pore CDO zeolite with novel OSDAs and the expanded polymorphs. <i>Microporous and Mesoporous Materials</i> , 2017 , 246, 147-157	5.3	12
79	Simple organic structure directing agents for synthesizing nanocrystalline zeolites. <i>Chemical Science</i> , 2017 , 8, 8138-8149	9.4	26
78	Role of Supramolecular Chemistry During Templating Phenomenon in Zeolite Synthesis. <i>Structure and Bonding</i> , 2017 , 139-177	0.9	2
77	Fe-Containing Zeolites for NH ₃ -SCR of NO _x : Effect of Structure, Synthesis Procedure, and Chemical Composition on Catalytic Performance and Stability. <i>Chemistry - A European Journal</i> , 2017 , 23, 13404-13414	4.8	35
76	Efficient Oligomerization of Pentene into Liquid Fuels on Nanocrystalline Beta Zeolites. <i>ACS Catalysis</i> , 2017 , 7, 6170-6178	13.1	30
75	Optimal Operating Conditions of Coupled Sequential NO _x Storage/Reduction and Cu/CHA Selective Catalytic Reduction Monoliths. <i>Topics in Catalysis</i> , 2017 , 60, 30-39	2.3	8
74	High-silica nanocrystalline Beta zeolites: efficient synthesis and catalytic application. <i>Chemical Science</i> , 2016 , 7, 102-108	9.4	58
73	Study of disorders in zeolite ITQ-39 using structure projection reconstruction from through-focus series of HRTEM images 2016 , 283-284		
72	Reversible Transformation of Pt Nanoparticles into Single Atoms inside High-Silica Chabazite Zeolite. <i>Journal of the American Chemical Society</i> , 2016 , 138, 15743-15750	16.4	247
71	ITQ-39 zeolite, an efficient catalyst for the conversion of low value naphtha fractions into diesel fuel: The role of pore size on molecular diffusion and reactivity. <i>Journal of Catalysis</i> , 2016 , 333, 127-138	7.3	7
70	Synthesis of highly stable metal-containing extra-large-pore molecular sieves. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2016 , 374,	3	4
69	Cu-zeolite catalysts for NO _x removal by selective catalytic reduction with NH ₃ and coupled to NO storage/reduction monolith in diesel engine exhaust aftertreatment systems. <i>Applied Catalysis B: Environmental</i> , 2016 , 187, 419-427	21.8	55
68	Nanocrystalline SSZ-39 zeolite as an efficient catalyst for the methanol-to-olefin (MTO) process. <i>Chemical Communications</i> , 2016 , 52, 6072-5	5.8	67
67	Synthesis of Al-MTW with low Si/Al ratios by combining organic and inorganic structure directing agents. <i>New Journal of Chemistry</i> , 2016 , 40, 4140-4145	3.6	10
66	Improving the catalytic performance of SAPO-18 for the methanol-to-olefins (MTO) reaction by controlling the Si distribution and crystal size. <i>Catalysis Science and Technology</i> , 2016 , 6, 2796-2806	5.5	38

65	Self-Assembled Aromatic Molecules as Efficient Organic Structure Directing Agents to Synthesize the Silicoaluminophosphate SAPO-42 with Isolated Si Species. <i>Chemistry of Materials</i> , 2015 , 27, 2981-2989	8.6	23
64	Rigid/Flexible Organic Structure Directing Agents for Directing the Synthesis of Multipore Zeolites: A Computational Approach. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 7711-7720	3.8	12
63	Design of Zeolites with Specific Architectures Using Self-Assembled Aromatic Organic Structure Directing Agents. <i>Topics in Catalysis</i> , 2015 , 58, 502-512	2.3	15
62	Efficient synthesis of the Cu-SSZ-39 catalyst for DeNOx applications. <i>Chemical Communications</i> , 2015 , 51, 11030-3	5.8	72
61	High yield synthesis of high-silica chabazite by combining the role of zeolite precursors and tetraethylammonium: SCR of NOx. <i>Chemical Communications</i> , 2015 , 51, 9965-8	5.8	98
60	Multipore zeolites: synthesis and catalytic applications. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 3560-79	16.4	237
59	Multiporige Zeolithe: Synthese und Anwendungen bei der Katalyse. <i>Angewandte Chemie</i> , 2015 , 127, 3639-3649	3.3	33
58	Synthesis, characterization and reactivity of high hydrothermally stable Cu-SAPO-34 materials prepared by one-pot processes. <i>Journal of Catalysis</i> , 2014 , 314, 73-82	7.3	93
57	State of the art of Lewis acid-containing zeolites: lessons from fine chemistry to new biomass transformation processes. <i>Dalton Transactions</i> , 2014 , 43, 4197-208	4.3	148
56	Synthesis of the Small Pore Silicoaluminophosphate STA-6 by Using Supramolecular Self-Assembled Organic Structure Directing Agents. <i>Chemistry of Materials</i> , 2014 , 26, 4346-4353	9.6	16
55	Direct synthesis design of Cu-SAPO-18, a very efficient catalyst for the SCR of NOx. <i>Journal of Catalysis</i> , 2014 , 319, 36-43	7.3	59
54	Advances in the synthesis of titanosilicates: From the medium pore TS-1 zeolite to highly-accessible ordered materials. <i>Microporous and Mesoporous Materials</i> , 2014 , 189, 31-40	5.3	58
53	Experimental energetics of large and extra-large pore zeolites: Pure silica beta polymorph C (BEC) and Ge-containing ITQ-33. <i>Microporous and Mesoporous Materials</i> , 2014 , 187, 77-81	5.3	4
52	Synthesis Strategies for Preparing Useful Small Pore Zeolites and Zeotypes for Gas Separations and Catalysis. <i>Chemistry of Materials</i> , 2014 , 26, 246-258	9.6	222
51	Supra-molecular assembly of aromatic proton sponges to direct the crystallization of extra-large-pore zeotypes. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2014 , 470, 20140107	2.4	5
50	Efficient One-Pot Preparation of Cu-SSZ-13 Materials using Cooperative OSDAs for their Catalytic Application in the SCR of NOx. <i>ChemCatChem</i> , 2013 , 5, 3316-3323	5.2	94
49	Towards the rational design of efficient organic structure-directing agents for zeolite synthesis. <i>Angewandte Chemie - International Edition</i> , 2013 , 52, 13880-9	16.4	225
48	Metal-containing zeolites as efficient catalysts for the transformation of highly valuable chiral biomass-derived products. <i>Green Chemistry</i> , 2013 , 15, 2101	10	42

- 47 Rationales Design von effizienten organischen strukturdirigierenden Reagentien für die Zeolithsynthese. *Angewandte Chemie*, **2013**, 125, 14124-14134 3.6 47
- 46 Synthesis of an extra-large molecular sieve using proton sponges as organic structure-directing agents. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 3749-3754 11.5 83
- 45 Direct synthesis of a titanosilicate molecular sieve containing large and medium pores in its structure. *Microporous and Mesoporous Materials*, **2012**, 164, 44-48 5.3 17
- 44 Effect of Cage Size on the Selective Conversion of Methanol to Light Olefins. *ACS Catalysis*, **2012**, 2, 2490-2495 3.1 112
- 43 Cu-SSZ-39, an active and hydrothermally stable catalyst for the selective catalytic reduction of NOx. *Chemical Communications*, **2012**, 48, 8264-6 5.8 169
- 42 Synthesis of Expanded Titanosilicate MWW-Related Materials from a Pure Silica Precursor. *Chemistry of Materials*, **2012**, 24, 4371-4375 9.6 28
- 41 Synthesis design and structure of a multipore zeolite with interconnected 12- and 10-MR channels. *Journal of the American Chemical Society*, **2012**, 134, 6473-8 16.4 64
- 40 Rational direct synthesis methodology of very active and hydrothermally stable Cu-SAPO-34 molecular sieves for the SCR of NOx. *Applied Catalysis B: Environmental*, **2012**, 127, 273-280 21.8 134
- 39 Structure and catalytic properties of the most complex intergrown zeolite ITQ-39 determined by electron crystallography. *Nature Chemistry*, **2012**, 4, 188-94 17.6 151
- 38 Direct Synthesis of Functional Zeolitic Materials. *ISRN Materials Science*, **2012**, 2012, 1-24 25
- 37 Metalloenzyme-like catalyzed isomerizations of sugars by Lewis acid zeolites. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 9727-32 11.5 303
- 36 One-Pot Synthesis of 5-(Hydroxymethyl)furfural from Carbohydrates using Tin-Beta Zeolite. *ACS Catalysis*, **2011**, 1, 408-410 13.1 544
- 35 A new aluminosilicate molecular sieve with a system of pores between those of ZSM-5 and beta zeolite. *Journal of the American Chemical Society*, **2011**, 133, 9497-505 16.4 75
- 34 Impact of Controlling the Site Distribution of Al Atoms on Catalytic Properties in Ferrierite-Type Zeolites. *Journal of Physical Chemistry C*, **2011**, 115, 1096-1102 3.8 96
- 33 Hybrid Organic-Inorganic Solids That Show Shape Selectivity. *Chemistry of Materials*, **2010**, 22, 2646-2652 9.6 11
- 32 Tin-containing zeolites are highly active catalysts for the isomerization of glucose in water. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 6164-8 11.5 750
- 31 Mechanism of Glucose Isomerization Using a Solid Lewis Acid Catalyst in Water. *Angewandte Chemie*, **2010**, 122, 9138-9141 3.6 85
- 30 Mechanism of glucose isomerization using a solid Lewis acid catalyst in water. *Angewandte Chemie - International Edition*, **2010**, 49, 8954-7 16.4 547

29	Design of a full-profile-matching solution for high-throughput analysis of multiphase samples through powder X-ray diffraction. <i>Chemistry - A European Journal</i> , 2009 , 15, 4258-69	4.8	32
28	The ITQ-37 mesoporous chiral zeolite. <i>Nature</i> , 2009 , 458, 1154-7	50.4	463
27	Increasing stability and productivity of lipase enzyme by encapsulation in a porous organic/inorganic system. <i>Microporous and Mesoporous Materials</i> , 2009 , 118, 334-340	5.3	74
26	DoE framework for catalyst development based on soft computing techniques. <i>Computers and Chemical Engineering</i> , 2009 , 33, 225-238	4	20
25	Synthesis methodology, stability, acidity, and catalytic behavior of the 18 \times 18 \times 10 member ring pores ITQ-33 zeolite. <i>Journal of Catalysis</i> , 2008 , 254, 101-109	7.3	66
24	Combining high-throughput experimentation, advanced data modeling and fundamental knowledge to develop catalysts for the epoxidation of large olefins and fatty esters. <i>Journal of Catalysis</i> , 2008 , 258, 25-34	7.3	46
23	Synthesis and Structure of Polymorph B of Zeolite Beta. <i>Chemistry of Materials</i> , 2008 , 20, 3218-3223	9.6	67
22	Biodiesel production by immobilized lipase on zeolites and related materials. <i>Studies in Surface Science and Catalysis</i> , 2008 , 174, 1011-1016	1.8	17
21	Biomimetic synthesis of microporous and mesoporous materials at room temperature and neutral pH, with application in electronics, controlled release of chemicals, and catalysis. <i>New Journal of Chemistry</i> , 2008 , 32, 1338	3.6	20
20	Zeolite structure determination using electron crystallography. <i>Studies in Surface Science and Catalysis</i> , 2008 , 174, 799-804	1.8	2
19	Synthesis methodology, acidity and catalytic behaviour of the 18 \times 10 member ring pores ITQ-33 zeolite. <i>Studies in Surface Science and Catalysis</i> , 2008 , 174, 155-160	1.8	2
18	A reliable methodology for high throughput identification of a mixture of crystallographic phases from powder X-ray diffraction data. <i>CrystEngComm</i> , 2008 , 10, 1321	3.3	29
17	Synthesis of the TiSilicate Form of BEC Polymorph of Zeolite Assisted by Molecular Modeling. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 19547-19554	3.8	52
16	Synthesis and structure of polymorph B of Beta zeolite. <i>Studies in Surface Science and Catalysis</i> , 2008 , 174, 233-236	1.8	3
15	Biomimetic synthesis of micro and mesoporous molecular sieves at room temperature and neutral pH. <i>Studies in Surface Science and Catalysis</i> , 2007 , 170, 145-150	1.8	0
14	Monomers that form conducting polymers as structure-directing agents: synthesis of microporous molecular sieves encapsulating poly-para-phenylenevinylene. <i>Chemistry - A European Journal</i> , 2007 , 13, 8733-8	4.8	10
13	Prediction of ITQ-21 Zeolite Phase Crystallinity: Parametric Versus Non-parametric Strategies. <i>QSAR and Combinatorial Science</i> , 2007 , 26, 255-272		23
12	Zeolite synthesis modelling with support vector machines: a combinatorial approach. <i>Combinatorial Chemistry and High Throughput Screening</i> , 2007 , 10, 13-24	1.3	36

11	Discovery of a new catalytically active and selective zeolite (ITQ-30) by high-throughput synthesis techniques. <i>Studies in Surface Science and Catalysis</i> , 2007 , 322-329	1.8	0
10	Discovery of a new catalytically active and selective zeolite (ITQ-30) by high-throughput synthesis techniques. <i>Journal of Catalysis</i> , 2006 , 241, 312-318	7.3	60
9	Synthesis and characterization of the all-silica pure polymorph C and an enriched polymorph B intergrowth of zeolite beta. <i>Angewandte Chemie - International Edition</i> , 2006 , 45, 8013-5	16.4	81
8	Synthesis and Characterization of the All-Silica Pure Polymorph C and an Enriched Polymorph B Intergrowth of Zeolite Beta. <i>Angewandte Chemie</i> , 2006 , 118, 8181-8183	3.6	17
7	A New Mapping/Exploration Approach for HT Synthesis of Zeolites. <i>Chemistry of Materials</i> , 2006 , 18, 3287-3296	9.6	69
6	Synthesis of micro- and mesoporous molecular sieves at room temperature and neutral pH catalyzed by functional analogues of silicatein. <i>Chemical Communications</i> , 2006 , 3137-9	5.8	27
5	Rational design and HT techniques allow the synthesis of new IWR zeolite polymorphs. <i>Journal of the American Chemical Society</i> , 2006 , 128, 4216-7	16.4	76
4	High-throughput synthesis and catalytic properties of a molecular sieve with 18- and 10-member rings. <i>Nature</i> , 2006 , 443, 842-5	50.4	410
3	Application of artificial neural networks to high-throughput synthesis of zeolites. <i>Microporous and Mesoporous Materials</i> , 2005 , 78, 73-81	5.3	57
2	Integrating high-throughput characterization into combinatorial heterogeneous catalysis: unsupervised construction of quantitative structure/property relationship models. <i>Journal of Catalysis</i> , 2005 , 232, 335-341	7.3	55
1	A Career in Catalysis: Avelino Corma. <i>ACS Catalysis</i> , 7054-7123	13.1	1