David Farrusseng

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197 papers	10,211 citations	50 h-index	97 g-index
210 ext. papers	11,190 ext. citations	6.9 avg, IF	6.47 L-index

#	Paper	IF	Citations
197	Metal-organic frameworks: opportunities for catalysis. *Angewandte Chemie - International Edition*, **2009**, 48, 7502-13	16.4	1612
196	Water adsorption in MOFs: fundamentals and applications. *Chemical Society Reviews*, **2014**, 43, 5594-617	58.5	837
195	Natural gas treating by selective adsorption: Material science and chemical engineering interplay. *Chemical Engineering Journal*, **2009**, 155, 553-566	14.7	320
194	Porous ceramic membranes for catalytic reactors overview and new ideas. *Journal of Membrane Science*, **2001**, 181, 3-20	9.6	261
193	MOF-supported selective ethylene dimerization single-site catalysts through one-pot postsynthetic modification. *Journal of the American Chemical Society*, **2013**, 135, 4195-8	16.4	213
192	Metall-organische Ger te f die Katalyse. *Angewandte Chemie*, **2009**, 121, 7638-7649	3.6	213
191	Heats of adsorption for seven gases in three metal-organic frameworks: systematic comparison of experiment and simulation. *Langmuir*, **2009**, 25, 7383-8	4	183
190	Generic postfunctionalization route from amino-derived metal-organic frameworks. *Journal of the American Chemical Society*, **2010**, 132, 4518-9	16.4	167
189	Engineering of coordination polymers for shape selective alkylation of large aromatics and the role of defects. *Microporous and Mesoporous Materials*, **2010**, 129, 319-329	5.3	166
188	Structure property relationships of water adsorption in metal organic frameworks. *New Journal of Chemistry*, **2014**, 38, 3102-3111	3.6	163
187	Perspectives on zeolite-encapsulated metal nanoparticles and their applications in catalysis. *New Journal of Chemistry*, **2016**, 40, 3933-3949	3.6	160
186	Guest-induced gate-opening of a zeolite imidazolate framework. *New Journal of Chemistry*, **2011**, 35, 546-550	3.6	153
185	Absolute molecular sieve separation of ethylene/ethane mixtures with silver zeolite A. *Journal of the American Chemical Society*, **2012**, 134, 14635-7	16.4	151
184	Photocatalytic carbon dioxide reduction with rhodium-based catalysts in solution and heterogenized within metal-organic frameworks. *ChemSusChem*, **2015**, 8, 603-8	8.3	149
183	Origin of highly active metal-organic framework catalysts: defects? Defects!. *Dalton Transactions*, **2016**, 45, 4090-9	4.3	148
182	Dynamic nuclear polarization enhanced solid-state NMR spectroscopy of functionalized metal-organic frameworks. *Angewandte Chemie - International Edition*, **2012**, 51, 123-7	16.4	145
181	A new symmetric solid-oxide fuel cell with La0.8Sr0.2Sc0.2Mn0.8O3- perovskite oxide as both the anode and cathode. *Acta Materialia*, **2009**, 57, 1165-1175	8.4	140

180	Enantiopure Peptide-Functionalized Metal-Organic Frameworks. *Journal of the American Chemical Society*, **2015**, 137, 9409-16	16.4	130
179	Solvent free base catalysis and transesterification over basic functionalised Metal-Organic Frameworks. *Green Chemistry*, **2009**, 11, 1729	10	125
178	Engineering structured MOF at nano and macroscales for catalysis and separation. *Journal of Materials Chemistry*, **2011**, 21, 7582		123
177	Hollow Zeolite Structures: An Overview of Synthesis Methods. *Chemistry of Materials*, **2016**, 28, 5205-5223	9.6	122
176	MOFs as acid catalysts with shape selectivity properties. *New Journal of Chemistry*, **2008**, 32, 937	3.6	121
175	Facile synthesis of an ultramicroporous MOF tubular membrane with selectivity towards CO2. *New Journal of Chemistry*, **2011**, 35, 41-44	3.6	118
174	Experimental and Computational Study of Functionality Impact on Sodalite-Zeolitic Imidazolate Frameworks for CO2 Separation. *Journal of Physical Chemistry C*, **2011**, 115, 16425-16432	3.8	115
173	Facile shaping of an imidazolate-based MOF on ceramic beads for adsorption and catalytic applications. *Chemical Communications*, **2010**, 46, 7999-8001	5.8	103
172	Transition-Metal Nanoparticles in Hollow Zeolite Single Crystals as Bifunctional and Size-Selective Hydrogenation Catalysts. *Chemistry of Materials*, **2015**, 27, 276-282	9.6	95
171	Antimicrobial activity of cobalt imidazolate metal-organic frameworks. *Chemosphere*, **2014**, 113, 188-92	8.4	87
170	Oxidative activation of ethane on catalytic modified dense ionic oxygen conducting membranes. *Catalysis Today*, **2005**, 104, 131-137	5.3	82
169	Size-selective hydrogenation at the subnanometer scale over platinum nanoparticles encapsulated in silicalite-1 single crystal hollow shells. *Chemical Communications*, **2014**, 50, 1824-6	5.8	81
168	The development of descriptors for solids: teaching "catalytic intuition" to a computer. *Angewandte Chemie - International Edition*, **2004**, 43, 5347-9	16.4	80
167	The Origin of the Activity of Amine-Functionalized Metal-Organic Frameworks in the Catalytic Synthesis of Cyclic Carbonates from Epoxide and CO2. *ChemCatChem*, **2012**, 4, 1725-1728	5.2	79
166	Assessing chemical heterogeneity at the nanoscale in mixed-ligand metal-organic frameworks with the PTIR technique. *Angewandte Chemie - International Edition*, **2014**, 53, 2852-6	16.4	74
165	Synergistic effects of encapsulated phthalocyanine complexes in MIL-101 for the selective aerobic oxidation of tetralin. *Chemical Communications*, **2011**, 47, 1562-4	5.8	74
164	High-throughput heterogeneous catalysis. *Surface Science Reports*, **2008**, 63, 487-513	12.9	70
163	Styrene from toluene by combinatorial catalysis. *Catalysis Today*, **2003**, 81, 425-436	5.3	70

162	Hierarchical Zeolitic Imidazolate Framework-8 Catalyst for Monoglyceride Synthesis. *ChemCatChem* , **2013**, 5, 3562-3566	5.2	69
161	Characteristics and performance in the oxidative dehydrogenation of propane of MFI and V-MFI zeolite membranes. *Catalysis Today*, **2000**, 56, 199-209	5.3	68
160	Ultimate size control of encapsulated gold nanoparticles. *Chemical Communications*, **2013**, 49, 8507-9	5.8	66
159	Homogeneity of flexible metal-organic frameworks containing mixed linkers. *Journal of Materials Chemistry*, **2012**, 22, 10287		64
158	Engineering the Environment of a Catalytic Metal-Organic Framework by Postsynthetic Hydrophobization. *ChemCatChem*, **2011**, 3, 675-678	5.2	64
157	Modeling of all porous solid oxide fuel cells. *Applied Energy*, **2018**, 219, 105-113	10.7	62
156	Investigation of Acid Centers in MIL-53(Al, Ga) for Brønsted-Type Catalysis: In Situ FTIR and Ab Initio Molecular Modeling. *ChemCatChem*, **2010**, 2, 1235-1238	5.2	62
155	Selective CO oxidation in the presence of hydrogen: fast parallel screening and mechanistic studies on ceria-based catalysts. *Journal of Catalysis*, **2004**, 225, 489-497	7.3	59
154	Amino acid functionalized metal-organic frameworks by a soft coupling-deprotection sequence. *Chemical Communications*, **2011**, 47, 11650-2	5.8	57
153	Tuning the activity by controlling the wettability of MOF eggshell catalysts: A quantitative structure-activity study. *Journal of Catalysis*, **2011**, 284, 207-214	7.3	56
152	Pore-Size Engineering of Silicon Imido Nitride for Catalytic Applications. *Angewandte Chemie - International Edition*, **2001**, 40, 4204-4207	16.4	56
151	Using Artificial Neural Networks to Boost High-throughput Discovery in Heterogeneous Catalysis. *QSAR and Combinatorial Science*, **2004**, 23, 767-778		53
150	Combinatorial Explosion in Homogeneous Catalysis: Screening 60,000 Cross-Coupling Reactions. *Advanced Synthesis and Catalysis*, **2004**, 346, 1844-1853	5.6	53
149	Synthesis and Shaping Scale-up Study of Functionalized UiO-66 MOF for Ammonia Air Purification Filters. *Industrial & Engineering Chemistry Research*, **2018**, 57, 8200-8208	3.9	52
148	Studies on the performance stability of mixed conducting BSCFO membranes in medium temperature oxygen permeation. *Chemical Communications*, **2003**, 32-3	5.8	51
147	Platinum nanoparticles entrapped in zeolite nanoshells as active and sintering-resistant arene hydrogenation catalysts. *Journal of Catalysis*, **2015**, 332, 25-30	7.3	50
146	How to Design Diverse Libraries of Solid Catalysts?. *QSAR and Combinatorial Science*, **2003**, 22, 729-736		50
145	Diffusion-Driven Selectivity in Oxidation of CO in the Presence of Propylene Using Zeolite Nano Shell as Membrane. *ACS Catalysis*, **2014**, 4, 4299-4303	13.1	49

144	Transition metal loaded silicon carbide-derived carbons with enhanced catalytic properties. *Carbon*, **2012**, 50, 1861-1870	10.4	49
143	Periodic trends in the selective hydrogenation of styrene over silica supported metal catalysts. *Journal of Catalysis*, **2013**, 307, 352-361	7.3	47
142	Limitations and potentials of oxygen transport dense and porous ceramic membranes for oxidation reactions. *Catalysis Today*, **2005**, 104, 102-113	5.3	47
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140	Design of Discovery Libraries for Solids Based on QSAR Models. *QSAR and Combinatorial Science*, **2005**, 24, 78-93		44
139	Solubility of Gases in Water Confined in Nanoporous Materials: ZSM-5, MCM-41, and MIL-100. *Journal of Physical Chemistry C*, **2015**, 119, 21547-21554	3.8	41
138	Synthesis of Monoglycerides by Esterification of Oleic Acid with Glycerol in Heterogeneous Catalytic Process Using Tin-Organic Framework Catalyst. *Catalysis Letters*, **2013**, 143, 356-363	2.8	41
137	Engineering MIL-53(Al) flexibility by controlling amino tags. *Dalton Transactions*, **2011**, 40, 11359-61	4.3	41
136	Systematic study of the impact of MOF densification into tablets on textural and mechanical properties. *CrystEngComm*, **2017**, 19, 4211-4218	3.3	40
135	A water-based and high space-time yield synthetic route to MOF Ni2(dhtp) and its linker 2,5-dihydroxyterephthalic acid. *Journal of Materials Chemistry A*, **2014**, 2, 17757-17763	13	39
134	Tailoring metal-organic framework catalysts by click chemistry. *Dalton Transactions*, **2012**, 41, 3945-8	4.3	38
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130	Hollow Zeolite Single-Crystals Encapsulated Alloy Nanoparticles with Controlled Size and Composition. *ChemNanoMat*, **2016**, 2, 534-539	3.5	37
129	An all porous solid oxide fuel cell (SOFC): a bridging technology between dual and single chamber SOFCs. *Energy and Environmental Science*, **2013**, 6, 2119	35.4	36
128	High-throughput approach to the catalytic combustion of diesel soot. *Catalysis Today*, **2008**, 137, 103-109	3.3	36
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126	Molecular Porous Photosystems Tailored for Long-Term Photocatalytic CO Reduction. *Angewandte Chemie - International Edition*, **2020**, 59, 5116-5122	16.4	35
125	Enhanced H2 uptake in solvents confined in mesoporous metal-organic framework. *Journal of the American Chemical Society*, **2012**, 134, 17369-71	16.4	35
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123	Synthesis of mesoporous silicon imido nitride with high surface area and narrow pore size distribution. *Chemical Communications*, **2000**, 2481-2482	5.8	35
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121	Quantitative Characterization of Breathing upon Adsorption for a Series of Amino-Functionalized MIL-53. *Journal of Physical Chemistry C*, **2012**, 116, 9507-9516	3.8	32
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118	High throughput experimentation in oxidation catalysis: Higher integration and intelligent software. *Catalysis Today*, **2006**, 117, 284-290	5.3	31
117	Oxidative dehydrogenation of propane on V/Al2O3 catalytic membranes. Effect of the type of membrane and reactant feed configuration. *Chemical Engineering Science*, **1999**, 54, 1265-1272	4.4	31
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114	Acceleration in catalyst development by fast transient kinetic investigation. *Journal of Catalysis*, **2003**, 216, 135-143	7.3	28
113	High-throughput approach to the catalytic combustion of diesel soot II: Screening of oxide-based catalysts. *Catalysis Today*, **2011**, 159, 138-143	5.3	26
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111	A water-based room temperature synthesis of ZIF-93 for CO2 adsorption. *Journal of Materials Chemistry A*, **2018**, 6, 5598-5602	13	25
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107	A comparative study of La0.8Sr0.2MnO3 and La0.8Sr0.2Sc0.1Mn0.9O3 as cathode materials of single-chamber SOFCs operating on a methane–air mixture. *Journal of Power Sources*, **2009**, 191, 225-232	8.9	24
106	Tests for the Use of La2Mo2O9-based Oxides as Multipurpose SOFC Core Materials. *Fuel Cells*, **2010** , 10, 433-439	2.9	24
105	Oxidation in catalytic membrane reactors. *Applied Catalysis A: General*, **2007**, 325, 198-204	5.1	24
104	Enhanced Ligand-Based Luminescence in Metal–Organic Framework Sensor. *ChemNanoMat*, **2016**, 2, 866-872	3.5	23
103	Effects of H2S and phenanthrene on the activity of Ni and Rh-based catalysts for the reforming of a simulated biomass-derived producer gas. *Applied Catalysis B: Environmental*, **2018**, 221, 206-214	21.8	22
102	Molecular Level Characterization of the Structure and Interactions in Peptide-Functionalized Metal-Organic Frameworks. *Chemistry - A European Journal*, **2016**, 22, 16531-16538	4.8	20
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100	Hollow Beta Zeolite Single Crystals for the Design of Selective Catalysts. *Crystal Growth and Design*, **2018**, 18, 592-596	3.5	19
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98	Protection–deprotection Methods Applied to Metal–Organic Frameworks for the Design of Original Single-Site Catalysts. *ChemCatChem*, **2011**, 3, 823-826	5.2	19
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89	Data Management for Combinatorial Heterogeneous Catalysis: Methodology and Development of Advanced Tools **2003**, 551-579		17
88	Evaluation of Energy Heterogeneity in Metal-Organic Frameworks: Absence of Henry's Region in MIL-53 and MIL-68 Materials?. *Journal of Physical Chemistry C*, **2010**, 114, 17665-17674	3.8	16
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85	Cu-mediated solid-state reaction in a post-functionalized metal-organic framework. *CrystEngComm* , **2012**, 14, 4105	3.3	15
84	Virtual screening of materials using neuro-genetic approach: Concepts and implementation. *Computational Materials Science*, **2009**, 45, 52-59	3.2	15
83	A Pt/Al2O3-supported metal-organic framework film as the size-selective core-shell hydrogenation catalyst. *Chemical Communications*, **2016**, 52, 7161-3	5.8	15
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81	A Microkinetic Vision on High-Throughput Catalyst Formulation and Optimization: Development of an Appropriate Software Tool. *Topics in Catalysis*, **2010**, 53, 64-76	2.3	14
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79	CeO2/Pt Catalyst Nanoparticle Containing Carbide-Derived Carbon Composites by a New In situ Functionalization Strategy. *Chemistry of Materials*, **2011**, 23, 57-66	9.6	13
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75	Soft synthesis of isocyanate-functionalised metal-organic frameworks. *Dalton Transactions*, **2012**, 41, 14236-8	4.3	12
74	The First Redox Switchable Ceramic Membrane. *Journal of the American Chemical Society*, **2000**, 122, 12592-12593	16.4	12
73	Xylene separation on a diverse library of exchanged faujasite zeolites. *Microporous and Mesoporous Materials*, **2017**, 247, 52-59	5.3	11

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71	Design of microporous mixed zinc□nickel triazolate metal□organic frameworks with functional ligands. *CrystEngComm*, **2013**, 15, 9336	3.3	10
70	Diversity management for efficient combinatorial optimization of materials. *Applied Surface Science* , **2007**, 254, 772-776	6.7	10
69	Deactivation handling in a high-throughput kinetic study of o-xylene hydrogenation. *Catalysis Today* , **2008**, 137, 71-79	5.3	10
68	Adsorption in heterogeneous porous media: Hierarchical and composite solids. *Microporous and Mesoporous Materials*, **2016**, 229, 145-154	5.3	10
67	Microporous Polymers as Macroligands for Pentamethylcyclopentadienylrhodium Transfer-Hydrogenation Catalysts. *ChemCatChem*, **2018**, 10, 1778-1782	5.2	9
66	Assessing Chemical Heterogeneity at the Nanoscale in Mixed-Ligand Metal□Organic Frameworks with the PTIR Technique. *Angewandte Chemie*, **2014**, 126, 2896-2900	3.6	9
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61	Coke-free operation of an all porous solid oxide fuel cell (AP-SOFC) used as an O2 supply device. *Journal of Materials Chemistry A*, **2015**, 3, 2684-2689	13	8
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56	The Combinatorial Approach for Heterogeneous Catalysis: A Challenge for Academic Research **2002**, 101-124		8
55	Migration and Growth of Silver Nanoparticles in Zeolite Socony Mobil 5 (ZSM-5) Observed by Environmental Electron Microscopy: Implications for Heterogeneous Catalysis. *ACS Applied Nano Materials*, **2019**, 2, 6452-6461	5.6	7

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