David P Serrano

List of Publications by Citations

225 papers	10,669 citations	60 h-index	90 g-index
237 ext. papers	11,899 ext. citations	7.4 avg, IF	6.44 L-index

#	Paper	IF	Citations
225	Synthesis strategies in the search for hierarchical zeolites. *Chemical Society Reviews*, **2013**, 42, 4004-35	58.5	557
224	Hierarchical Zeolites with Enhanced Textural and Catalytic Properties Synthesized from Organofunctionalized Seeds. *Chemistry of Materials*, **2006**, 18, 2462-2464	9.6	268
223	Developing Advanced Catalysts for the Conversion of Polyolefinic Waste Plastics into Fuels and Chemicals. *ACS Catalysis*, **2012**, 2, 1924-1941	13.1	216
222	Fuels from Waste Plastics by Thermal and Catalytic Processes: A Review. *Industrial & Engineering Chemistry Research*, **2008**, 47, 7982-7992	3.9	184
221	Molecular and Meso- and Macroscopic Properties of Hierarchical Nanocrystalline ZSM-5 Zeolite Prepared by Seed Silanization. *Chemistry of Materials*, **2009**, 21, 641-654	9.6	168
220	Effect of metal□support interaction on the selective hydrodeoxygenation of anisole to aromatics over Ni-based catalysts. *Applied Catalysis B: Environmental*, **2014**, 145, 91-100	21.8	159
219	Life cycle assessment of processes for hydrogen production. Environmental feasibility and reduction of greenhouse gases emissions. *International Journal of Hydrogen Energy*, **2009**, 34, 1370-1376	6.7	156
218	From 3D to 2D zeolite catalytic materials. *Chemical Society Reviews*, **2018**, 47, 8263-8306	58.5	153
217	Ni2P/SBA-15 As a Hydrodeoxygenation Catalyst with Enhanced Selectivity for the Conversion of Methyl Oleate Into n-Octadecane. *ACS Catalysis*, **2012**, 2, 592-598	13.1	142
216	Catalytic Conversion of Polyolefins into Liquid Fuels over MCM-41: Comparison with ZSM-5 and Amorphous SiO2□Al2O3. *Energy & Fuels*, **1997**, 11, 1225-1231	4.1	141
215	Low temperature synthesis and properties of ZSM-5 aggregates formed by ultra-small nanocrystals. *Microporous and Mesoporous Materials*, **2004**, 75, 41-49	5.3	141
214	Adsorption and Hydrophobic Properties of Mesostructured MCM-41 and SBA-15 Materials for Volatile Organic Compound Removal. *Industrial & Engineering Chemistry Research*, **2004**, 43, 7010-7018	3.9	132
213	Acidic and catalytic properties of hierarchical zeolites and hybrid ordered mesoporous materials assembled from MFI protozeolitic units. *Journal of Catalysis*, **2011**, 279, 366-380	7.3	130
212	Feedstock recycling of polyethylene in a two-step thermo-catalytic reaction system. *Journal of Analytical and Applied Pyrolysis*, **2007**, 79, 415-423	6	126
211	Synthesis of titanium-containing ZSM-48. *Journal of the Chemical Society Chemical Communications*, **1992**, 745		122
210	Catalytic conversion of rapeseed oil into raw chemicals and fuels over Ni- and Mo-modified nanocrystalline ZSM-5 zeolite. *Catalysis Today*, **2012**, 195, 59-70	5.3	119
209	Hydrodeoxygenation of anisole as bio-oil model compound over supported Ni and Co catalysts: Effect of metal and support properties. *Catalysis Today*, **2015**, 243, 163-172	5.3	116

208	Hydrogen production by methane decomposition: Origin of the catalytic activity of carbon materials. *Fuel*, **2010**, 89, 1241-1248	7.1	116
207	Thermochemical energy storage at high temperature via redox cycles of Mn and Co oxides: Pure oxides versus mixed ones. *Solar Energy Materials and Solar Cells*, **2014**, 123, 47-57	6.4	113
206	Catalytic activity of zeolitic and mesostructured catalysts in the cracking of pure and waste polyolefins. *Journal of Analytical and Applied Pyrolysis*, **2007**, 78, 153-161	6	107
205	Zeolite Beta with hierarchical porosity prepared from organofunctionalized seeds. *Microporous and Mesoporous Materials*, **2008**, 115, 504-513	5.3	107
204	Progress in the design of zeolite catalysts for biomass conversion into biofuels and bio-based chemicals. *Catalysis Reviews - Science and Engineering*, **2018**, 60, 1-70	12.6	106
203	An investigation into the catalytic cracking of LDPE using Py□C/MS. *Journal of Analytical and Applied Pyrolysis*, **2005**, 74, 370-378	6	101
202	Heterogenous events in the crystallization of zeolites. *Journal of Materials Chemistry*, **2001**, 11, 2391-2407		99
201	H2 production from methane pyrolysis over commercial carbon catalysts: Kinetic and deactivation study. *International Journal of Hydrogen Energy*, **2009**, 34, 4488-4494	6.7	98
200	Catalytic cracking of polyethylene over zeolite mordenite with enhanced textural properties. *Journal of Analytical and Applied Pyrolysis*, **2009**, 85, 352-358	6	96
199	Effect of the organic moiety nature on the synthesis of hierarchical ZSM-5 from silanized protozeolitic units. *Journal of Materials Chemistry*, **2008**, 18, 4210		95
198	Unravelling the effect of charge dynamics at the plasmonic metal/semiconductor interface for CO photoreduction. *Nature Communications*, **2018**, 9, 4986	17.4	94
197	Catalytic conversion of rapeseed oil for the production of raw chemicals, fuels and carbon nanotubes over Ni-modified nanocrystalline and hierarchical ZSM-5. *Applied Catalysis B: Environmental*, **2014**, 145, 205-215	21.8	93
196	Catalytic conversion of polystyrene over HMCM-41, HZSM-5 and amorphous SiO2□Al2O3: comparison with thermal cracking. *Applied Catalysis B: Environmental*, **2000**, 25, 181-189	21.8	93
195	Catalytic Cracking of a Polyolefin Mixture over Different Acid Solid Catalysts. *Industrial & Engineering Chemistry Research*, **2000**, 39, 1177-1184	3.9	92
194	Lamellar and pillared ZSM-5 zeolites modified with MgO and ZnO for catalytic fast-pyrolysis of eucalyptus woodchips. *Catalysis Today*, **2016**, 277, 171-181	5.3	91
193	Improving the Thermochemical Energy Storage Performance of the Mn2 O3 /Mn3 O4 Redox Couple by the Incorporation of Iron. *ChemSusChem*, **2015**, 8, 1947-54	8.3	91
192	Life cycle assessment of alternatives for hydrogen production from renewable and fossil sources. *International Journal of Hydrogen Energy*, **2012**, 37, 1173-1183	6.7	90
191	Evaluation of transition metal phosphides supported on ordered mesoporous materials as catalysts for phenol hydrodeoxygenation. *Green Chemistry*, **2016**, 18, 1938-1951	10	87

190	Thermochemical heat storage based on the Mn2O3/Mn3O4 redox couple: influence of the initial particle size on the morphological evolution and cyclability. *Journal of Materials Chemistry A*, **2014**, 2, 19435-19443	13	87
189	Catalytic conversion of polyolefins into fuels over zeolite beta. *Polymer Degradation and Stability*, **2000**, 69, 11-16	4.7	86
188	Catalytic hydroreforming of the polyethylene thermal cracking oil over Ni supported hierarchical zeolites and mesostructured aluminosilicates. *Applied Catalysis B: Environmental*, **2011**, 106, 405-415	21.8	82
187	Hierarchical TS-1 zeolite as an efficient catalyst for oxidative desulphurization of hydrocarbon fractions. *Applied Catalysis B: Environmental*, **2014**, 146, 35-42	21.8	81
186	Effect of Au surface plasmon nanoparticles on the selective CO2 photoreduction to CH4. *Applied Catalysis B: Environmental*, **2015**, 178, 177-185	21.8	80
185	Turning TS-1 zeolite into a highly active catalyst for olefin epoxidation with organic hydroperoxides. *Chemical Communications*, **2009**, 1407-9	5.8	80
184	Characterization of adsorptive and hydrophobic properties of silicalite-1, ZSM-5, TS-1 and Beta zeolites by TPD techniques. *Separation and Purification Technology*, **2007**, 54, 1-9	8.3	80
183	Hydrocarbons production through hydrotreating of methyl esters over Ni and Co supported on SBA-15 and Al-SBA-15. *Catalysis Today*, **2013**, 210, 81-88	5.3	79
182	Catalytic cracking of HDPE over hybrid zeolitic–mesoporous materials. *Journal of Analytical and Applied Pyrolysis*, **2005**, 74, 379-386	6	79
181	Preparation of TS-1 by wetness impregnation of amorphous SiO2–TiO2 solids: influence of the synthesis variables. *Applied Catalysis A: General*, **1995**, 124, 391-408	5.1	79
180	Conversion of Polyethylene into Transportation Fuels by the Combination of Thermal Cracking and Catalytic Hydroreforming over Ni-Supported Hierarchical Beta Zeolite. *Energy & Fuels*, **2012**, 26, 3187-3195	4.1	78
179	Catalytic conversion of polyethylene into fuels over mesoporous MCM-41. *Chemical Communications*, **1996**, 725	5.8	77
178	Thermal and catalytic cracking of polyethylene under mild conditions. *Journal of Analytical and Applied Pyrolysis*, **2001**, 58-59, 127-142	6	74
177	Study on the Synthesis of High-Surface-Area Mesoporous TiO2in the Presence of Nonionic Surfactants. *Industrial & Engineering Chemistry Research*, **2004**, 43, 2485-2492	3.9	72
176	Crystallization mechanism of all-silica zeolite beta in fluoride medium. *Microporous and Mesoporous Materials*, **2001**, 46, 35-46	5.3	70
175	Influence of nanocrystalline HZSM-5 external surface on the catalytic cracking of polyolefins. *Journal of Analytical and Applied Pyrolysis*, **2005**, 74, 353-360	6	68
174	A sol–gel approach for the room temperature synthesis of Al-containing micelle-templated silica. *Microporous and Mesoporous Materials*, **2000**, 34, 43-54	5.3	68
173	Kinetics of toluene alkylation with methanol over magnesium-modified ZSM-5. *Industrial & Engineering Chemistry Research*, **1993**, 32, 2548-2554	3.9	68

172	Engineering the acidity and accessibility of the zeolite ZSM-5 for efficient bio-oil upgrading in catalytic pyrolysis of lignocellulose. *Green Chemistry*, **2018**, 20, 3499-3511	10	65
171	Influence of the Operating Variables on the Catalytic Conversion of a Polyolefin Mixture over HMCM-41 and Nanosized HZSM-5. *Industrial & Engineering Chemistry Research*, **2001**, 40, 5696-5704	3.9	63
170	Assessing biomass catalytic pyrolysis in terms of deoxygenation pathways and energy yields for the efficient production of advanced biofuels. *Catalysis Science and Technology*, **2016**, 6, 2829-2843	5.5	63
169	Catalytic properties in polyolefin cracking of hierarchical nanocrystalline HZSM-5 samples prepared according to different strategies. *Journal of Catalysis*, **2010**, 276, 152-160	7.3	62
168	Cobalt based catalysts prepared by Pechini method for CO2-free hydrogen production by methane decomposition. *International Journal of Hydrogen Energy*, **2010**, 35, 10285-10294	6.7	62
167	Synthesis and crystallization mechanism of zeolite TS-2 by microwave and conventional heating. *Microporous and Mesoporous Materials*, **2004**, 69, 197-208	5.3	61
166	Conversion of low density polyethylene into petrochemical feedstocks using a continuous screw kiln reactor. *Journal of Analytical and Applied Pyrolysis*, **2001**, 58-59, 789-801	6	61
165	Influence of the Ni/P ratio and metal loading on the performance of NixPy/SBA-15 catalysts for the hydrodeoxygenation of methyl oleate. *Fuel*, **2015**, 144, 60-70	7.1	60
164	CO reduction over NaNbO and NaTaO perovskite photocatalysts. *Photochemical and Photobiological Sciences*, **2017**, 16, 17-23	4.2	60
163	Revisiting the BaO2/BaO redox cycle for solar thermochemical energy storage. *Physical Chemistry Chemical Physics*, **2016**, 18, 8039-48	3.6	57
162	Comparison of metal and carbon catalysts for hydrogen production by methane decomposition. *Applied Catalysis A: General*, **2011**, 396, 40-51	5.1	57
161	Biomass catalytic fast pyrolysis over hierarchical ZSM-5 and Beta zeolites modified with Mg and Zn oxides. *Biomass Conversion and Biorefinery*, **2017**, 7, 289-304	2.3	55
160	Effect of copper on the performance of ZnO and ZnO1−xNx oxides as CO2 photoreduction catalysts. *Catalysis Today*, **2013**, 209, 21-27	5.3	54
159	Methane catalytic decomposition over ordered mesoporous carbons: A promising route for hydrogen production. *International Journal of Hydrogen Energy*, **2010**, 35, 9788-9794	6.7	54
158	Tailoring the properties of hierarchical TS-1 zeolite synthesized from silanized protozeolitic units. *Applied Catalysis A: General*, **2012**, 435-436, 32-42	5.1	53
157	Synthesis of hierarchical ZSM-5 by silanization and alkoxylation of protozeolitic units. *Catalysis Today*, **2011**, 168, 86-95	5.3	53
156	Feedstock recycling of agriculture plastic film wastes by catalytic cracking. *Applied Catalysis B: Environmental*, **2004**, 49, 257-265	21.8	53
155	Advanced biofuels production by upgrading of pyrolysis bio-oil. *Wiley Interdisciplinary Reviews: Energy and Environment*, **2017**, 6, e245	4.7	52

154	Auto shredder residue recycling: Mechanical separation and pyrolysis. *Waste Management*, **2012**, 32, 852-8	8.6	52
153	Ordered mesoporous carbons as highly active catalysts for hydrogen production by CH(4) decomposition. *Chemical Communications*, **2008**, 6585-7	5.8	52
152	Hierarchical ZSM-5 zeolites synthesized by silanization of protozeolitic units: Mediating the mesoporosity contribution by changing the organosilane type. *Catalysis Today*, **2014**, 227, 15-25	5.3	51
151	Enhancement of hydrocarbon production via artificial photosynthesis due to synergetic effect of Ag supported on TiO2 and ZnO semiconductors. *Chemical Engineering Journal*, **2013**, 224, 128-135	14.7	51
150	Preparation of extruded catalysts based on TS-1 zeolite for their application in propylene epoxidation. *Catalysis Today*, **2009**, 143, 151-157	5.3	51
149	Catalytic conversion of low-density polyethylene using a continuous screw kiln reactor. *Catalysis Today*, **2002**, 75, 257-262	5.3	51
148	Toluene disproportionation over ZSM-5 zeolite. *Applied Catalysis*, **1991**, 76, 183-198		51
147	Catalytic hydrodeoxygenation of m-cresol over Ni 2 P/hierarchical ZSM-5. *Catalysis Today*, **2018**, 304, 72-79	5.3	50
146	Hierarchical TS-1 zeolite synthesized from SiO2 TiO2 xerogels imprinted with silanized protozeolitic units. *Chemical Engineering Journal*, **2011**, 171, 1428-1438	14.7	50
145	Hydrogen Production from Fossil Fuels: Life Cycle Assessment of Technologies with Low Greenhouse Gas Emissions. *Energy & Fuels*, **2011**, 25, 2194-2202	4.1	50
144	Performance of a continuous screw kiln reactor for the thermal and catalytic conversion of polyethylene□lubricating oil base mixtures. *Applied Catalysis B: Environmental*, **2003**, 44, 95-105	21.8	50
143	Catalytic cracking of polyethylene over nanocrystalline HZSM-5: Catalyst deactivation and regeneration study. *Journal of Analytical and Applied Pyrolysis*, **2007**, 79, 456-464	6	49
142	Thermal and catalytic cracking of a LDPE□VA copolymer mixture. *Journal of Analytical and Applied Pyrolysis*, **2003**, 68-69, 481-494	6	48
141	Mesostructured SiO2-doped TiO2 with enhanced thermal stability prepared by a soft-templating sol□gel route. *Microporous and Mesoporous Materials*, **2008**, 111, 429-440	5.3	47
140	Synthesis of ZSM-5 from Ethanol-Containing Systems. Influence of the Gel Composition. *Industrial & Engineering Chemistry Research*, **1995**, 34, 451-456	3.9	47
139	Synthesis of TS-1 by wetness impregnation of amorphous SiO2?TiO2 solids prepared by the sol-gel method. *Microporous Materials*, **1995**, 4, 273-282		46
138	Hierarchical mesoporous Pd/ZSM-5 for the selective catalytic hydrodeoxygenation of m-cresol to methylcyclohexane. *Catalysis Science and Technology*, **2016**, 6, 2560-2564	5.5	44
137	Thermal and catalytic conversion of used tyre rubber and its polymeric constituents using Py-GC/MS. *Applied Catalysis B: Environmental*, **2006**, 64, 209-219	21.8	44

136	Valorization of steam-exploded wheat straw through a biorefinery approach: Bioethanol and bio-oil co-production. *Fuel*, **2017**, 199, 403-412	7.1	43
135	Friedel□rafts acylation of anisole over hybrid zeolitic-mesostructured materials. *Applied Catalysis A: General*, **2009**, 359, 69-78	5.1	43
134	Narrowing the mesopore size distribution in hierarchical TS-1 zeolite by surfactant-assisted reorganization. *Microporous and Mesoporous Materials*, **2014**, 189, 71-82	5.3	42
133	Influence of the calcination treatment on the catalytic properties of hierarchical ZSM-5. *Catalysis Today*, **2012**, 179, 91-101	5.3	42
132	Kinetic and autocatalytic effects during the hydrogen production by methane decomposition over carbonaceous catalysts. *International Journal of Hydrogen Energy*, **2013**, 38, 5671-5683	6.7	42
131	Adsorption, acid and catalytic changes induced in ZSM-5 by coking with different hydrocarbons. *Applied Catalysis A: General*, **1993**, 99, 97-113	5.1	41
130	Deactivation and regeneration of a Ni supported hierarchical Beta zeolite catalyst used in the hydroreforming of the oil produced by LDPE thermal cracking. *Fuel*, **2013**, 109, 679-686	7.1	40
129	Development of crystallinity and photocatalytic properties in porous TiO2 by mild acid treatment. *Journal of Materials Chemistry*, **2007**, 17, 1178		40
128	Evidence of solid-solid transformations during the TS-1 crystallization from amorphous wetness impregnated SiO2?TiO2 xerogels. *Microporous Materials*, **1996**, 7, 309-321		40
127	Understanding Redox Kinetics of Iron-Doped Manganese Oxides for High Temperature Thermochemical Energy Storage. *Journal of Physical Chemistry C*, **2016**, 120, 27800-27812	3.8	39
126	Synthesis of titanium silicalite-1 from an SiO2□iO2 cogel using a wetness impregnation method. *Journal of the Chemical Society Chemical Communications*, **1994**, 27-28		38
125	Manganese oxide-based thermochemical energy storage: Modulating temperatures of redox cycles by Fe□u co-doping. *Journal of Energy Storage*, **2016**, 5, 169-176	7.8	36
124	Ga-Promoted Photocatalytic H2 Production over Pt/ZnO Nanostructures. *ACS Applied Materials & Interfaces*, **2016**, 8, 23729-38	9.5	35
123	Photocatalytic hydrogen production in the water/methanol system using Pt/RE:NaTaO3 (RE = Y, La, Ce, Yb) catalysts. *International Journal of Hydrogen Energy*, **2014**, 39, 5283-5290	6.7	35
122	Life cycle assessment of hydrogen production by methane decomposition using carbonaceous catalysts. *International Journal of Hydrogen Energy*, **2010**, 35, 1205-1212	6.7	35
121	Deactivation of toluene alkylation with methanol over magnesium-modified ZSM-5 Shape selectivity changes induced by coke formation. *Applied Catalysis A: General*, **1994**, 114, 273-285	5.1	35
120	Enhanced photocatalytic hydrogen production by improving the Pt dispersion over mesostructured TiO2. *International Journal of Hydrogen Energy*, **2014**, 39, 4812-4819	6.7	33
119	Effect of hierarchical porosity and fluorination on the catalytic properties of zeolite beta for glycerol etherification. *Applied Catalysis A: General*, **2014**, 473, 75-82	5.1	33

118	Hydroreforming of the oils from LDPE thermal cracking over NiRu and Ru supported over hierarchical Beta zeolite. *Fuel*, **2015**, 144, 287-294	7.1	33
117	Preparation of bimodal micro-mesoporous TiO2 with tailored crystalline properties. *Chemical Communications*, **2004**, 1000-1	5.8	33
116	Ce-promoted Ni/SBA-15 catalysts for anisole hydrotreating under mild conditions. *Applied Catalysis B: Environmental*, **2016**, 197, 206-213	21.8	32
115	Selective oxidation of benzyl alcohol using in situ generated H2O2 over hierarchical AuPd titanium silicalite catalysts. *Catalysis Science and Technology*, **2013**, 3, 2425	5.5	32
114	Bio-oil production by lignocellulose fast-pyrolysis: Isolating and comparing the effects of indigenous versus external catalysts. *Fuel Processing Technology*, **2017**, 167, 563-574	7.2	32
113	Recycling of used lubricating oil: Evaluation of environmental and energy performance by LCA. *Resources, Conservation and Recycling*, **2017**, 125, 315-323	11.9	32
112	Hydroprocessing of the LDPE thermal cracking oil into transportation fuels over Pd supported on hierarchical ZSM-5 catalyst. *Fuel*, **2017**, 206, 190-198	7.1	32
111	Preliminary study on the TS-1 deactivation during styrene oxidation with H2O2. *Catalysis Today*, **2000**, 61, 263-270	5.3	32
110	Co-production of graphene sheets and hydrogen by decomposition of methane using cobalt based catalysts. *Energy and Environmental Science*, **2011**, 4, 778	35.4	31
109	Synthesis of Snilicalite from hydrothermal conversion of SiO2SnO2 xerogels. *Microporous and Mesoporous Materials*, **2009**, 119, 176-185	5.3	31
108	Advances in the design of ordered mesoporous materials for low-carbon catalytic hydrogen production. *Journal of Materials Chemistry A*, **2013**, 1, 12016	13	30
107	A comparison of methods for the heterogenization of the chiral Jacobsen catalyst on mesostructured SBA-15 supports. *Applied Catalysis A: General*, **2008**, 335, 172-179	5.1	30
106	Catalytic cracking of LDPE over nanocrystalline HZSM-5 zeolite prepared by seed-assisted synthesis from an organic-template-free system. *Journal of Analytical and Applied Pyrolysis*, **2016**, 117, 132-140	6	29
105	Properties of hierarchical Beta zeolites prepared from protozeolitic nanounits for the catalytic cracking of high density polyethylene. *Applied Catalysis A: General*, **2017**, 531, 187-196	5.1	29
104	Chemical insights on the activity of La1-xSrxFeO3 perovskites for chemical looping reforming of methane coupled with CO2-splitting. *Journal of CO2 Utilization*, **2019**, 31, 16-26	7.6	28
103	Synthesis of Hierarchical TS-1 Zeolite from Silanized Seeds. *Topics in Catalysis*, **2010**, 53, 1319-1329	2.3	28
102	Catalytic fast pyrolysis of biomass over Mg-Al mixed oxides derived from hydrotalcite-like precursors: Influence of Mg/Al ratio. *Journal of Analytical and Applied Pyrolysis*, **2018**, 134, 362-370	6	27
101	Mixed NaNbxTa1O3 perovskites as photocatalysts for H2 production. *Green Chemistry*, **2015**, 17, 1735-1743	10	27

100	Mild temperature hydrogen production by methane decomposition over cobalt catalysts prepared with different precipitating agents. *International Journal of Hydrogen Energy*, **2012**, 37, 7034-7041	6.7	27
99	Hierarchical ZSM-5 zeolite with uniform mesopores and improved catalytic properties. *New Journal of Chemistry*, **2016**, 40, 4206-4216	3.6	26
98	Enhanced Production of Aromatic Hydrocarbons by Rapeseed Oil Conversion over Ga and Zn Modified ZSM-5 Catalysts. *Industrial & Engineering Chemistry Research*, **2016**, 55, 12723-12732	3.9	26
97	Advances and challenges in zeolite synthesis and catalysis. *Catalysis Today*, **2020**, 345, 2-13	5.3	26
96	Improvement of the hierarchical TS-1 properties by silanization of protozeolitic units in presence of alcohols. *Microporous and Mesoporous Materials*, **2013**, 166, 59-66	5.3	25
95	Remarkable catalytic properties of hierarchical zeolite-Beta in epoxide rearrangement reactions. *Catalysis Today*, **2015**, 243, 141-152	5.3	25
94	Influence of the structural and textural properties of ordered mesoporous materials and hierarchical zeolitic supports on the controlled release of methylprednisolone hemisuccinate. *Journal of Materials Chemistry B*, **2014**, 2, 7996-8004	7.3	25
93	HDPE chemical recycling promoted by phenol solvent. *Journal of Analytical and Applied Pyrolysis*, **2009**, 85, 366-371	6	25
92	Valorization of Waste Agricultural Polyethylene Film by Sequential Pyrolysis and Catalytic Reforming. *Industrial & Engineering Chemistry Research*, **2009**, 48, 8697-8703	3.9	25
91	Performance of MCM-22 zeolite for the catalytic fast-pyrolysis of acid-washed wheat straw. *Catalysis Today*, **2018**, 304, 30-38	5.3	24
90	Nanocrystalline ZSM-5: A catalyst with high activity and selectivity for epoxide rearrangement reactions. *Journal of Molecular Catalysis A*, **2010**, 318, 68-74		24
89	Deactivation Kinetics of Toluene Alkylation with Methanol over Magnesium-Modified ZSM-5. *Industrial & Engineering Chemistry Research*, **1996**, 35, 1300-1306	3.9	24
88	The crucial role of clay binders in the performance of ZSM-5 based materials for biomass catalytic pyrolysis. *Catalysis Science and Technology*, **2019**, 9, 789-802	5.5	23
87	Effect of hierarchical porosity in Beta zeolites on the Beckmann rearrangement of oximes. *Catalysis Science and Technology*, **2017**, 7, 181-190	5.5	23
86	On the Sn(II) and Sn(IV) incorporation into the AFI-structured AlPO4-based framework: the first significantly acidic SnAPO-5. *Journal of Materials Chemistry*, **2009**, 19, 6833		23
85	Guaiacol hydrodeoxygenation over Ni2P supported on 2D-zeolites. *Catalysis Today*, **2020**, 345, 48-58	5.3	23
84	Transportation fuel production by combination of LDPE thermal cracking and catalytic hydroreforming. *Waste Management*, **2014**, 34, 2176-84	8.6	22
83	On the feasibility of producing hydrogen with net carbon fixation by the decomposition of vegetable and microalgal oils. *Energy and Environmental Science*, **2012**, 5, 6126	35.4	22

82	Catalytic Upgrading of Plastic Wastes **2006**, 73-110		22
81	Synthesis of microporous surfactant-templated aluminosilicates. *Chemical Communications*, **2000**, 2041-2042	5.8	22
80	Magnesium and silicon as ZSM-5 modifier agents for selective toluene disproportionation. *Industrial & Engineering Chemistry Research*, **1992**, 31, 1875-1880	3.9	21
79	Thermochemical Heat Storage at High Temperatures using Mn2O3/Mn3O4 System: Narrowing the Redox Hysteresis by Metal Co-doping. *Energy Procedia*, **2015**, 73, 263-271	2.3	20
78	Synthesis of Nickel Phosphide Nanorods as Catalyst for the Hydrotreating of Methyl Oleate. *Topics in Catalysis*, **2012**, 55, 991-998	2.3	20
77	Cross-reactivity of guaiacol and propionic acid blends during hydrodeoxygenation over Ni-supported catalysts. *Fuel*, **2018**, 214, 187-195	7.1	20
76	Synthesis of hierarchical Beta zeolite with uniform mesopores: Effect on its catalytic activity for veratrole acylation. *Catalysis Today*, **2018**, 304, 89-96	5.3	20
75	Study on the Ti and Al coincorporation into the MFI zeolitic structure. *Journal of Materials Chemistry* , **1998**, 8, 2269-2276		19
74	Crystallization of TS-1 and TS-2 zeolites with contribution of solid□solid transformations. *Chemical Communications*, **1996**, 1097-1098	5.8	18
73	Selective hydrodecarboxylation of fatty acids into long-chain hydrocarbons catalyzed by Pd/Al-SBA-15. *Microporous and Mesoporous Materials*, **2019**, 280, 88-96	5.3	17
72	Photocatalytic H2 production from aqueous methanol solutions using metal-co-catalysed Zn2SnO4 nanostructures. *Applied Catalysis B: Environmental*, **2016**, 191, 106-115	21.8	17
71	Bidimensional ZSM-5 zeolites probed as catalysts for polyethylene cracking. *Catalysis Science and Technology*, **2016**, 6, 2754-2765	5.5	17
70	Thermochemical valorization of camelina straw waste via fast pyrolysis. *Biomass Conversion and Biorefinery*, **2017**, 7, 277-287	2.3	17
69	Preliminary assessment of plastic waste valorization via sequential pyrolysis and catalytic reforming. *Journal of Material Cycles and Waste Management*, **2012**, 14, 301-307	3.4	17
68	Enhanced Production of □Olefins by Thermal Degradation of High-Density Polyethylene (HDPE) in Decalin Solvent: Effect of the Reaction Time and Temperature. *Industrial & Engineering Chemistry Research*, **2007**, 46, 3497-3504	3.9	17
67	Bifunctional properties of Al-TS-1 synthesized by wetness impregnation of amorphous Al2O3-TiO2-SiO2 solids prepared by the sol-gel method. *Catalysis Letters*, **1996**, 41, 69-78	2.8	17
66	Hydrogen production through catalytic methane decomposition promoted by pure silica materials. *International Journal of Hydrogen Energy*, **2015**, 40, 5237-5243	6.7	16
65	Hydrogen production by methane decomposition over pure silica SBA-15 materials. *Catalysis Today*, **2016**, 277, 152-160	5.3	16

64	Zeolite crystallization from organofunctionalized seeds. *Studies in Surface Science and Catalysis*, **2007**, 282-288	1.8	16
63	Liquid phase rearrangement of long straight-chain epoxides over amorphous, mesostructured and zeolitic catalysts. *Applied Catalysis A: General*, **2004**, 269, 137-146	5.1	16
62	Kinetics of toluene disproportionation over unmodified and modified ZSM-5 zeolites. *Industrial & Engineering Chemistry Research*, **1993**, 32, 49-55	3.9	16
61	Influence of structural and morphological characteristics on the hydrogen production and sodium recovery in the NaOH MnO thermochemical cycle. *International Journal of Hydrogen Energy*, **2013**, 38, 13143-13152	6.7	15
60	Hydroreforming of the LDPE Thermal Cracking Oil over Hierarchical Ni/Beta Catalysts with Different Ni Particle Size Distributions. *Industrial & Engineering Chemistry Research*, **2015**, 54, 6660-6668	3.9	14
59	Effect of the Al-MCM-41 properties on the catalytic liquid phase rearrangement of 1,2-epoxyoctane. *Applied Catalysis A: General*, **2007**, 319, 171-180	5.1	14
58	Mechanism of CIT-6 and VPI-8 crystallization from zincosilicate gels. *Chemistry - A European Journal*, **2002**, 8, 5153-60	4.8	14
57	Scaling-Up of Bio-Oil Upgrading during Biomass Pyrolysis over ZrO /ZSM-5-Attapulgite. *ChemSusChem*, **2019**, 12, 2428-2438	8.3	13
56	Role of the physicochemical properties of hausmannite on the hydrogen production via the Mn3O4 NaOH thermochemical cycle. *International Journal of Hydrogen Energy*, **2016**, 41, 113-122	6.7	13
55	Hydroreforming over Ni/H-beta of the thermal cracking products of LDPE, HDPE and PP for fuel production. *Journal of Material Cycles and Waste Management*, **2012**, 14, 286-293	3.4	13
54	Hierarchical zeolites: materials with improved accessibility and enhanced catalytic activity. *Catalysis*, 253-283	2.3	13
53	Effects of hydrogen-donating solvents on the thermal degradation of HDPE. *Journal of Analytical and Applied Pyrolysis*, **2007**, 78, 194-199	6	13
52	Effect of the solvent in the liquid phase rearrangement of 1,2-epoxyoctane over Al-MCM-41 and Al-TS-1 catalysts. *Journal of Molecular Catalysis A*, **2004**, 222, 167-174		13
51	Crystallization mechanism of Al i-beta zeolite synthesized from amorphous wetness impregnated xerogels. *Journal of Materials Chemistry*, **1999**, 9, 2899-2905		13
50	Exploring the Redox Behavior of La0.6Sr0.4Mn1 AlxO3 Perovskites for CO2-Splitting in Thermochemical Cycles. *Topics in Catalysis*, **2017**, 60, 1108-1118	2.3	12
49	Catalytic Copyrolysis of Lignocellulose and Polyethylene Blends over HBeta Zeolite. *Industrial & Engineering Chemistry Research*, **2019**, 58, 6243-6254	3.9	12
48	Exploring the thermochemical heat storage capacity of AMn2O4 (A = Li or Cu) spinels. *Solid State Ionics*, **2018**, 320, 316-324	3.3	12
47	H2 production by CH4 decomposition over metallic cobalt nanoparticles: Effect of the catalyst activation. *Applied Catalysis A: General*, **2013**, 467, 371-379	5.1	12

46	Effect of Decalin Solvent on the Thermal Degradation of HDPE. *Journal of Polymers and the Environment*, **2006**, 14, 375-384	4.5	12
45	Crystallization mechanism of Al-TS-1 synthesisedfrom amorphous wetness-impregnated Al2O3TiO2SiO2xerogels: role of aluminium species. *Journal of Materials Chemistry*, **2001**, 11, 1519-1525		12
44	Hydrogen production by methane decomposition over MnOx/YSZ catalysts. *International Journal of Hydrogen Energy*, **2016**, 41, 19382-19389	6.7	12
43	Catalytic activity of the beta zeolite with enhanced textural properties in the Friedel-Crafts acylation of aromatic compounds. *Studies in Surface Science and Catalysis*, **2008**, 1091-1094	1.8	11
42	The Role of the Hydroxyl Groups on the Silica Surface When Supporting Metallocene/MAO Catalysts. *Polymer-Plastics Technology and Engineering*, **2003**, 11, 17-32		11
41	Liquid-phase isophorone oxide rearrangement over mesoporous Al-MCM-41 materials. *Journal of Catalysis*, **2005**, 236, 122-128	7.3	11
40	Deactivation kinetics of para-selective toluene disproportionation over modified ZSM-5. *Industrial & Engineering Chemistry Research*, **1994**, 33, 26-31	3.9	11
39	Roles of ZSM-5 modifier agents in selective toluene disproportionation. *Canadian Journal of Chemical Engineering*, **1993**, 71, 558-563	2.3	11
38	Design of efficient Mn-based redox materials for thermochemical heat storage at high temperatures **2016**,		11
37	Factors influencing the photocatalytic activity of alkali NbTa perovskites for hydrogen production from aqueous methanol solutions. *International Journal of Hydrogen Energy*, **2016**, 41, 19921-19928	6.7	11
36	Analysis of Products Generated from the Thermal and Catalytic Degradation of Pure and Waste Polyolefins using Py-GC/MS. *Journal of Polymers and the Environment*, **2007**, 15, 107-118	4.5	10
35	Elucidating the Photoredox Nature of Isolated Iron Active Sites on MCM-41. *ACS Catalysis*, **2017**, 7, 1646-1654	13.1	9
34	Rewilding processes shape the use of Mediterranean landscapes by an avian top scavenger. *Scientific Reports*, **2020**, 10, 2853	4.9	9
33	Modified Wacker TBHP oxidation of 1-dodecene. *Applied Catalysis A: General*, **2008**, 335, 137-144	5.1	9
32	Cascade Deoxygenation Process Integrating Acid and Base Catalysts for the Efficient Production of Second-Generation Biofuels. *ACS Sustainable Chemistry and Engineering*, **2019**, 7, 18027-18037	8.3	8
31	Enhanced bio-oil upgrading in biomass catalytic pyrolysis using KH-ZSM-5 zeolite with acid-base properties. *Biomass Conversion and Biorefinery*, **2019**, 1	2.3	8
30	Transition Metal Phosphide Nanoparticles Supported on SBA-15 as Highly Selective Hydrodeoxygenation Catalysts for the Production of Advanced Biofuels. *Journal of Nanoscience and Nanotechnology*, **2015**, 15, 6642-50	1.3	8
29	Pyrolysis of microalgae for fuel production **2017**, 259-281		8

28	Influence of the Preparation Methodology on the Reactivity and Characteristics of Fe-Mo-oxide Nanocrystals Stabilized inside Pentasyl-type Zeolites. *Studies in Surface Science and Catalysis*, **1998**, 118, 577-591	1.8	8
27	Hydrotreating of Guaiacol and Acetic Acid Blends over NiP/ZSM-5 Catalysts: Elucidating Molecular Interactions during Bio-Oil Upgrading. *ACS Omega*, **2019**, 4, 21516-21528	3.9	7
26	Hydrotreating of Methyl Esters to Produce Green Diesel over Co- and Ni-Containing Zr-SBA-15 Catalysts. *Catalysts*, **2020**, 10, 186	4	6
25	Nearly room-temperature crystallisation of Zn-doped AlPO4-based chabazite materials. *Studies in Surface Science and Catalysis*, **2007**, 499-505	1.8	6
24	Effect of Mesoporosity, Acidity and Crystal Size of Zeolite ZSM-5 on Catalytic Performance during the Ex-situ Catalytic Fast Pyrolysis of Biomass. *ChemCatChem*, **2021**, 13, 1207-1219	5.2	6
23	Exploring the alternative MnO-Na2CO3 thermochemical cycle for water splitting. *Journal of CO2 Utilization*, **2020**, 42, 101264	7.6	5
22	6 Conversion of cellulose and hemicellulose into platform molecules: chemical routes		4
21	Synthesis of MTBE from isobutane using a single catalytic system based on titanium-containing ZSM-5 zeolite. *Chemical Communications*, **1996**, 1145	5.8	4
20	Current Challenges of CO2 Photocatalytic Reduction Over Semiconductors Using Sunlight **2015**, 171-191		3
19	Shifting Pathways in the Phenol/2-Propanol Conversion over the Tandem Raney Ni + ZSM-5 Catalytic System. *Industrial & Engineering Chemistry Research*, **2020**, 59, 3375-3382	3.9	3
18	Conversion of Stearic Acid into Bio-Gasoline over Pd/ZSM-5 Catalysts with Enhanced Accessibility. *Applied Sciences (Switzerland)*, **2019**, 9, 2386	2.6	3
17	Development of Hierarchical Porosity in Zeolites by Using Organosilane-Based Strategies **2015**, 157-198		3
16	Synthesis of hard mesoporous macro-spheres with silicate and aluminosilicate compositions. *Journal of Porous Materials*, **2010**, 17, 387-397	2.4	3
15	Controlling the generation of hierarchical porosity in ZSM-5 by changing the silanization degree of protozeolitic units. *Studies in Surface Science and Catalysis*, **2008**, 123-128	1.8	3
14	The role of the surface acidic/basic centers and redox sites on TiO2 in the photocatalytic CO2 reduction. *Applied Catalysis B: Environmental*, **2022**, 303, 120931	21.8	3
13	Evaluating fractional pyrolysis for bio-oil speciation into holocellulose and lignin derived compounds. *Journal of Analytical and Applied Pyrolysis*, **2021**, 154, 105019	6	3
12	Tracking the evolution of embryonic zeolites into hierarchical ZSM-5. *Journal of Materials Chemistry A*, **2021**, 9, 13570-13587	13	3
11	Upscaling Effects on Alkali Metal-Grafted Ultrastable Y Zeolite Extrudates for Modeled Catalytic Deoxygenation of Bio-oils. *ChemCatChem*, **2021**, 13, 1951-1965	5.2	3

10	Conversion of LDPE into transportation fuels by a two-stage process using Ni/Al-SBA-15 as catalyst. *Journal of Material Cycles and Waste Management*, **2014**, 16, 435-441	3.4	2
9	Synthesis of MTBE from Isobutane Using a Single Catalytic System Based on Titanium-Containing ZSM-5: Influence of Reaction Parameters. *Industrial & Engineering Chemistry Research*, **1998**, 37, 4215-4221	3.9	2
8	Preparation by the sol-gel method of raw materials for the synthesis of Ti containing zeolites. *Studies in Surface Science and Catalysis*, **1995**, 98, 24-25	1.8	2
7	zsm-5 ZEOLITES PERFORMANCE ASSESSMENT IN CATALYTIC PYROLYSIS OF pvc-containing REAL WEEE PLASTIC wastes. *Catalysis Today*, **2021**,	5.3	1
6	Selective Decarboxylation of Fatty Acids Catalyzed by Pd-Supported Hierarchical ZSM-5 Zeolite. *Energy & Fuels*,	4.1	1
5	Apex scavengers from different European populations converge at threatened savannah landscapes.. *Scientific Reports*, **2022**, 12, 2500	4.9	1
4	Deactivation and regeneration of solid acid and base catalyst bodies used in cascade for bio-oil synthesis and upgrading. *Journal of Catalysis*, **2021**, 405, 641-641	7.3	0
3	Enhanced production of aromatic hydrocarbons and phenols by catalytic co-pyrolysis of fruit and garden pruning wastes. *Journal of Environmental Chemical Engineering*, **2022**, 10, 107738	6.8	0
2	Transportation Biofuels via the Pyrolysis Pathway: Status and Prospects **2019**, 1081-1112		
1	Friedel-Crafts acylation of aromatic compounds over hybrid zeolitic-mesoporous materials. *Studies in Surface Science and Catalysis*, **2007**, 170, 1884-1890	1.8	