Jean-Pierre Gilson

List of Publications by Year
in descending order

103	7,310	50276	54911
papers	citations	46 h-index	84 g-index

103	103	103	5615
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Impact of Zeolites on the Petroleum and Petrochemical Industry. Topics in Catalysis, 2009, 52, 1131-1161.	2.8	820
2	Template-free nanosized faujasite-type zeolites. Nature Materials, 2015, 14, 447-451.	27.5	360
3	Advances in nanosized zeolites. Nanoscale, 2013, 5, 6693.	5.6	337
4	Infrared, microcalorimetric, and electron spin resonance investigations of the acidic properties of the H-ZSM-5 zeolite. Journal of Catalysis, 1979, 59, 248-262.	6.2	297
5	Quantification of enhanced acid site accessibility in hierarchical zeolites â€“ The accessibility index. Journal of Catalysis, 2009, 264, 11-14.	6.2	279
6	Hierarchical ZSMâ€5 Zeolites in Shapeâ€Selective Xylene Isomerization: Role of Mesoporosity and Acid Site Speciation. Chemistry - A European Journal, 2010, 16, 6224-6233.	3.3	239
7	Quantification of Water and Silanol Species on Various Silicas by Coupling IR Spectroscopy and in-Situ Thermogravimetry. Langmuir, 2009, 25, 5825-5834.	3.5	196
8	Bio-oils Hydrodeoxygenation: Adsorption of Phenolic Molecules on Oxidic Catalyst Supports. Journal of Physical Chemistry C, 2010, 114, 15661-15670.	3.1	196
9	Penta-co-ordinated aluminium in zeolites and aluminosilicates. Journal of the Chemical Society Chemical Communications, 1987, , 91.	2.0	179
10	Effect of water on the stability of Mo and CoMo hydrodeoxygenation catalysts: A combined experimental and DFT study. Journal of Catalysis, 2011, 282, 155-164.	6.2	153
11	Chemical Equilibrium Controlled Etching of MFI-Type Zeolite and Its Influence on Zeolite Structure, Acidity, and Catalytic Activity. Chemistry of Materials, 2013, 25, 2759-2766.	6.7	149
12	Mesoporous ZSM-22 zeolite obtained by desilication: peculiarities associated with crystal morphology and aluminium distribution. CrystEngComm, 2011, 13, 3408.	2.6	140
13	One-pot synthesis of silanol-free nanosized MFIÂzeolite. Nature Materials, 2017, 16, 1010-1015.	27.5	135
14	Accessibility of the acid sites in dealuminated small-port mordenites studied by FTIR of co-adsorbed alkylpyridines and CO. Microporous and Mesoporous Materials, 2004, 71, 157-166.	4.4	125
15	Opening the Cages of Faujasite-Type Zeolite. Journal of the American Chemical Society, 2017, 139, 17273-17276.	13.7	125
16	Hydroisomerization of Emerging Renewable Hydrocarbons using Hierarchical Pt/Hâ€ZSMâ€22 Catalyst. ChemSusChem, 2013, 6, 421-425.	6.8	111
17	In situ characterization of carbonaceous residues from zeolite-catalysed reactions using high resolution solid state 13C-n.m.r. spectroscopy. Zeolites, 1982, 2, 42-46.	0.5	107
18	Bio-oil hydrodeoxygenation: Adsorption of phenolic compounds on sulfided (Co)Mo catalysts. Journal of Catalysis, 2013, 297, 176-186.	6.2	107

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19	Silanol defect engineering and healing in zeolites: opportunities to fine-tune their properties and performances. Chemical Society Reviews, 2021, 50, 11156-11179.	38.1	100
20	Comparative Study of Nanoâ€ZSMâ€5 Catalysts Synthesized in OH^{â^'} and F^{â^'} Media. Advanced Functional Materials, 2014, 24, 257-264.	14.9	98
21	2D-COS IR study of coking in xylene isomerisation on H-MFI zeolite. Catalysis Today, 2001, 70, 227-241.	4.4	97
22	Influence of crystal size and probe molecule on diffusion in hierarchical ZSM-5 zeolites prepared by desilication. Microporous and Mesoporous Materials, 2012, 148, 115-121.	4.4	95
23	Zeolites for Cleaner Technologies. Catalytic Science Series, 2002, , .	0.0	95
24	The Mosaic Structure of Zeolite Crystals. Angewandte Chemie - International Edition, 2016, 55, 15049-15052.	13.8	88
25	Concerning the aluminum distribution gradient in ZSM-5 zeolites. Journal of Catalysis, 1981, 71, 447-448.	6.2	82
26	Solid-state oxygen-17 nuclear magnetic resonance spectroscopic studies of zeolites and related systems. 1. Journal of the American Chemical Society, 1986, 108, 7231-7235.	13.7	81
27	Hydroisomerization and hydrocracking of linear and multibranched long model alkanes on hierarchical Pt/ZSM-22 zeolite. Catalysis Today, 2013, 218-219, 135-142.	4.4	81
28	The preparation of hierarchical SAPO-34 crystals via post-synthesis fluoride etching. Chemical Communications, 2016, 52, 3512-3515.	4.1	80
29	Photochemical Preparation of Silver Nanoparticles Supported on Zeolite Crystals. Langmuir, 2014, 30, 6250-6256.	3.5	78
30	On the remarkable resistance to coke formation of nanometer-sized and hierarchical MFI zeolites during ethanol to hydrocarbons transformation. Journal of Catalysis, 2015, 328, 165-172.	6.2	76
31	Towards more efficient monodimensional zeolite catalysts: n-alkane hydro-isomerisation on hierarchical ZSM-22. Catalysis Science and Technology, 2011, 1, 1331.	4.1	72
32	On the external and intracrystalline surface catalytic activity of pentasil zeolites. Journal of Catalysis, 1984, 88, 538-541.	6.2	71
33	Mesoporous zeolites by fluoride etching. Current Opinion in Chemical Engineering, 2015, 8, 1-6.	7.8	69
34	The use of the consecutive adsorption of pyridine bases and carbon monoxide in the IR spectroscopic study of the accessibility of acid sites in microporous/mesoporous materials. Kinetics and Catalysis, 2006, 47, 40-48.	1.0	68
35	In situ thermogravimetry in an infrared spectrometer: an answer to quantitative spectroscopy of adsorbed species on heterogeneous catalysts. Microporous and Mesoporous Materials, 2004, 67, 107-112.	4.4	65
36	Synthesis and catalytic properties of hierarchical micro/mesoporous materials based on FER zeolite. Microporous and Mesoporous Materials, 2011, 146, 201-207.	4.4	63

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37	IR study of the interaction of phenol with oxides and sulfided CoMo catalysts for bio-fuel hydrodeoxygenation. Catalysis Today, 2011, 172, 132-135.	4.4	61
38	Novel Strategy for the Synthesis of Ultraâ€Stable Singleâ€Site Moâ€ZSMâ€5 Zeolite Nanocrystals. Angewandte Chemie - International Edition, 2020, 59, 19553-19560.	13.8	61
39	Direct Evidence for Single Molybdenum Atoms Incorporated in the Framework of MFI Zeolite Nanocrystals. Journal of the American Chemical Society, 2019, 141, 8689-8693.	13.7	57
40	Isomerization of n-Hexane over Sulfated Zirconia: Influence of Hydrogen and Platinum. Journal of Catalysis, 2001, 198, 328-337.	6.2	55
41	Adsorption and conversion of ethylene on H-ZSM-5 zeolite studied by 13C NMR spectroscopy. Journal of Molecular Catalysis, 1981, 10, 331-340.	1.2	53
42	Defect-engineered zeolite porosity and accessibility. Journal of Materials Chemistry A, 2020, 8, 3621-3631.	10.3	52
43	Redox behaviour of transition metal ions in zeolites. Part 7.â€”Characterization of a nickel metal phase in zeolite NaY. Journal of the Chemical Society Faraday Transactions I, 1979, 75, 1196.	1.0	51
44	In situ and post-synthesis control of physicochemical properties of FER-type crystals. Microporous and Mesoporous Materials, 2014, 200, 334-342.	4.4	49
45	Silver confined within zeolite EMT nanoparticles: preparation and antibacterial properties. Nanoscale, 2014, 6, 10859-10864.	5.6	49
46	Ring opening of decalin and methylcyclohexane over alumina-based monofunctional WO3/Al2O3 and Ir/Al2O3 catalysts. Journal of Catalysis, 2012, 286, 62-77.	6.2	48
47	Preparation of Single-Crystal â€œHouse-of-Cardsâ€•like ZSM-5 and Their Performance in Ethanol-to-Hydrocarbon Conversion. Chemistry of Materials, 2019, 31, 4639-4648.	6.7	45
48	27Al-n.m.r. characterization of natural and synthetic zeolites. Zeolites, 1984, 4, 133-139.	0.5	44
49	Zeolites in a good shape: Catalyst forming by extrusion modifies their performances. Microporous and Mesoporous Materials, 2020, 299, 110114.	4.4	44
50	Platinum tungstated zirconia isomerization catalystsPart I. Characterization of acid and metal properties. Journal of Catalysis, 2005, 231, 453-467.	6.2	43
51	Platinum-tungstated zirconia isomerization catalystsPart II. Effect of platinum and tungsten loading on the mechanism of isomerization of n-hexane: a kinetic study. Journal of Catalysis, 2005, 231, 468-479.	6.2	43
52	FCC gasoline sulfur reduction additives: Mechanism and active sites. Journal of Catalysis, 2007, 249, 79-92.	6.2	41
53	Design of hierarchically structured catalysts by mordenites recrystallization: Application in naphthalene alkylation. Catalysis Today, 2011, 168, 133-139.	4.4	40
54	Prompt nuclear and atomic reactions for elemental analysis of zeolites I. A discussion of the experimental methods. Zeolites, 1983, 3, 37-42.	0.5	39

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55	Hydrogenation of Toluene over Supported Pt and Pd Catalysts: Influence of Structural Factors on the Sulfur Tolerance. Journal of Catalysis, 2002, 212, 63-75.	6.2	39
56	Study of Ir/WO3/ZrO2â€“SiO2 ring-opening catalysts: Part II. Reaction network, kinetic studies and structureâ€“activity correlation. Journal of Catalysis, 2008, 254, 49-63.	6.2	39
57	Mitigating coking during methylcyclohexane transformation on HZSM-5 zeolites with additional porosity. Journal of Catalysis, 2014, 320, 118-126.	6.2	39
58	Hydrodeoxygenation of Phenolic Compounds by Sulfided (Co)Mo/Al₂O₃Catalysts, a Combined Experimental and Theoretical Study. Oil and Gas Science and Technology, 2013, 68, 829-840.	1.4	37
59	Supported Embryonic Zeolites and their Use to Process Bulky Molecules. ACS Catalysis, 2018, 8, 8199-8212.	11.2	37
60	Breaking the Si/Al Limit of Nanosized Î² Zeolites: Promoting Catalytic Production of Lactide. Chemistry of Materials, 2020, 32, 751-758.	6.7	35
61	Flexible Template-Free RHO Nanosized Zeolite for Selective CO₂ Adsorption. Chemistry of Materials, 2020, 32, 5985-5993.	6.7	31
62	A 13C-N.M.R. investigation of the conversion of methanol on H-ZSM-5 in the presence of carbon monoxide. Journal of Molecular Catalysis, 1979, 5, 393-397.	1.2	30
63	Modeling of structure and vibrational spectra of AlPO4-5 and its silica analog SSZ-24. Zeolites, 1992, 12, 826-836.	0.5	30
64	The Mosaic Structure of Zeolite Crystals. Angewandte Chemie, 2016, 128, 15273-15276.	2.0	30
65	Probing the BrÃ¸nsted Acidity of the External Surface of Faujasiteâ€Type Zeolites. ChemPhysChem, 2020, 21, 1873-1881.	2.1	30
66	The challenge of silanol species characterization in zeolites. Inorganic Chemistry Frontiers, 2022, 9, 1125-1133.	6.0	29
67	Propane carbonylation on sulfated zirconia catalyst as studied by 13C MAS NMR and FTIR spectroscopy. Journal of Catalysis, 2004, 223, 290-295.	6.2	28
68	Ring opening of decalin and methylcyclohexane over bifunctional Ir/WO3/Al2O3 catalysts. Journal of Catalysis, 2013, 299, 30-43.	6.2	24
69	Catalytic activation of OKO zeolite with intersecting pores of 10- and 12-membered rings using atomic layer deposition of aluminium. Chemical Communications, 2014, 50, 4610-4612.	4.1	24
70	Embryonic ZSM-5 zeolites: zeolitic materials with superior catalytic activity in 1,3,5-triisopropylbenzene dealkylation. New Journal of Chemistry, 2016, 40, 4307-4313.	2.8	24
71	2D correlation IR spectroscopy of xylene isomerisation on H-MFI zeolite. Chemical Communications, 2000, , 1003-1004.	4.1	23
72	Cumene transformations over mordenite catalysts: a 13C MAS NMR study. Microporous and Mesoporous Materials, 2003, 57, 297-308.	4.4	23

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73	Understanding the Fundamentals of Microporosity Upgrading in Zeolites: Increasing Diffusion and Catalytic Performances. Advanced Science, 2021, 8, e2100001.	11.2	23
74	Surface and Subsurface Platinum in Sulfated Zirconia Catalysts: Relation with Toluene Hydrogenation and n-Hexane Isomerization. Journal of Catalysis, 2002, 212, 173-181.	6.2	21
75	Emphasis on the Properties of Metalâ€Containing Zeolites Operating Outside the Comfort Zone of Current Heterogeneous Catalytic Reactions. Angewandte Chemie - International Edition, 2020, 59, 19414-19432.	13.8	21
76	Synthesis of Embryonic Zeolites with Controlled Physicochemical Properties. Chemistry of Materials, 2020, 32, 2123-2132.	6.7	20
77	Pt/Al2O3-Cl catalysts derived from ethylaluminumdichloride. Applied Catalysis A: General, 2004, 269, 203-214.	4.3	19
78	Study of Ir/WO3/Al2O3 ring opening catalysts. Applied Catalysis A: General, 2010, 388, 37-44.	4.3	19
79	High resolution 27Al NMR of amorphous silica-aluminas. Applied Catalysis, 1985, 15, 327-331.	0.8	17
80	Unlocking the potential of hidden sites in FAUJASITE: new insights in a proton transfer mechanism. Angewandte Chemie - International Edition, 2021, 60, 26702-26709.	13.8	17
81	Evidence for secondary building unit effects on the solid state 29Si n.m.r. resonance of silicon in zeolitic structures. Journal of the Chemical Society Chemical Communications, 1981, , 1129.	2.0	16
82	Hydroisomerization and hydrocracking activity enhancement of a hierarchical ZSM-5 zeolite catalyst via atomic layer deposition of aluminium. Catalysis Science and Technology, 2016, 6, 6177-6186.	4.1	15
83	Crystallization pathway from a highly viscous colloidal suspension to ultra-small FAU zeolite nanocrystals. Journal of Materials Chemistry A, 2021, 9, 17492-17501.	10.3	15
84	Unraveling the Effect of Silanol Defects on the Insertion of Single-Site Mo in the MFI Zeolite Framework. Inorganic Chemistry, 2022, 61, 1418-1425.	4.0	14
85	Emphasis on the Properties of Metalâ€Containing Zeolites Operating Outside the Comfort Zone of Current Heterogeneous Catalytic Reactions. Angewandte Chemie, 2020, 132, 19582-19600.	2.0	13
86	Engineering RHO Nanozeolite: Controlling the Particle Morphology, Al and Cation Content, Stability, and Flexibility. ACS Applied Energy Materials, 2022, 5, 6032-6042.	5.1	11
87	New insights on zeolite chemistry by advanced IR and NMR characterization tools. Journal of Molecular Catalysis A, 2009, 305, 54-59.	4.8	10
88	Novel Strategy for the Synthesis of Ultraâ€Stable Singleâ€Site Moâ€ZSMâ€5 Zeolite Nanocrystals. Angewandte Chemie, 2020, 132, 19721-19728.	2.0	10
89	Preparation of hierarchical SSZ-13 by NH4F etching. Microporous and Mesoporous Materials, 2021, 314, 110863.	4.4	10
90	Organic template-free synthesis of an open framework silicoaluminophosphate (SAPO) with high thermal stability and high ionic conductivity. Inorganic Chemistry Frontiers, 2020, 7, 542-553.	6.0	9

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91	Comparative Study of Zeolite L Etching with Ammonium Fluoride and Ammonium Bifluoride Solutions. Advanced Materials Interfaces, 2021, 8, 2000348.	3.7	9
92	Room-Temperature Synthesis of BPH Zeolite Nanosheets Free of Organic Template with Enhanced Stability for Gas Separations. ACS Applied Nano Materials, 2021, 4, 24-28.	5.0	9
93	Dissolution Behavior and Varied Mesoporosity of Zeolites by NH₄F Etching. Chemistry - A European Journal, 2022, 28, e202104339.	3.3	9
94	Influence of W loading on the environment of Si in WO3/ZrO2â€“SiO2 catalysts. Applied Catalysis A: General, 2010, 374, 137-141.	4.3	8
95	Catalytic activation of all-silica COK-14 zeolite through alumination and particle size reduction using wet ball milling. Catalysis Today, 2019, 334, 3-12.	4.4	8
96	Chromic acid dealumination of zeolites. Microporous and Mesoporous Materials, 2022, 329, 111513.	4.4	8
97	A novel method of monitoring the sulfidation of hydrotreating catalysts: the conversion of carbonyl sulfide. Catalysis Science and Technology, 2015, 5, 835-842.	4.1	7
98	Increasing the catalytic performance of erionite by hierarchization. Microporous and Mesoporous Materials, 2020, 299, 110088.	4.4	7
99	Transformation of Discrete Amorphous Aluminosilicate Nanoparticles into Nanosized Zeolites. Advanced Materials Interfaces, 2021, 8, 2000634.	3.7	6
100	From Gas to Liquid Phase Sulfidation: An IR Spectroscopy Study. Catalysis Letters, 2012, 142, 736-743.	2.6	5
101	Access to sodalite cages in ion-exchanged nanosized FAU zeolites probed by hyperpolarized 129Xe NMR and DFT calculations. Microporous and Mesoporous Materials, 2022, 338, 111965.	4.4	5
102	Atomic-Insight into Zeolite Catalyst Formingâ€”an Advanced NMR Study. Journal of Physical Chemistry C, 2021, 125, 20028-20034.	3.1	4
103	Unlocking the potential of hidden sites in FAUJASITE: new insights in a proton transfer mechanism. Angewandte Chemie, 0, , .	2.0	4