

# Barbara Gil

## List of Publications by Year in descending order

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119  
papers

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docs citations

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5849  
citing authors

#	ARTICLE	IF	CITATIONS
1	Platinum nanoparticles supported on zeolite MWW nanosheets prepared via homogeneous solution route. <i>Catalysis Today</i> , 2022, 390-391, 335-342.	4.4	1
2	Catalytic activity enhancement in pillared zeolites produced from exfoliated MWW monolayers in solution. <i>Catalysis Today</i> , 2022, 390-391, 272-280.	4.4	5
3	Dehydration of methanol and ethanol over ferrierite originated layered zeolites – the role of acidity and porous structure. <i>RSC Advances</i> , 2022, 12, 9395-9403.	3.6	4
4	MWW and MFI Frameworks as Model Layered Zeolites: Structures, Transformations, Properties, and Activity. <i>ACS Catalysis</i> , 2021, 11, 2366-2396.	11.2	63
5	Structure-Catalytic Properties Relationship in Friedel Crafts Alkylation Reaction for MCM-36-Type Zeolites Obtained by Isopropanol-Assisted Pillaring. <i>Catalysts</i> , 2021, 11, 299.	3.5	3
6	From Colloidal Dispersions of Zeolite Monolayers to Effective Solid Catalysts in Transformations of Bulky Organic Molecules: Role of Freeze-Drying and Dialysis. <i>Molecules</i> , 2021, 26, 2076.	3.8	2
7	Exfoliated Ferrierite-Related Unilamellar Nanosheets in Solution and Their Use for Preparation of Mixed Zeolite Hierarchical Structures. <i>Journal of the American Chemical Society</i> , 2021, 143, 11052-11062.	13.7	18
8	Mixed zeolite hybrids combining the MFI structure with exfoliated MWW monolayers. <i>Microporous and Mesoporous Materials</i> , 2021, 324, 111300.	4.4	5
9	Structural transformation and chemical modifications of the unusual layered zeolite MWW form SSZ-70. <i>Catalysis Today</i> , 2020, 354, 133-140.	4.4	11
10	The structure-catalytic activity relationship for the transient layered zeolite MCM-56 with MWW topology. <i>Catalysis Today</i> , 2020, 345, 116-124.	4.4	12
11	Incorporation and release of a model drug, ciprofloxacin, from non-modified SBA-15 molecular sieves with different pore sizes. <i>Microporous and Mesoporous Materials</i> , 2020, 294, 109903.	4.4	15
12	Silica and silica–titania intercalated MCM-36 modified with iron as catalysts for selective reduction of nitrogen oxides – the role of associated reactions. <i>Catalysis Science and Technology</i> , 2020, 10, 7940-7954.	4.1	10
13	Detemplated and Pillared 2-Dimensional Zeolite ZSM-55 with Ferrierite Layer Topology as a Carrier for Drugs. <i>Molecules</i> , 2020, 25, 3501.	3.8	3
14	Liquid dispersions of zeolite monolayers with high catalytic activity prepared by soft-chemical exfoliation. <i>Science Advances</i> , 2020, 6, eaay8163.	10.3	37
15	Acid-treated Clay Minerals as Catalysts for Dehydration of Methanol and Ethanol. <i>Clays and Clay Minerals</i> , 2020, 68, 23-37.	1.3	20
16	Incorporation of Ti as a Pyramidal Framework Site in the Mono-layered MCM-56 Zeolite and its Oxidation Activity. <i>ChemCatChem</i> , 2019, 11, 520-527.	3.7	14
17	A new layered MWW zeolite synthesized with the bifunctional surfactant template and the updated classification of layered zeolite forms obtained by direct synthesis. <i>Journal of Materials Chemistry A</i> , 2019, 7, 7701-7709.	10.3	41
18	A study of the external and internal sites of 2D and 3D zeolites through the FTIR investigation of the adsorption of ammonia and pivalonitrile. <i>Applied Catalysis A: General</i> , 2019, 578, 63-69.	4.3	11

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19	A novel stir bar sorptive-dispersive microextraction in combination with magnetically modified graphene for isolation of seven pesticides from water samples. <i>Microchemical Journal</i> , 2019, 147, 962-971.	4.5	29
20	Fe-MIL-100 as drug delivery system for asthma and chronic obstructive pulmonary disease treatment and diagnosis. <i>Microporous and Mesoporous Materials</i> , 2019, 280, 264-270.	4.4	33
21	An Inhalable Theranostic System for Local Tuberculosis Treatment Containing an Isoniazid Loaded Metal Organic Framework Fe-MIL-101-NH <sub>2</sub> From Raw MOF to Drug Delivery System. <i>Pharmaceutics</i> , 2019, 11, 687.	4.5	42
22	Experimental Evidence of the Mechanism of Selective Catalytic Reduction of NO with NH <sub>3</sub> over Fe-Containing BEA Zeolites. <i>ChemSusChem</i> , 2019, 12, 692-705.	6.8	17
23	Characterization of Co and Fe-MCM-56 catalysts for NH <sub>3</sub> -SCR and N <sub>2</sub> O decomposition: An in situ FTIR study. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2018, 196, 281-288.	3.9	20
24	Pillaring of layered zeolite precursors with ferrierite topology leading to unusual molecular sieves on the micro/mesoporous border. <i>Dalton Transactions</i> , 2018, 47, 3029-3037.	3.3	16
25	The effect of hot liquid water treatment on the properties and catalytic activity of MWW zeolites with various layered structures. <i>Catalysis Today</i> , 2018, 304, 22-29.	4.4	10
26	Porous clay heterostructures intercalated with multicomponent pillars as catalysts for dehydration of alcohols. <i>Applied Clay Science</i> , 2018, 160, 116-125.	5.2	35
27	Iron-Based Metal-Organic Frameworks as a Theranostic Carrier for Local Tuberculosis Therapy. <i>Pharmaceutical Research</i> , 2018, 35, 144.	3.5	51
28	Effective catalysts for the low-temperature NH <sub>3</sub> -SCR process based on MCM-41 modified with copper by template ion-exchange (TIE) method. <i>Applied Catalysis B: Environmental</i> , 2018, 237, 927-937.	20.2	40
29	Gate-Opening Mechanism of Hydrophilic-Hydrophobic Metal-Organic Frameworks: Molecular Simulations and Quasi-Equilibrated Desorption. <i>Chemistry of Materials</i> , 2018, 30, 5116-5127.	6.7	17
30	Cobalt-containing BEA zeolite for catalytic combustion of toluene. <i>Applied Catalysis B: Environmental</i> , 2017, 212, 59-67.	20.2	91
31	MCM-41 modified with transition metals by template ion-exchange method as catalysts for selective catalytic oxidation of ammonia to dinitrogen. <i>Microporous and Mesoporous Materials</i> , 2017, 240, 9-21.	4.4	47
32	Framework-substituted cerium MCM-22 zeolite and its interlayer expanded derivative MWW-IEZ. <i>Catalysis Science and Technology</i> , 2016, 6, 2742-2753.	4.1	27
33	Cu-Mg-Al hydrotalcite-like materials as precursors of effective catalysts for selective oxidation of ammonia to dinitrogen The influence of Mg/Al ratio and calcination temperature. <i>Applied Clay Science</i> , 2016, 129, 122-130.	5.2	42
34	Metal-organic frameworks: mechanisms of antibacterial action and potential applications. <i>Drug Discovery Today</i> , 2016, 21, 1009-1018.	6.4	375
35	Experimental evidence of NO SCR mechanism in the presence of the BEA zeolite with framework and extra-framework cobalt species. <i>Applied Catalysis B: Environmental</i> , 2016, 198, 457-470.	20.2	20
36	Interconversion of the CDO Layered Precursor ZSM-55 between FER and CDO Frameworks by Controlled Deswelling and Reassembly. <i>Chemistry of Materials</i> , 2016, 28, 3616-3619.	6.7	16

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37	Cu SSZ-13 zeolite catalyst on metallic foam support for SCR of NO with ammonia: Catalyst layering and characterisation of active sites. <i>Catalysis Today</i> , 2016, 268, 142-149.	4.4	29
38	Layer like porous materials with hierarchical structure. <i>Chemical Society Reviews</i> , 2016, 45, 3400-3438.	38.1	196
39	Facile evaluation of the crystallization and quality of the transient layered zeolite MCM-56 by infrared spectroscopy. <i>Catalysis Today</i> , 2015, 243, 39-45.	4.4	31
40	Influence of iron state and acidity of zeolites on the catalytic activity of FeHBEA, FeHZSM-5 and FeHMOR in SCR of NO with NH <sub>3</sub> and N <sub>2</sub> O decomposition. <i>Microporous and Mesoporous Materials</i> , 2015, 203, 73-85.	4.4	93
41	Swelling and Interlayer Chemistry of Layered MWW Zeolites MCM-22 and MCM-56 with High Al Content. <i>Chemistry of Materials</i> , 2015, 27, 4620-4629.	6.7	64
42	Physicochemical and catalytic properties of hybrid catalysts derived from 12-molybdophosphoric acid and montmorillonites. <i>Applied Catalysis A: General</i> , 2015, 498, 192-204.	4.3	14
43	Adsorptive desulfurization with CPO-27/MOF-74: an experimental and computational investigation. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 10759-10766.	2.8	47
44	[Ti,Zr]-pillared montmorillonite – A new quality with respect to Ti- and Zr-pillared clays. <i>Microporous and Mesoporous Materials</i> , 2015, 202, 155-164.	4.4	43
45	Comprehensive system integrating 3D and 2D zeolite structures with recent new types of layered geometries. <i>Catalysis Today</i> , 2014, 227, 9-14.	4.4	46
46	The influence of the preparation procedures on the catalytic activity of Fe-BEA zeolites in SCR of NO with ammonia and N <sub>2</sub> O decomposition. <i>Catalysis Today</i> , 2014, 235, 210-225.	4.4	58
47	Dynamic 2D manganese(ii) isonicotinate framework with reversible crystal-to-amorphous transformation and selective guest adsorption. <i>CrystEngComm</i> , 2014, 16, 4959.	2.6	21
48	Activity enhancement of zeolite MCM-22 by interlayer expansion enabling higher Ce loading and room temperature CO oxidation. <i>Journal of Materials Chemistry A</i> , 2014, 2, 15722-15725.	10.3	29
49	High acidity unilamellar zeolite MCM-56 and its pillared and delaminated derivatives. <i>Dalton Transactions</i> , 2014, 43, 10501.	3.3	44
50	Application of quasi-equilibrated thermodesorption of linear and di-branched paraffin molecules for detailed porosity characterization of the mono-layered zeolite MCM-56, in comparison with MCM-22 and ZSM-5. <i>Dalton Transactions</i> , 2014, 43, 10574-10583.	3.3	15
51	Multirate delivery of multiple therapeutic agents from metal-organic frameworks. <i>APL Materials</i> , 2014, 2, .	5.1	58
52	A robust amino-functionalized titanium(iv) based MOF for improved separation of acid gases. <i>Chemical Communications</i> , 2013, 49, 10082.	4.1	135
53	Laponite-derived porous clay heterostructures: III. The effect of alumination. <i>Microporous and Mesoporous Materials</i> , 2013, 175, 67-75.	4.4	33
54	Metal-organic frameworks as potential multi-carriers of drugs. <i>CrystEngComm</i> , 2013, 15, 9364.	2.6	70

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55	Structures, Sorption Characteristics, and Nonlinear Optical Properties of a New Series of Highly Stable Aluminum MOFs. <i>Chemistry of Materials</i> , 2013, 25, 17-26.	6.7	307
56	Advantages of a wire gauze structured reactor with a zeolite (Cu-USY) catalyst for NH <sub>3</sub> -SCR of NO. <i>Chemical Engineering Journal</i> , 2013, 214, 319-326.	12.7	19
57	Synthesis of quinolines via FriedlÄnder reaction catalyzed by CuBTC metal-organic-framework. <i>Dalton Transactions</i> , 2012, 41, 4036.	3.3	118
58	Heteropolyacid encapsulation into the MOF: influence of acid particles distribution on ethanol conversion in hybrid nanomaterials. <i>Dalton Transactions</i> , 2012, 41, 12624.	3.3	20
59	Copper exchanged ultrastable zeolite Y - A catalyst for NH <sub>3</sub> -SCR of NO <sub>x</sub> from stationary biogas engines. <i>Catalysis Today</i> , 2012, 191, 6-11.	4.4	37
60	A new Al-MOF based on a unique column-shaped inorganic building unit exhibiting strongly hydrophilic sorption behaviour. <i>Chemical Communications</i> , 2012, 48, 9486.	4.1	81
61	Thermal post-synthetic modification of Al-MIL-53-COOH: systematic investigation of the decarboxylation and condensation reaction. <i>CrystEngComm</i> , 2012, 14, 4119.	2.6	76
62	Influence of the calcination treatment on the catalytic properties of hierarchical ZSM-5. <i>Catalysis Today</i> , 2012, 179, 91-101.	4.4	50
63	On the location of iron and aluminium atoms in thermally activated AlMCM-58 and FeMCM-58 zeolites. <i>Microporous and Mesoporous Materials</i> , 2012, 151, 339-345.	4.4	4
64	Comparison study of titania pillared interlayered clays and porous clay heterostructures modified with copper and iron as catalysts of the DeNO <sub>x</sub> process. <i>Applied Clay Science</i> , 2011, 53, 164-173.	5.2	61
65	The influence of reagent used for the precipitation of Cs <sub>2</sub> HPW <sub>12</sub> O <sub>40</sub> salt on its textural and catalytic properties. <i>Microporous and Mesoporous Materials</i> , 2011, 144, 46-56.	4.4	13
66	The Influence of Si/Al Ratio on the Distribution of OH Groups in Zeolites with MWW Topology. <i>Topics in Catalysis</i> , 2010, 53, 1340-1348.	2.8	41
67	Comparison of the catalytic performance of the metal substituted cage type mesoporous silica catalysts in the alkylation of naphthalene. <i>Applied Catalysis A: General</i> , 2010, 377, 76-82.	4.3	14
68	Complementary use of IR and EPR spectroscopies for characterization of iron species in thermally treated MFI-type zeolites. <i>Microporous and Mesoporous Materials</i> , 2010, 127, 82-89.	4.4	14
69	Acidity of MCM-58 and MCM-68 zeolites in comparison with some other 12-ring zeolites. <i>Microporous and Mesoporous Materials</i> , 2010, 129, 256-266.	4.4	38
70	Characterization of the porosity and surface chemistry of mesoporous silicas by quasi-equilibrated thermodesorption of 1-butanol and n-nonane. <i>Thermochimica Acta</i> , 2010, 511, 82-88.	2.7	16
71	Desilication of ZSM-5 and ZSM-12 zeolites: Impact on textural, acidic and catalytic properties. <i>Catalysis Today</i> , 2010, 152, 24-32.	4.4	171
72	Experimental and theoretical determination of adsorption heats of CO <sub>2</sub> over alkali metal exchanged ferrierites with different Si/Al ratio. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 6413.	2.8	86

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73	The role of the zeolite channel architecture and acidity on the activity and selectivity in aromatic transformations: The effect of zeolite cages in SSZ-35 zeolite. <i>Journal of Catalysis</i> , 2009, 266, 79-91.	6.2	96
74	Montmorillonite-based porous clay heterostructures (PCHs) intercalated with silica-titania pillars synthesis and characterization. <i>Journal of Solid State Chemistry</i> , 2009, 182, 1094-1104.	2.9	75
75	Montmorillonite, vermiculite and saponite based porous clay heterostructures modified with transition metals as catalysts for the DeNOx process. <i>Applied Catalysis B: Environmental</i> , 2009, 88, 331-340.	20.2	61
76	Quantitative IR studies of the concentration of Co <sup>2+</sup> and Co <sup>3+</sup> sites in zeolites CoZSM-5 and CoFER. <i>Applied Catalysis A: General</i> , 2009, 353, 117-122.	4.3	41
77	Porous clay heterostructures (PCHs) intercalated with silica-titania pillars and modified with transition metals as catalysts for the DeNOx process. <i>Applied Catalysis B: Environmental</i> , 2009, 91, 449-459.	20.2	57
78	Quantification of Water and Silanol Species on Various Silicas by Coupling IR Spectroscopy and in-Situ Thermogravimetry. <i>Langmuir</i> , 2009, 25, 5825-5834.	3.5	196
79	Characterization of Acidity and Porosity of Zeolite Catalysts by the Equilibrated Thermodesorption of n-Hexane and n-Nonane. <i>Catalysis Letters</i> , 2008, 120, 154-160.	2.6	23
80	The influence of the initial acidity of HFER on the status of Co species and catalytic performance of CoFER and InCoFER in CH <sub>4</sub> -SCR-NO. <i>Catalysis Today</i> , 2008, 137, 174-178.	4.4	28
81	Role of vanadium sites in NO and O <sub>2</sub> adsorption processes over VO <sub>x</sub> /CeO <sub>2</sub> -ZrO <sub>2</sub> catalysts – EPR and IR studies. <i>Catalysis Today</i> , 2008, 137, 292-299.	4.4	17
82	Acidic Properties of SSZ-33 and SSZ-35 Novel Zeolites: a Complex Infrared and MAS NMR Study. <i>Journal of Physical Chemistry C</i> , 2008, 112, 2997-3007.	3.1	120
83	Acidic properties of SSZ-33 and SSZ-35 novel zeolites: a complex I.R. and MAS NMR study. <i>Studies in Surface Science and Catalysis</i> , 2008, , 1027-1032.	1.5	4
84	Combining computational and in situ spectroscopies joint with molecular modeling for determination of reaction intermediates of deNOx process – CuZSM-5 catalyst case study. <i>Catalysis Today</i> , 2007, 126, 103-111.	4.4	25
85	Basic sites in zeolites followed by IR studies of NO+. <i>Applied Catalysis A: General</i> , 2007, 319, 64-71.	4.3	14
86	An IR spectroscopy study of Co sites in zeolites CoZSM-5. <i>Applied Catalysis A: General</i> , 2007, 330, 33-42.	4.3	45
87	In situ IR and catalytic studies of the effect of coke on acid properties of steamed zeolite Y. <i>Microporous and Mesoporous Materials</i> , 2007, 99, 328-333.	4.4	19
88	In situ IR and catalytic studies of the regeneration of acid sites in coked zeolite Y. <i>Microporous and Mesoporous Materials</i> , 2007, 103, 225-229.	4.4	8
89	FT-IR and microbalance studies of diammonium ions formation in heteropolyacids. <i>Vibrational Spectroscopy</i> , 2007, 43, 435-439.	2.2	7
90	Interaction of NO and NO <sub>2</sub> with the surface of CexZr1-xO <sub>2</sub> solid solutions – Influence of the phase composition. <i>Catalysis Today</i> , 2007, 119, 114-119.	4.4	29

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91	Ammonia sorption by Dawson acid studied by IR spectroscopy and microbalance. Journal of Molecular Structure, 2005, 740, 25-29.	3.6	20
92	SCR of NO by NH <sub>3</sub> on alumina or titania pillared montmorillonite modified with Cu or CoPart II. Temperature programmed studies. Applied Catalysis B: Environmental, 2004, 53, 47-61.	20.2	74
93	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
94	IR study of heterogeneity of OH groups in zeolite HY-splitting of OH and OD bands. Journal of Molecular Structure, 2003, 645, 45-49.	3.6	17
95	Heterogeneity of OH groups in HZSM-5 zeolites: splitting of OH and OD bands in low-temperature IR spectra. Microporous and Mesoporous Materials, 2003, 58, 291-294.	4.4	19
96	An in situ IR study of the NO <sub>x</sub> adsorption/reduction mechanism on modified Y zeolites. Physical Chemistry Chemical Physics, 2003, 5, 1897-1905.	2.8	72
97	Nature of Copper Active Sites in CuZSM-5: Theory and Experiment. International Journal of Molecular Sciences, 2002, 3, 435-444.	4.1	13
98	Why Cu <sup>+</sup> in ZSM-5 framework is active in DeNO reaction—quantum chemical calculations and IR studies. Catalysis Today, 2002, 75, 353-357.	4.4	19
99	Distribution of the strength of acid sites in mildly steamed HZSM-5 studied by IR spectroscopy. Reaction Kinetics and Catalysis Letters, 2002, 77, 209-217.	0.6	2
100	Heterogeneity of OH groups in HZSM-5 zeolites. IR studies of ammonia adsorption and desorption. Journal of Molecular Structure, 2001, 596, 41-45.	3.6	17
101	The study of heterogeneity of OH groups in zeolites by comparing the half-width of IR band of hydroxyls interacting with adsorbed molecules. Catalysis Today, 2001, 70, 131-138.	4.4	12
102	Homogeneous OH groups in dealuminated HY zeolite studied by IR spectroscopy. Microporous and Mesoporous Materials, 2001, 47, 61-66.	4.4	19
103	Title is missing!. Topics in Catalysis, 2000, 11/12, 335-341.	2.8	44
104	Ti-O-T skeletal vibration in CuZSM-5 zeolite: IR study and quantum chemical modeling. Physical Chemistry Chemical Physics, 2000, 2, 401-405.	2.8	59
105	FTIR study of hydration of dodecatungstosilicic acid. Catalysis Letters, 1999, 57, 61-64.	2.6	41
106	Sorption of methanol on tungstosilicic acid. Physical Chemistry Chemical Physics, 1999, 1, 2355-2360.	2.8	18
107	Heterogeneity of OH groups in mordenites. Microporous and Mesoporous Materials, 1998, 21, 75-79.	4.4	17
108	Acidity and Catalytic Properties of Realuminated Zeolite Y. Journal of Physical Chemistry B, 1997, 101, 6929-6932.	2.6	35

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109	Heterogeneity of OH groups in NaH-mordenites: Effect of Na/H exchange degree. Zeolites, 1997, 18, 245-249.	0.5	47
110	O-H stretching frequencies in NaHX and NaHY zeolites: IR spectroscopic studies and quantum chemical calculations. Journal of the Chemical Society, Faraday Transactions, 1996, 92, 4643-4646.	1.7	12
111	Heterogeneity of OH groups in H-mordenites: Effect of dehydroxylation. Zeolites, 1996, 17, 428-433.	0.5	60
112	IR Spectroscopic Studies of Dealuminated and Realuminated Zeolite HY. The Journal of Physical Chemistry, 1996, 100, 11242-11245.	2.9	47
113	Acid properties of NaH-mordenites: Infrared spectroscopic studies of ammonia sorption. Zeolites, 1995, 15, 501-506.	0.5	75
114	Heterogeneity of hydroxyl groups in zeolites studied by IR spectroscopy. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1995, 105, 1-18.	4.7	35
115	IR Spectroscopic Studies and Quantum Chemical Calculations Concerning the O-H Dissociation Energies in Zeolites NaHX and NaHY. The Journal of Physical Chemistry, 1994, 98, 5622-5626.	2.9	21
116	Acidic hydroxyl groups in zeolites X and Y: a correlation between infrared and solid-state NMR spectra. The Journal of Physical Chemistry, 1994, 98, 930-933.	2.9	43
117	Heterogeneity of OH Groups in Faujasites Studied by IR Spectroscopy. Journal of Catalysis, 1994, 145, 372-376.	6.2	42
118	Cluster models for Brønsted acid centres in faujasites. Journal of Molecular Catalysis, 1993, 82, 347-352.	1.2	3
119	Heterogeneity of hydroxyl groups in zeolites. Langmuir, 1993, 9, 2496-2498.	3.5	35