

Pablo Beato

List of Publications by Year in descending order

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88
papers

8,255
citations

76326

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49909

87
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89
all docs

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docs citations

89
times ranked

6026
citing authors

#	ARTICLE	IF	CITATIONS
1	Influence of Cu-speciation in mordenite on direct methane to methanol conversion: Multi-Technique characterization and comparison with NH ₃ selective catalytic reduction of NO _x . <i>Catalysis Today</i> , 2021, 369, 105-111.	4.4	14
2	The role of platinum on the NO _x storage and desorption behavior of ceria: an online FT-IR study combined with <i>in situ</i> Raman and UV-vis spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 1874-1887.	2.8	6
3	Finding the active species: The conversion of methanol to aromatics over Zn-ZSM-5/alumina shaped catalysts. <i>Journal of Catalysis</i> , 2021, 394, 416-428.	6.2	29
4	From Catalytic Test Reaction to Modern Chemical Descriptors in Zeolite Catalysis Research. <i>Chemie-Ingenieur-Technik</i> , 2021, 93, 902-915.	0.8	5
5	Mapping the coke formation within a zeolite catalyst extrudate in space and time by operando computed X-ray diffraction tomography. <i>Journal of Catalysis</i> , 2021, 401, 1-6.	6.2	14
6	Synthesis of mesoporous ZSM-5 zeolite encapsulated in an ultrathin protective shell of silicalite-1 for MTH conversion. <i>Microporous and Mesoporous Materials</i> , 2020, 292, 109730.	4.4	44
7	Enhanced Catalytic Performance of Zn-containing HZSM-5 upon Selective Desilication in Ethane Dehydroaromatization Process. <i>ChemCatChem</i> , 2020, 12, 1519-1526.	3.7	14
8	Stability of Iron-Molybdate Catalysts for Selective Oxidation of Methanol to Formaldehyde: Influence of Preparation Method. <i>Catalysis Letters</i> , 2020, 150, 1434-1444.	2.6	13
9	Catalytic hydropyrolysis of biomass using supported CoMo catalysts – Effect of metal loading and support acidity. <i>Fuel</i> , 2020, 264, 116807.	6.4	22
10	EXAFS wavelet transform analysis of Cu-MOR zeolites for the direct methane to methanol conversion. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 18950-18963.	2.8	35
11	Comparing the Nature of Active Sites in Cu-loaded SAPO-34 and SSZ-13 for the Direct Conversion of Methane to Methanol. <i>Catalysts</i> , 2020, 10, 191.	3.5	16
12	Alkali Earth Metal Molybdates as Catalysts for the Selective Oxidation of Methanol to Formaldehyde – Selectivity, Activity, and Stability. <i>Catalysts</i> , 2020, 10, 82.	3.5	15
13	Zeolite Surface Methoxy Groups as Key Intermediates in the Stepwise Conversion of Methane to Methanol. <i>ChemCatChem</i> , 2019, 11, 5022-5026.	3.7	45
14	<i>Operando</i> XAS/XRD and Raman Spectroscopic Study of Structural Changes of the Iron Molybdate Catalyst during Selective Oxidation of Methanol. <i>ChemCatChem</i> , 2019, 11, 4871-4883.	3.7	26
15	Deactivation of a CoMo Catalyst during Catalytic Hydropyrolysis of Biomass. Part 1. Product Distribution and Composition. <i>Energy & Fuels</i> , 2019, 33, 12374-12386.	5.1	11
16	Collective action of water molecules in zeolite dealumination. <i>Catalysis Science and Technology</i> , 2019, 9, 3721-3725.	4.1	43
17	Temperature-programmed reduction with NO as a characterization of active Cu in Cu-CHA catalysts for NH ₃ -SCR. <i>Catalysis Science and Technology</i> , 2019, 9, 2608-2619.	4.1	17
18	Cu-Exchanged Ferrierite Zeolite for the Direct CH ₄ to CH ₃ OH Conversion: Insights on Cu Speciation from X-Ray Absorption Spectroscopy. <i>Topics in Catalysis</i> , 2019, 62, 712-723.	2.8	9

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19	Deactivation of a CoMo Catalyst during Catalytic Hydropyrolysis of Biomass. Part 2. Characterization of the Spent Catalysts and Char. <i>Energy & Fuels</i> , 2019, 33, 12387-12402.	5.1	10
20	Synthesis of ZSM-23 (MTT) zeolites with different crystal morphology and intergrowths: effects on the catalytic performance in the conversion of methanol to hydrocarbons. <i>Catalysis Science and Technology</i> , 2019, 9, 6782-6792.	4.1	7
21	Identification of Distinct Framework Aluminum Sites in Zeolite ZSM-23: A Combined Computational and Experimental ²⁷ Al NMR Study. <i>Journal of Physical Chemistry C</i> , 2019, 123, 7831-7844.	3.1	19
22	Understanding and Optimizing the Performance of Cu ²⁺ for The Direct CH ₄ to CH ₃ OH Conversion. <i>ChemCatChem</i> , 2019, 11, 621-627.	3.7	29
23	The impact of reaction conditions and material composition on the stepwise methane to methanol conversion over Cu-MOR: An operando XAS study. <i>Catalysis Today</i> , 2019, 336, 99-108.	4.4	26
24	Operando UV-Raman study of the methanol to olefins reaction over SAPO-34: Spatiotemporal evolution monitored by different reactor approaches. <i>Catalysis Today</i> , 2019, 336, 203-209.	4.4	16
25	Deactivation of Zeolite Catalyst H-ZSM-5 during Conversion of Methanol to Gasoline: Operando Time- and Space-Resolved X-ray Diffraction. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 1324-1328.	4.6	33
26	Tuning the material and catalytic properties of SUZ-4 zeolites for the conversion of methanol or methane. <i>Microporous and Mesoporous Materials</i> , 2018, 265, 112-122.	4.4	24
27	High Zn/Al ratios enhance dehydrogenation vs hydrogen transfer reactions of Zn-ZSM-5 catalytic systems in methanol conversion to aromatics. <i>Journal of Catalysis</i> , 2018, 362, 146-163.	6.2	120
28	Influence of post-synthetic modifications on the composition, acidity and textural properties of ZSM-22 zeolite. <i>Catalysis Today</i> , 2018, 299, 120-134.	4.4	23
29	Impact of post-synthetic treatments on unidirectional H-ZSM-22 zeolite catalyst: Towards improved clean MTG catalytic process. <i>Catalysis Today</i> , 2018, 299, 135-145.	4.4	21
30	The Nuclearity of the Active Site for Methane to Methanol Conversion in Cu-Mordenite: A Quantitative Assessment. <i>Journal of the American Chemical Society</i> , 2018, 140, 15270-15278.	13.7	177
31	Topology-dependent hydrocarbon transformations in the methanol-to-hydrocarbons reaction studied by <i>operando</i> UV-Raman spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 26580-26590.	2.8	18
32	Cu-CHA "a model system for applied selective redox catalysis. <i>Chemical Society Reviews</i> , 2018, 47, 8097-8133.	38.1	215
33	Deactivation behavior of an iron-molybdate catalyst during selective oxidation of methanol to formaldehyde. <i>Catalysis Science and Technology</i> , 2018, 8, 4626-4637.	4.1	32
34	Investigating the Low Temperature Formation of Cu ^{II} -(N,O) Species on Cu-CHA Zeolites for the Selective Catalytic Reduction of NO _x . <i>Chemistry - A European Journal</i> , 2018, 24, 12044-12053.	3.3	53
35	Distribution of Aluminum over the Tetrahedral Sites in ZSM-5 Zeolites and Their Evolution after Steam Treatment. <i>Journal of Physical Chemistry C</i> , 2018, 122, 15595-15613.	3.1	82
36	Vanadia-Based Catalysts for the Sulfur Dioxide Oxidation Studied <i>In Situ</i> by Transmission Electron Microscopy and Raman Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2017, 121, 3350-3364.	3.1	6

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37	New insights into catalyst deactivation and product distribution of zeolites in the methanol-to-hydrocarbons (MTH) reaction with methanol and dimethyl ether feeds. <i>Catalysis Science and Technology</i> , 2017, 7, 2700-2716.	4.1	106
38	Structure-activity deactivation relationships in zeolites during the methanol-to-hydrocarbons reaction: Complementary assessments of the coke content. <i>Journal of Catalysis</i> , 2017, 351, 33-48.	6.2	82
39	Electronic and Geometrical Structure of Zn ²⁺ Ions Stabilized in the Porous Structure of Zn-Loaded Zeolite H-ZSM-5: A Multifrequency CW and Pulse EPR Study. <i>Journal of Physical Chemistry C</i> , 2017, 121, 14238-14245.	3.1	25
40	Conversion of methanol to hydrocarbons over zeolite ZSM-23 (MTT): exceptional effects of particle size on catalyst lifetime. <i>Chemical Communications</i> , 2017, 53, 6816-6819.	4.1	31
41	Benzene co-reaction with methanol and dimethyl ether over zeolite and zeotype catalysts: Evidence of parallel reaction paths to toluene and diphenylmethane. <i>Journal of Catalysis</i> , 2017, 349, 136-148.	6.2	70
42	Methane to Methanol: Structure-Activity Relationships for Cu-CHA. <i>Journal of the American Chemical Society</i> , 2017, 139, 14961-14975.	13.7	277
43	A Straightforward Descriptor for the Deactivation of Zeolite Catalyst H-ZSM-5. <i>ACS Catalysis</i> , 2017, 7, 8235-8246.	11.2	77
44	From Colloidal Monodisperse Nickel Nanoparticles to Well-Defined Ni/Al ₂ O ₃ Model Catalysts. <i>Langmuir</i> , 2017, 33, 9836-9843.	3.5	19
45	Zeolite morphology and catalyst performance: conversion of methanol to hydrocarbons over offretite. <i>Catalysis Science and Technology</i> , 2017, 7, 5435-5447.	4.1	18
46	Hierarchical Vanadia Model Catalysts for Ammonia Selective Catalytic Reduction. <i>Topics in Catalysis</i> , 2017, 60, 1631-1640.	2.8	9
47	Hydrogen Transfer versus Methylation: On the Genesis of Aromatics Formation in the Methanol-To-Hydrocarbons Reaction over H-ZSM-5. <i>ACS Catalysis</i> , 2017, 7, 5773-5780.	11.2	102
48	Composition-driven Cu-speciation and reducibility in Cu-CHA zeolite catalysts: a multivariate XAS/FTIR approach to complexity. <i>Chemical Science</i> , 2017, 8, 6836-6851.	7.4	163
49	Time- and space-resolved study of the methanol to hydrocarbons (MTH) reaction - influence of zeolite topology on axial deactivation patterns. <i>Faraday Discussions</i> , 2017, 197, 421-446.	3.2	39
50	Nitrate-nitrite equilibrium in the reaction of NO with a Cu-CHA catalyst for NH ₃ -SCR. <i>Catalysis Science and Technology</i> , 2016, 6, 8314-8324.	4.1	44
51	The Cu-CHA deNO _x Catalyst in Action: Temperature-Dependent NH ₃ -Assisted Selective Catalytic Reduction Monitored by Operando XAS and XES. <i>Journal of the American Chemical Society</i> , 2016, 138, 12025-12028.	13.7	243
52	Exploring Scaling Relations for Chemisorption Energies on Transition-Metal-Exchanged Zeolites ZSM-22 and ZSM-5. <i>ChemCatChem</i> , 2016, 8, 767-772.	3.7	18
53	Time- and space-resolved high energy operando X-ray diffraction for monitoring the methanol to hydrocarbons reaction over H-ZSM-22 zeolite catalyst in different conditions. <i>Surface Science</i> , 2016, 648, 141-149.	1.9	30
54	Atomic-scale Dynamics in Catalysts for Sulfur Chemistry. <i>Microscopy and Microanalysis</i> , 2015, 21, 421-422.	0.4	0

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55	Bismuth Molybdate Catalysts Prepared by Mild Hydrothermal Synthesis: Influence of pH on the Selective Oxidation of Propylene. <i>Catalysts</i> , 2015, 5, 1554-1573.	3.5	38
56	MoS ₂ supported on P25 titania: A model system for the activation of a HDS catalyst. <i>Journal of Catalysis</i> , 2015, 328, 225-235.	6.2	33
57	Co-conversion of methanol and light alkenes over acidic zeolite catalyst H-ZSM-22: Simulated recycle of non-gasoline range products. <i>Applied Catalysis A: General</i> , 2015, 494, 68-76.	4.3	19
58	Revisiting the nature of Cu sites in the activated Cu-SSZ-13 catalyst for SCR reaction. <i>Chemical Science</i> , 2015, 6, 548-563.	7.4	341
59	Systematic study on the influence of the morphology of $\text{I}^{\pm}\text{-MoO}_3$ in the selective oxidation of propylene. <i>Journal of Solid State Chemistry</i> , 2015, 228, 42-52.	2.9	24
60	Morphology-induced shape selectivity in zeolite catalysis. <i>Journal of Catalysis</i> , 2015, 327, 22-32.	6.2	64
61	A Consistent Reaction Scheme for the Selective Catalytic Reduction of Nitrogen Oxides with Ammonia. <i>ACS Catalysis</i> , 2015, 5, 2832-2845.	11.2	400
62	Kinetics of Zeolite Dealumination: Insights from H-SSZ-13. <i>ACS Catalysis</i> , 2015, 5, 7131-7139.	11.2	69
63	Structure, activity and kinetics of supported molybdenum oxide and mixed molybdenum-vanadium oxide catalysts prepared by flame spray pyrolysis for propane OHD. <i>Applied Catalysis A: General</i> , 2014, 472, 29-38.	4.3	27
64	Methanol Conversion to Hydrocarbons (MTH) Over H-ITQ-13 (ITH) Zeolite. <i>Topics in Catalysis</i> , 2014, 57, 143-158.	2.8	16
65	Methanol-to-hydrocarbons conversion: The alkene methylation pathway. <i>Journal of Catalysis</i> , 2014, 314, 159-169.	6.2	136
66	Interaction of NH ₃ with Cu-SSZ-13 Catalyst: A Complementary FTIR, XANES, and XES Study. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 1552-1559.	4.6	248
67	Selective oxidation of propylene to acrolein by hydrothermally synthesized bismuth molybdates. <i>Applied Catalysis A: General</i> , 2014, 482, 145-156.	4.3	41
68	Single-Event MicroKinetics (SEMK) for Methanol to Hydrocarbons (MTH) on H-ZSM-23. <i>Catalysis Today</i> , 2013, 215, 224-232.	4.4	23
69	Catalyst deactivation by coke formation in microporous and desilicated zeolite H-ZSM-5 during the conversion of methanol to hydrocarbons. <i>Journal of Catalysis</i> , 2013, 307, 62-73.	6.2	169
70	Probing the surface of nanosheet H-ZSM-5 with FTIR spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 13363.	2.8	53
71	Characterization of Cu-exchanged SSZ-13: a comparative FTIR, UV-Vis, and EPR study with Cu-ZSM-5 and Cu- I^2 with similar Si/Al and Cu/Al ratios. <i>Dalton Transactions</i> , 2013, 42, 12741.	3.3	317
72	Operando Raman spectroscopy applying novel fluidized bed micro-reactor technology. <i>Catalysis Today</i> , 2013, 205, 128-133.	4.4	45

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73	Unit cell thick nanosheets of zeolite H-ZSM-5: Structure and activity. <i>Topics in Catalysis</i> , 2013, 56, 558-566.	2.8	33
74	Role of internal coke for deactivation of ZSM-5 catalysts after low temperature removal of coke with NO ₂ . <i>Catalysis Science and Technology</i> , 2012, 2, 1196.	4.1	30
75	Methylation of benzene by methanol: Single-site kinetics over H-ZSM-5 and H-beta zeolite catalysts. <i>Journal of Catalysis</i> , 2012, 292, 201-212.	6.2	126
76	Shape Selectivity in the Conversion of Methanol to Hydrocarbons: The Catalytic Performance of One-Dimensional 10-Ring Zeolites: ZSM-22, ZSM-23, ZSM-48, and EU-1. <i>ACS Catalysis</i> , 2012, 2, 26-37.	11.2	207
77	Conversion of Methanol to Hydrocarbons: How Zeolite Cavity and Pore Size Controls Product Selectivity. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 5810-5831.	13.8	1,476
78	Conversion of methanol over 10-ring zeolites with differing volumes at channel intersections: comparison of TNU-9, IM-5, ZSM-11 and ZSM-5. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 2539-2549.	2.8	137
79	Structure-deactivation relationship for ZSM-5 catalysts governed by framework defects. <i>Journal of Catalysis</i> , 2011, 280, 196-205.	6.2	265
80	How defects and crystal morphology control the effects of desilication. <i>Catalysis Today</i> , 2011, 168, 38-47.	4.4	103
81	Hierarchical ZSM-5 prepared by guanidinium base treatment: Understanding microstructural characteristics and impact on MTG and NH ₃ -SCR catalytic reactions. <i>Catalysis Today</i> , 2011, 168, 71-79.	4.4	24
82	Selectivity control through fundamental mechanistic insight in the conversion of methanol to hydrocarbons over zeolites. <i>Microporous and Mesoporous Materials</i> , 2010, 136, 33-41.	4.4	141
83	Assessing the acid properties of desilicated ZSM-5 by FTIR using CO and 2,4,6-trimethylpyridine (collidine) as molecular probes. <i>Applied Catalysis A: General</i> , 2009, 356, 23-30.	4.3	249
84	Conversion of Methanol to Hydrocarbons: Spectroscopic Characterization of Carbonaceous Species Formed over H-ZSM-5. <i>Journal of Physical Chemistry C</i> , 2008, 112, 9710-9716.	3.1	127
85	Analysis of structural transformations during the synthesis of a MoVTaNb mixed oxide catalyst. <i>Applied Catalysis A: General</i> , 2006, 307, 137-147.	4.3	52
86	Magnetite Nanocrystals: Aqueous Synthesis, Characterization, and Solubility. <i>Chemistry of Materials</i> , 2005, 17, 3044-3049.	6.7	341
87	Synthesis of Yttria-Based Crystalline and Lamellar Nanostructures and their Formation Mechanism. <i>Small</i> , 2004, 1, 112-121.	10.0	118
88	Synthesis and Characterization of Stable and Crystalline Ce _{1-x} Zr _x O ₂ Nanoparticle Sols. <i>Chemistry of Materials</i> , 2004, 16, 2599-2604.	6.7	119