Peng Tian

List of Publications by Year
in descending order

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105 papers	4,993 citations	136950 32 h-index	95266 68 g-index
105 all docs	105 docs citations	105 times ranked	3111 citing authors

#	Article	IF	Citations
1	Methanol to Olefins (MTO): From Fundamentals to Commercialization. ACS Catalysis, 2015, 5, 1922-1938.	11.2	1,268
2	Recent Progress in Methanolâ€toâ€Olefins (MTO) Catalysts. Advanced Materials, 2019, 31, e1902181.	21.0	217
3	Synthesis, characterization and catalytic properties of SAPO-34 synthesized using diethylamine as a template. Microporous and Mesoporous Materials, 2008, 111, 143-149.	4.4	184
4	Comparative study of MTO conversion over SAPO-34, H-ZSM-5 and H-ZSM-22: Correlating catalytic performance and reaction mechanism to zeolite topology. Catalysis Today, 2011, 171, 221-228.	4.4	179
5	Observation of Heptamethylbenzenium Cation over SAPO-Type Molecular Sieve DNL-6 under Real MTO Conversion Conditions. Journal of the American Chemical Society, 2012, 134, 836-839.	13.7	173
6	Dual template-directed synthesis of SAPO-34 nanosheet assemblies with improved stability in the methanol to olefins reaction. Journal of Materials Chemistry A, 2015, 3, 5608-5616.	10.3	160
7	Cavity Controls the Selectivity: Insights of Confinement Effects on MTO Reaction. ACS Catalysis, 2015, 5, 661-665.	11.2	131
8	Synthesis of SAPO-34 templated by diethylamine: Crystallization process and Si distribution in the crystals. Microporous and Mesoporous Materials, 2008, 114, 416-423.	4.4	122
9	Recent advances of the nano-hierarchical SAPO-34 in the methanol-to-olefin (MTO) reaction and other applications. Catalysis Science and Technology, 2017, 7, 4905-4923.	4.1	115
10	A top-down approach to prepare silicoaluminophosphate molecular sieve nanocrystals with improved catalytic activity. Chemical Communications, 2014, 50, 1845.	4.1	101
11	Achieving a Superlong Lifetime in the Zeolite-Catalyzed MTO Reaction under High Pressure: Synergistic Effect of Hydrogen and Water. ACS Catalysis, 2019, 9, 3017-3025.	11.2	91
12	A low-temperature approach to synthesize low-silica SAPO-34 nanocrystals and their application in the methanol-to-olefins (MTO) reaction. Catalysis Science and Technology, 2016, 6, 7569-7578.	4.1	89
13	A study of the acidity of SAPO-34 by solid-state NMR spectroscopy. Microporous and Mesoporous Materials, 2012, 158, 19-25.	4.4	87
14	A novel solvothermal approach to synthesize SAPO molecular sieves using organic amines as the solvent and template. Journal of Materials Chemistry, 2012, 22, 6568.	6.7	72
15	Synthesis of small crystals zeolite NaY. Materials Letters, 2006, 60, 1131-1133.	2.6	70
16	Insights into the Pyridine-Modified MOR Zeolite Catalysts for DME Carbonylation. ACS Catalysis, 2020, 10, 3372-3380.	11.2	68
17	Creation of hollow SAPO-34 single crystals via alkaline or acid etching. Chemical Communications, 2016, 52, 5718-5721.	4.1	58
18	Direct quantification of surface barriers for mass transfer in nanoporous crystalline materials. Communications Chemistry, 2019, 2, .	4.5	58

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19	Characterization of metal-containing molecular sieves and their catalytic properties in the selective oxidation of cyclohexane. Catalysis Today, 2004, 93-95, 735-742.	4.4	57
20	Synthesis of SAPO-34 Molecular Sieves Templated with Diethylamine and Their Properties Compared with Other Templates. Chinese Journal of Catalysis, 2012, 33, 174-182.	14.0	56
21	Facile preparation of nanocrystal-assembled hierarchical mordenite zeolites with remarkable catalytic performance. Chinese Journal of Catalysis, 2015, 36, 1910-1919.	14.0	55
22	Phase-Transformation Synthesis of SAPO-34 and a Novel SAPO Molecular Sieve with RHO Framework Type from a SAPO-5 Precursor. Chemistry of Materials, 2011, 23, 1406-1413.	6.7	54
23	Conversion of methanol over H-ZSM-22: The reaction mechanism and deactivation. Catalysis Today, 2011, 164, 288-292.	4.4	54
24	A modeling study on reaction and diffusion in MTO process over SAPO-34 zeolites. Chemical Engineering Journal, 2019, 377, 119668.	12.7	50
25	Aminothermal synthesis of CHA-type SAPO molecular sieves and their catalytic performance in methanol to olefins (MTO) reaction. Journal of Materials Chemistry A, 2013, 1, 14206.	10.3	49
26	Synthesis of SAPO-34 nanoaggregates with the assistance of an inexpensive three-in-one non-surfactant organosilane. Chemical Communications, 2017, 53, 4985-4988.	4.1	45
27	A Bottomâ€Up Strategy for the Synthesis of Highly Siliceous Faujasiteâ€Type Zeolite. Advanced Materials, 2020, 32, e2000272.	21.0	45
28	The influence of low-temperature hydration methods on the stability of Cu-SAPO-34 SCR catalyst. Chemical Engineering Journal, 2018, 354, 85-92.	12.7	43
29	Preparation of Spherical Mordenite Zeolite Assemblies with Excellent Catalytic Performance for Dimethyl Ether Carbonylation. ACS Applied Materials & Interfaces, 2018, 10, 32239-32246.	8.0	39
30	Synthesis of DNLâ€6 with a High Concentration of Siâ€‰(4â€‰Al) Environments and its Application in CO₂ Separation. ChemSusChem, 2013, 6, 911-918.	6.8	36
31	Synthesis of SAPO-34 with alkanolamines as novel templates and their application for CO2 separation. Microporous and Mesoporous Materials, 2014, 194, 8-14.	4.4	33
32	In situ growth and assembly of microporous aluminophosphate nanosheets into ordered architectures at low temperature and their enhanced catalytic performance. Journal of Materials Chemistry A, 2015, 3, 7741-7749.	10.3	33
33	Investigation of low-temperature hydrothermal stability of Cu-SAPO-34 for selective catalytic reduction of NO x with NH 3. Chinese Journal of Catalysis, 2017, 38, 918-927.	14.0	33
34	Investigation of methanol conversion over high-Si beta zeolites and the reaction mechanism of their high propene selectivity. Catalysis Science and Technology, 2017, 7, 5882-5892.	4.1	33
35	Direct Cu²⁺ ion-exchanged into as-synthesized SAPO-34 and its catalytic application in the selective catalytic reduction of NO with NH₃. RSC Advances, 2016, 6, 12544-12552.	3.6	32
36	High Propylene Selectivity in Methanol Conversion over a Small-Pore SAPO Molecular Sieve with Ultra-Small Cage. ACS Catalysis, 2020, 10, 3741-3749.	11.2	32

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37	Preparation of Ru metal nanoparticles in mesoporous materials: influence of sulfur on the hydrogenating activity. Microporous and Mesoporous Materials, 2003, 60, 197-206.	4.4	31
38	Investigation of the Crystallization Process of SAPO-35 and Si Distribution in the Crystals. Journal of Physical Chemistry C, 2013, 117, 4048-4056.	3.1	31
39	A reconstruction strategy to synthesize mesoporous SAPO molecular sieve single crystals with high MTO catalytic activity. Chemical Communications, 2016, 52, 6463-6466.	4.1	30
40	The effect of Si environments on NH3 selective catalytic reduction performance and moisture stability of Cu-SAPO-34 catalysts. Journal of Catalysis, 2020, 391, 404-413.	6.2	30
41	DMTO: A Sustainable Methanol-to-Olefins Technology. Engineering, 2021, 7, 17-21.	6.7	30
42	Synthesis and characterization of DNL-6, a new silicoaluminophosphate molecular sieve with the RHO framework. Microporous and Mesoporous Materials, 2011, 144, 113-119.	4.4	29
43	SAPO-34 templated by dipropylamine and diisopropylamine: synthesis and catalytic performance in the methanol to olefin (MTO) reaction. New Journal of Chemistry, 2016, 40, 4236-4244.	2.8	29
44	Synthesis of nanosized SAPO-34 with the assistance of bifunctional amine and seeds. Chemical Communications, 2018, 54, 11160-11163.	4.1	29
45	Organophosphorous surfactant-assistant synthesis of SAPO-34 molecular sieve with special morphology and improved MTO performance. RSC Advances, 2016, 6, 47864-47872.	3.6	28
46	Seed-assisted synthesis of high silica ZSM-35 through interface-induced growth over MCM-49 seeds. Microporous and Mesoporous Materials, 2014, 196, 89-96.	4.4	27
47	Synthesis of hierarchical beta zeolite by using a bifunctional cationic polymer and the improved catalytic performance. RSC Advances, 2015, 5, 9852-9860.	3.6	27
48	Study of crystallization process of SAPO-11 molecular sieve. Chinese Journal of Catalysis, 2013, 34, 593-603.	14.0	25
49	Improving the low-temperature hydrothermal stability of Cu-SAPO-34 by the addition of Ag for ammonia selective catalytic reduction of NO x. Applied Catalysis A: General, 2018, 551, 79-87.	4.3	25
50	Synthesis of high-Si hierarchical beta zeolites without mesoporogen and their catalytic application in the methanol to propene reaction. Catalysis Science and Technology, 2018, 8, 2966-2974.	4.1	25
51	An effective route to improve the catalytic performance of SAPO-34 in the methanol-to-olefin reaction. Journal of Natural Gas Chemistry, 2012, 21, 431-434.	1.8	24
52	Preparation of ordered carbon/silica hybrid mesoporous materials with specific pore size expansion. Microporous and Mesoporous Materials, 2005, 79, 269-273.	4.4	22
53	The self-protection effect of reactant gas on the moisture stability of CuSAPO-34 catalyst for NH3-SCR. Chemical Engineering Journal, 2019, 374, 832-839.	12.7	21
54	Recognizing the Important Role of Surface Barriers in MOR Zeolite Catalyzed DME Carbonylation Reaction. ACS Catalysis, 2022, 12, 1-7.	11.2	21

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55	Hollow nanocrystals of silicoaluminophosphate molecular sieves synthesized by an aminothermal co-templating strategy. CrystEngComm, 2016, 18, 1000-1008.	2.6	20
56	Fabrication of Cu-CHA composites with enhanced NH3-SCR catalytic performances and hydrothermal stabilities. Microporous and Mesoporous Materials, 2020, 309, 110585.	4.4	20
57	Organic-free synthesis of MOR nanoassemblies with excellent DME carbonylation performance. Chinese Journal of Catalysis, 2021, 42, 1468-1477.	14.0	19
58	Highly selective adsorption of CO over N2 on CuCl-loaded SAPO-34 adsorbent. Journal of Energy Chemistry, 2019, 36, 122-128.	12.9	18
59	Synthesis of mesoporous high-silica zeolite Y and their catalytic cracking performance. Chinese Journal of Catalysis, 2022, 43, 1945-1954.	14.0	18
60	Synthesis of ZSM-34 and Its Catalytic Properties in Methanol-to-Olefins Reaction. Chinese Journal of Catalysis, 2007, 28, 817-822.	14.0	17
61	External surface modification of as-made ZSM-5 and their catalytic performance in the methanol to propylene reaction. Chinese Journal of Catalysis, 2018, 39, 1418-1426.	14.0	17
62	Landscape of AlPO-based structures and compositions in the database of zeolite structures. Microporous and Mesoporous Materials, 2019, 280, 105-115.	4.4	17
63	Embryonic zeolite-assisted synthesis of SSZ-13 with superior efficiency and their excellent catalytic performance. Journal of Materials Chemistry A, 2021, 9, 15238-15245.	10.3	17
64	Heptamethylbenzenium cation formation and the correlated reaction pathway during methanol-to-olefins conversion over DNL-6. Catalysis Today, 2014, 226, 47-51.	4.4	16
65	N-methyldiethanolamine: A multifunctional structure-directing agent for the synthesis of SAPO and AlPO molecular sieves. Journal of Colloid and Interface Science, 2015, 445, 119-126.	9.4	16
66	A reconstruction strategy for the synthesis of Cu-SAPO-34 with excellent NH3-SCR catalytic performance and hydrothermal stability. Chinese Journal of Catalysis, 2020, 41, 1410-1420.	14.0	16
67	Probing locations of organic structure-directing agents (OSDAs) and host-guest interactions in CHA -type SAPO-34/44. Microporous and Mesoporous Materials, 2018, 264, 55-59.	4.4	15
68	Synthesis of SAPO-35 molecular sieve and its catalytic properties in the methanol-to-olefins reaction. Chinese Journal of Catalysis, 2013, 34, 798-807.	14.0	14
69	Investigation of the Strong BrÃ¸nsted Acidity in a Novel SAPO-type Molecular Sieve, DNL-6. Journal of Physical Chemistry C, 2015, 119, 2589-2596.	3.1	14
70	Silicoaluminophosphate molecular sieve DNL-6: Synthesis with a novel template, N,N â€²-dimethylethylenediamine, and its catalytic application. Chinese Journal of Catalysis, 2018, 39, 1511-1519.	14.0	14
71	Insights into the aminothermal crystallization process of SAPO-34 and its comparison with hydrothermal system. Microporous and Mesoporous Materials, 2017, 248, 204-213.	4.4	13
72	A novel approach for facilitating the targeted synthesis of silicoaluminophosphates. Journal of Materials Chemistry A, 2018, 6, 24186-24193.	10.3	13

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73	A dual-bed catalyst for producing ethylene and propylene from syngas. Journal of Energy Chemistry, 2022, 66, 190-194.	12.9	13
74	Template-assisted syntheses of two novel porous zirconium methylphosphonates. Microporous and Mesoporous Materials, 2005, 81, 175-183.	4.4	11
75	Cationic surfactant-assisted hydrothermal synthesis: an effective way to tune the crystalline phase and morphology of SAPO molecular sieves. CrystEngComm, 2015, 17, 8555-8561.	2.6	11
76	Preparation of hierarchical SAPO-18 via alkaline/acid etching. Microporous and Mesoporous Materials, 2020, 300, 110156.	4.4	11
77	Exploring BrÃ¸nsted acids confined in the 10-ring channels of the zeolite ferrierite. CrystEngComm, 2018, 20, 699-702.	2.6	10
78	Realizing Fast Synthesis of Highâ€Silica Zeolite Y with Remarkable Catalytic Performance. Angewandte Chemie - International Edition, 2022, 61, .	13.8	10
79	SAPO-34 synthesized with n -butylamine as a template and its catalytic application in the methanol amination reaction. Chinese Journal of Catalysis, 2017, 38, 574-582.	14.0	9
80	Rational Design of a Novel Catalyst Cuâ€SAPOâ€42 for NH₃â€SCR Reaction. Small, 2020, 16, e2000902.	10.0	9
81	The Complex Crystal Structure and Abundant Local Defects of Zeolite EMMâ€17 Unraveled by Combined Electron Crystallography and Microscopy. Angewandte Chemie - International Edition, 2021, 60, 24227-24233.	13.8	9
82	Dual-template directed aminothermal syntheses and characterization of silicoaluminophosphates SAPO-CLO and ECR-40. Microporous and Mesoporous Materials, 2021, 315, 110915.	4.4	8
83	Progress in Seed-assisted Synthesis of (Silico)Aluminophosphate Molecular Sieves. Chemical Research in Chinese Universities, 2022, 38, 1-8.	2.6	8
84	Simultaneously Achieving High Conversion and Selectivity in Syngas-to-Propane Reaction via a Dual-Bed Catalyst System. ACS Catalysis, 2022, 12, 3985-3994.	11.2	8
85	Conversion of methanol to propylene over SAPO-14: Reaction mechanism and deactivation. Chinese Journal of Catalysis, 2022, 43, 2259-2269.	14.0	8
86	Microporous Aluminophosphate ULM-6: Synthesis, NMR Assignment, and Its Transformation to AlPO4-14 Molecular Sieve. Journal of Physical Chemistry C, 2016, 120, 11854-11863.	3.1	7
87	Hydrothermal synthesis of Siliceous Beta Zeolite by an inorganic cation-driven strategy and its crystallization mechanism. Microporous and Mesoporous Materials, 2022, 329, 111557.	4.4	7
88	SAPO-34 crystals with nanosheet morphology synthesized by pyrophosphoric acid as new phosphorus source. Microporous and Mesoporous Materials, 2022, 333, 111753.	4.4	7
89	Cu-SAPO-17: A novel catalyst for selective catalytic reduction of NO. Chinese Journal of Catalysis, 2020, 41, 1715-1722.	14.0	6
90	High-silica zeolite Y: seed-assisted synthesis, characterization and catalytic properties. Inorganic Chemistry Frontiers, 2022, 9, 2213-2220.	6.0	6

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91	Designed synthesis of MOR zeolites using gemini-type bis(methylpyrrolidinium) dications as structure directing agents and their DME carbonylation performance. Journal of Materials Chemistry A, 2022, 10, 8334-8343.	10.3	6
92	Synthesis and spectroscopic study of mesoporous aluminum methylphosphonate foam templated by dibutyl methylphosphonate. Microporous and Mesoporous Materials, 2003, 62, 61-71.	4.4	5
93	Template-assisted syntheses of porous metal methylphosphonates. Journal of Porous Materials, 2006, 13, 73-80.	2.6	5
94	Two CrIII containing metal-1-hydroxyethylidenediphosphonate compounds: Synthesis, structure, and morphology. Crystal Research and Technology, 2006, 41, 1049-1054.	1.3	4
95	Syntheses and structures of sodium aluminodiphosphonates with different morphologies (diphosphonate=1-hydroxyethylidenediphosphonate). Journal of Crystal Growth, 2004, 264, 400-408.	1.5	3
96	Unraveling the Twin and Tunability of the Crystal Domain Sizes in the Mediumâ€Pore Zeolite ZSMâ€57 by Electron Crystallography. Chemistry - A European Journal, 2018, 25, 1029-1036.	3.3	3
97	One-pot synthesis of Na+-free Cu-SSZ-13 and its application in the NH3â€“SCR reaction. Chemical Communications, 2021, 57, 4898-4901.	4.1	3
98	Structure and electrical conductivity of a novel inorganic solid electrolyte: Na14.5[Al(PO4)2F2]2.5[Ti(PO4)2F2]0.5 (NATP). Solid State Communications, 2007, 141, 407-411.	1.9	2
99	Synthesis and Growth Mechanism of the Core-Shell SAPO-34/AlPO-18 Molecular Sieves. Chinese Journal of Catalysis, 2013, 33, 1724-1729.	14.0	2
100	Ethylenediammonium disodium (1-hydroxyethylidene)diphosphonate tetrahydrate, [NH3(CH2)2NH3]Na2(hedp)Â·4H2O. Acta Crystallographica Section E: Structure Reports Online, 2003, 59, m521-m523.	0.2	1
101	Exploring boron distributions in MFI-type borosilicates. Inorganic Chemistry Communication, 2021, 126, 108467.	3.9	1
102	Inorganic phosphate crystal Na15â^'n[Al(PO4)2F2]3â^'n[Ti(PO4)2F2]n (0â‰¤n<1): A novel cation exchanger with high exchange selectivity for Li+ and Pb2+ ions. Materials Research Bulletin, 2008, 43, 3382-3388.	5.2	0
103	The Complex Crystal Structure and Abundant Local Defects of Zeolite EMMâ€17 Unraveled by Combined Electron Crystallography and Microscopy. Angewandte Chemie, 2021, 133, 24429.	2.0	0
104	Construction of Singleâ€Crystalline Hierarchical ZSMâ€5 with Open Nanoarchitectures via Anisotropicâ€Kinetics Transformation for the Methanolâ€toâ€Hydrocarbons Reaction. Angewandte Chemie, 0, , .	2.0	0
105	Realizing Fast Synthesis of Highâ€Silica Zeolite Y with Remarkable Catalytic Performance. Angewandte Chemie, 0, , .	2.0	0