Jungkyu Choi

List of Publications by Year
in descending order

73 papers	2,488 citations	218592 26 h-index	214721 47 g-index
78 all docs	78 docs citations	78 times ranked	2840 citing authors

#	Article	IF	Citations
1	Grain Boundary Defect Elimination in a Zeolite Membrane by Rapid Thermal Processing. Science, 2009, 325, 590-593.	6.0	289
2	Diamine-functionalized metalâ€“organic framework: exceptionally high CO₂capacities from ambient air and flue gas, ultrafast CO₂uptake rate, and adsorption mechanism. Energy and Environmental Science, 2014, 7, 744-751.	15.6	260
3	Thermal stability of ZIF-8 under oxidative and inert environments: A practical perspective on using ZIF-8 as a catalyst support. Chemical Engineering Journal, 2015, 278, 293-300.	6.6	142
4	Uniformlya-Oriented MFI Zeolite Films by Secondary Growth. Angewandte Chemie - International Edition, 2006, 45, 1154-1158.	7.2	138
5	Thermal Structural Transitions and Carbon Dioxide Adsorption Properties of Zeolitic Imidazolate Framework-7 (ZIF-7). Journal of the American Chemical Society, 2014, 136, 7961-7971.	6.6	102
6	MFI zeolite membranes from a- and randomly oriented monolayers. Adsorption, 2006, 12, 339-360.	1.4	64
7	Incorporating Hierarchy into Conventional Zeolites for Catalytic Biomass Conversions: A Review. Catalysts, 2019, 9, 127.	1.6	64
8	Rapid thermal processing and separation performance of columnar MFI membranes on porous stainless steel tubes. Energy and Environmental Science, 2011, 4, 3479.	15.6	62
9	Defect-induced ripening of zeolitic-imidazolate framework ZIF-8 and its implication to vapor-phase membrane synthesis. Chemical Communications, 2016, 52, 11669-11672.	2.2	62
10	Role of Cu in Mo₆S₈ and Cu Mixture Cathodes for Magnesium Ion Batteries. ACS Applied Materials & Interfaces, 2015, 7, 7016-7024.	4.0	59
11	Chabazite-Type Zeolite Membranes for Effective CO₂ Separation: The Role of Hydrophobicity and Defect Structure. ACS Applied Materials & Interfaces, 2019, 11, 3946-3960.	4.0	53
12	On the performance of c-oriented MFI zeolite Membranes treated by rapid thermal processing. Journal of Membrane Science, 2013, 436, 79-89.	4.1	52
13	An oriented, siliceous deca-dodecasil 3R (DDR) zeolite film for effective carbon capture: insight into its hydrophobic effect. Journal of Materials Chemistry A, 2017, 5, 11246-11254.	5.2	52
14	Healing of Microdefects in SSZ-13 Membranes via Filling with Dye Molecules and Its Effect on Dry and Wet CO₂ Separations. Chemistry of Materials, 2018, 30, 3346-3358.	3.2	48
15	Organic template-free synthesis of high-quality CHA type zeolite membranes for carbon dioxide separation. Journal of Membrane Science, 2018, 549, 46-59.	4.1	47
16	MCM-22/Silica Selective Flake Nanocomposite Membranes for Hydrogen Separations. Journal of the American Chemical Society, 2010, 132, 448-449.	6.6	40
17	Effects of metal or metal oxide additives on oxidative coupling of methane using Na2WO4/SiO2 catalysts: Reducibility of metal additives to manipulate the catalytic activity. Applied Catalysis A: General, 2018, 562, 114-119.	2.2	39
18	Formation of ZIF-8 membranes inside porous supports for improving both their H2/CO2 separation performance and thermal/mechanical stability. Journal of Membrane Science, 2017, 540, 430-439.	4.1	38

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19	An Heteroâ€Epitaxially Grown Zeolite Membrane. Angewandte Chemie - International Edition, 2019, 58, 18654-18662.	7.2	38
20	Chemical Vapor Deposition on Chabazite (CHA) Zeolite Membranes for Effective Post-Combustion CO₂ Capture. Environmental Science & Technology, 2014, 48, 14828-14836.	4.6	36
21	On defects in highly a-oriented MFI membranes. Microporous and Mesoporous Materials, 2013, 170, 1-8.	2.2	35
22	Uniform Siâ€CHA Zeolite Layers Formed by a Selective Sonicationâ€Assisted Deposition Method. Angewandte Chemie - International Edition, 2013, 52, 5280-5284.	7.2	31
23	Microstructural optimization of NH2-MIL-125 membranes with superior H2/CO2 separation performance by innovating metal sources and heating modes. Journal of Membrane Science, 2020, 616, 118615.	4.1	30
24	High performance CO2-perm-selective SSZ-13 membranes: Elucidation of the link between membrane material and module properties. Journal of Membrane Science, 2020, 611, 118390.	4.1	29
25	Hydrogel micropost-based qPCR for multiplex detection of miRNAs associated with Alzheimer's disease. Biosensors and Bioelectronics, 2018, 101, 235-244.	5.3	28
26	On the zeolitic imidazolate framework-8 (ZIF-8) membrane for hydrogen separation from simulated biomass-derived syngas. Microporous and Mesoporous Materials, 2016, 233, 70-77.	2.2	27
27	Production of phenolic hydrocarbons from organosolv lignin and lignocellulose feedstocks of hardwood, softwood, grass and agricultural waste. Journal of Industrial and Engineering Chemistry, 2019, 69, 304-314.	2.9	27
28	Microstructural control of a SSZ-13 zeolite film via rapid thermal processing. Journal of Membrane Science, 2019, 591, 117342.	4.1	24
29	Quantitative elucidation of the elusive role of defects in polycrystalline MFI zeolite membranes on xylene separation performance. Journal of Membrane Science, 2019, 569, 91-103.	4.1	24
30	On methanol to hydrocarbons reactions in a hierarchically structured ZSM-5 zeolite catalyst. Catalysis Today, 2018, 303, 150-158.	2.2	21
31	Critical role of zeolites as H₂S scavengers in argyrodite Li₆PS₅Cl solid electrolytes for all-solid-state batteries. Journal of Materials Chemistry A, 2021, 9, 17311-17316.	5.2	21
32	Synthesis and sonication-induced assembly of Si-DDR particles for close-packed oriented layers. Chemical Communications, 2013, 49, 7418.	2.2	20
33	On the synthesis and characterization of all-silica CHA zeolite particles. Microporous and Mesoporous Materials, 2014, 184, 47-54.	2.2	20
34	Multiplexed Detection of Epigenetic Markers Using Quantum Dot (QD)-Encoded Hydrogel Microparticles. Analytical Chemistry, 2016, 88, 4259-4268.	3.2	20
35	A copper-impregnated BEA zeolite for adsorption and oxidation of aromatic species during vehicle cold starts. Applied Catalysis B: Environmental, 2021, 287, 119951.	10.8	20
36	Mono-dispersed DDR zeolite particles by seeded growth and their CO 2 , N 2 , and H 2 O adsorption properties. Chemical Engineering Journal, 2016, 306, 876-888.	6.6	18

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37	Generation and extraction of hydrogen from low-temperature water-gas-shift reaction by a ZIF-8-based membrane reactor. Microporous and Mesoporous Materials, 2019, 280, 347-356.	2.2	17
38	Unavoidable but minimizable microdefects in a polycrystalline zeolite membrane: its remarkable performance for wet CO₂/CH₄separation. Journal of Materials Chemistry A, 2021, 9, 12593-12605.	5.2	17
39	Thermosensitive Structural Changes and Adsorption Properties of Zeolitic Imidazolate Framework-8 (ZIF-8). Journal of Physical Chemistry C, 2015, 119, 8226-8237.	1.5	16
40	On the synthesis of a hierarchically-structured ZSM-5 zeolite and the effect of its physicochemical properties with Cu impregnation on cold-start hydrocarbon trap performance. Catalysis Today, 2018, 314, 78-93.	2.2	15
41	Anti-poisoning coreâ€“shell metal/ZIF-8 catalyst for selective alkene hydrogenation. Catalysis Today, 2016, 265, 203-209.	2.2	13
42	Highly sensitive three-dimensional interdigitated microelectrode biosensors embedded with porosity tunable hydrogel for detecting proteins. Sensors and Actuators B: Chemical, 2020, 302, 127190.	4.0	13
43	Synthetic Origin-Dependent catalytic activity of Metal-Organic Frameworks: Unprecedented demonstration with ZIF-8Âs on CO2 cycloaddition reaction. Chemical Engineering Journal, 2022, 435, 134964.	6.6	13
44	Increasing resolution of selectivity in alkene hydrogenation via diffusion length in core-shell MFI zeolite. Catalysis Today, 2018, 314, 94-100.	2.2	12
45	Multifunctionalized Reduced Graphene Oxide Biosensors for Simultaneous Monitoring of Structural Changes in Amyloid-Î² 40. Sensors, 2018, 18, 1738.	2.1	12
46	Continuous-flow production of petroleum-replacing fuels from highly viscous Kraft lignin pyrolysis oil using its hydrocracked oil as a solvent. Energy Conversion and Management, 2020, 213, 112728.	4.4	11
47	An Extrinsicâ€Poreâ€Containing Molecular Sieve Film: A Robust, Highâ€Throughput Membrane Filter. Angewandte Chemie - International Edition, 2021, 60, 1323-1331.	7.2	11
48	A Hybrid Zeolite Membrane-Based Breakthrough for Simultaneous CO₂ Capture and CH₄ Upgrading from Biogas. ACS Applied Materials & Interfaces, 2022, 14, 2893-2907.	4.0	11
49	Entropyâ€assisted image segmentation for nanoâ€and microâ€sized networks. Journal of Microscopy, 2016, 262, 274-294.	0.8	10
50	Effects of hierarchical zeolites on aromatization of acetylene. Catalysis Today, 2018, 303, 177-184.	2.2	10
51	An Heteroâ€Epitaxially Grown Zeolite Membrane. Angewandte Chemie, 2019, 131, 18827-18835.	1.6	10
52	Stacking MFI zeolite structures for improved Sonogashira coupling reactions. Microporous and Mesoporous Materials, 2019, 276, 147-153.	2.2	10
53	An unprecedented c-oriented DDR@MWW zeolite hybrid membrane: new insights into H2-permselectivities via six membered-ring pores. Journal of Materials Chemistry A, 2020, 8, 14071-14081.	5.2	10
54	Ionic liquid-templated synthesis of 10-MR zeolites and its origin disclosure. Microporous and Mesoporous Materials, 2020, 305, 110346.	2.2	10

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55	Kinetic Analysis of Secondary Crystal Growth for Hydrotalcite Film Formation. Crystal Growth and Design, 2015, 15, 884-890.	1.4	9
56	Condensation of furans for the production of diesel precursors: A study on the effects of surface acid sites of sulfonated carbon catalysts. Catalysis Today, 2021, 375, 155-163.	2.2	9
57	Two-Dimensional MFI Zeolite Nanosheets Exfoliated by Surfactant Assisted Solution Process. Nanomaterials, 2021, 11, 2327.	1.9	9
58	Understanding and improving the modular properties of high-performance SSZ-13 membranes for effective flue gas treatment. Journal of Membrane Science, 2022, 646, 120246.	4.1	9
59	A Cu-impregnated ZSM-5 zeolite for active cold start hydrocarbon removal: Cation-type-dependent Cu species and their synergetic HC adsorption/oxidation functions. Chemical Engineering Journal, 2022, 430, 132552.	6.6	8
60	Morphology control of ionic-liquid-templated ZSM-22 and ZSM-5 zeolites using a two-step process and its effect on toluene methylation. Microporous and Mesoporous Materials, 2021, 328, 111475.	2.2	8
61	Multiplex SNP Genotyping Using SWITCH: Sequenceâ€Specific Nanoparticle with Interpretative Toeholdâ€Mediated Sequence Decoding in Hydrogel. Small, 2022, 18, e2105538.	5.2	7
62	Effects of nanosheet catalysts on synthesis of aromatics and light hydrocarbons from acetylene. Catalysis Today, 2020, 352, 183-191.	2.2	6
63	Clinical application of serological Alzheimer's disease diagnosis using a highly sensitive biosensor with hydrogel-enhanced dielectrophoretic force. Biosensors and Bioelectronics, 2022, 195, 113668.	5.3	6
64	One-pot selective production of deoxygenated monomeric, dimeric, and trimeric hydrocarbons from xylose-derived 2-methylfuran using multifunctional tungstate-zirconia-supported Ru, Pd, and Ni catalysts. Chemical Engineering Journal, 2022, 441, 135581.	6.6	5
65	An Extrinsicâ€Poreâ€Containing Molecular Sieve Film: A Robust, Highâ€Throughput Membrane Filter. Angewandte Chemie, 2021, 133, 1343-1351.	1.6	4
66	Improved catalytic depolymerization of lignin waste using carbohydrate derivatives. Environmental Pollution, 2021, 268, 115674.	3.7	4
67	Solution-mediated transformation of natural zeolite to ANA and CAN topological structures with altered active sites for ethanol conversion. Advanced Powder Technology, 2021, 32, 4155-4166.	2.0	4
68	On the effects of water exposure of as-synthesized LTA membranes on their structural properties and dehydration performances. Separation and Purification Technology, 2020, 238, 116493.	3.9	3
69	Upgrading of sulfurâ€containing biogas into high quality fuel via oxidative coupling of methane. International Journal of Energy Research, 2021, 45, 19363.	2.2	3
70	Unveiling the elusive role of tetraethyl orthosilicate hydrolysis in ionic-liquid-templated zeolite synthesis. Materials Today Chemistry, 2022, 23, 100658.	1.7	2
71	Na2WO4/Mn/SiO2 Catalyst Pellets for Upgrading H2S-Containing Biogas via the Oxidative Coupling of Methane. Catalysts, 2021, 11, 1301.	1.6	1
72	Comparison of catalytic consequences of ionic liquid-templated ZSM-22 and ZSM-5 zeolites in propene dimerization. Microporous and Mesoporous Materials, 2022, 337, 111941.	2.2	1

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73	An anti-humidity palladium-containing MFI composite as a robust ethylene scavenger. Microporous and Mesoporous Materials, 2022, 341, 112090.	2.2	1