

Hae-Kwon Jeong

List of Publications by Year in descending order

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papers

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76326

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docs citations

91
times ranked

8255
citing authors

#	ARTICLE	IF	CITATIONS
1	Carbon dioxide capture-related gas adsorption and separation in metal-organic frameworks. <i>Coordination Chemistry Reviews</i> , 2011, 255, 1791-1823.	18.8	1,805
2	<i>In Situ</i> Synthesis of Thin Zeolitic Imidazolate Framework ZIF-8 Membranes Exhibiting Exceptionally High Propylene/Propane Separation. <i>Journal of the American Chemical Society</i> , 2013, 135, 10763-10768.	13.7	512
3	Current Status of Metal-Organic Framework Membranes for Gas Separations: Promises and Challenges. <i>Industrial & Engineering Chemistry Research</i> , 2012, 51, 2179-2199.	3.7	466
4	Synthesis of Zeolitic Imidazolate Framework Films and Membranes with Controlled Microstructures. <i>Langmuir</i> , 2010, 26, 14636-14641.	3.5	416
5	Heteroepitaxially Grown Zeolitic Imidazolate Framework Membranes with Unprecedented Propylene/Propane Separation Performances. <i>Journal of the American Chemical Society</i> , 2015, 137, 12304-12311.	13.7	381
6	Synthesis of continuous MOF-5 membranes on porous γ -alumina substrates. <i>Microporous and Mesoporous Materials</i> , 2009, 118, 296-301.	4.4	347
7	Fabrication of MOF-5 membranes using microwave-induced rapid seeding and solvothermal secondary growth. <i>Microporous and Mesoporous Materials</i> , 2009, 123, 100-106.	4.4	293
8	Grain Boundary Defect Elimination in a Zeolite Membrane by Rapid Thermal Processing. <i>Science</i> , 2009, 325, 590-593.	12.6	289
9	Simultaneous enhancement of mechanical properties and CO ₂ selectivity of ZIF-8 mixed matrix membranes: Interfacial toughening effect of ionic liquid. <i>Journal of Membrane Science</i> , 2016, 511, 130-142.	8.2	242
10	HKUST-1 membranes on porous supports using secondary growth. <i>Journal of Materials Chemistry</i> , 2010, 20, 3938.	6.7	218
11	Rapid fabrication of metal organic framework thin films using microwave-induced thermal deposition. <i>Chemical Communications</i> , 2008, , 2441.	4.1	209
12	Highly propylene-selective supported zeolite-imidazolate framework (ZIF-8) membranes synthesized by rapid microwave-assisted seeding and secondary growth. <i>Chemical Communications</i> , 2013, 49, 3854.	4.1	207
13	Zeolite (MFI) Crystal Morphology Control Using Organic Structure-Directing Agents. <i>Chemistry of Materials</i> , 2004, 16, 5697-5705.	6.7	164
14	Rapid microwave-assisted synthesis of hybrid zeolitic imidazolate frameworks with mixed metals and mixed linkers. <i>Journal of Materials Chemistry A</i> , 2017, 5, 6090-6099.	10.3	161
15	Fabrication of Polymer/Selective-Flake Nanocomposite Membranes and Their Use in Gas Separation. <i>Chemistry of Materials</i> , 2004, 16, 3838-3845.	6.7	152
16	High-Flux Zeolitic Imidazolate Framework Membranes for Propylene/Propane Separation by Postsynthetic Linker Exchange. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 156-161.	13.8	143
17	One step in situ synthesis of supported zeolitic imidazolate framework ZIF-8 membranes: Role of sodium formate. <i>Microporous and Mesoporous Materials</i> , 2013, 165, 63-69.	4.4	140
18	Isorecticular Metal-Organic Frameworks and Their Membranes with Enhanced Crack Resistance and Moisture Stability by Surfactant-Assisted Drying. <i>Langmuir</i> , 2011, 27, 2652-2657.	3.5	132

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19	Building multiple adsorption sites in porous polymer networks for carbon capture applications. <i>Energy and Environmental Science</i> , 2013, 6, 3559.	30.8	130
20	ZIF-67 Framework: A Promising New Candidate for Propylene/Propane Separation. <i>Experimental Data and Molecular Simulations. Journal of Physical Chemistry C</i> , 2016, 120, 8116-8124.	3.1	121
21	A highly crystalline layered silicate with three-dimensionally microporous layers. <i>Nature Materials</i> , 2003, 2, 53-58.	27.5	120
22	Synthesis and Structure Determination of ETS-4 Single Crystals. <i>Chemistry of Materials</i> , 2001, 13, 4247-4254.	6.7	115
23	Recent advances on mixed-matrix membranes for gas separation: Opportunities and engineering challenges. <i>Korean Journal of Chemical Engineering</i> , 2018, 35, 1577-1600.	2.7	108
24	Heteroepitaxial Growth of Isoreticular Metal-Organic Frameworks and Their Hybrid Films. <i>Crystal Growth and Design</i> , 2010, 10, 1283-1288.	3.0	107
25	An Unconventional Rapid Synthesis of High Performance Metal-Organic Framework Membranes. <i>Langmuir</i> , 2013, 29, 7896-7902.	3.5	97
26	Hot Electrons Generated from Doped Quantum Dots via Upconversion of Excitons to Hot Charge Carriers for Enhanced Photocatalysis. <i>Journal of the American Chemical Society</i> , 2015, 137, 5549-5554.	13.7	96
27	Improving propylene/propane separation performance of Zeolitic-Imidazolate framework ZIF-8 Membranes. <i>Chemical Engineering Science</i> , 2015, 124, 20-26.	3.8	94
28	A new superior competitor for exceptional propylene/propane separations: ZIF-67 containing mixed matrix membranes. <i>Journal of Membrane Science</i> , 2017, 526, 367-376.	8.2	94
29	Ultrathin zeolitic-imidazolate framework ZIF-8 membranes on polymeric hollow fibers for propylene/propane separation. <i>Journal of Membrane Science</i> , 2018, 559, 28-34.	8.2	94
30	Oriented Molecular Sieve Membranes by Heteroepitaxial Growth. <i>Journal of the American Chemical Society</i> , 2002, 124, 12966-12968.	13.7	91
31	Rapid One-Pot Microwave Synthesis of Mixed-Linker Hybrid Zeolitic-Imidazolate Framework Membranes for Tunable Gas Separations. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 5586-5593.	8.0	87
32	Synthesis of amine-functionalized ZIF-8 with 3-amino-1,2,4-triazole by postsynthetic modification for efficient CO ₂ -selective adsorbents and beyond. <i>Journal of Materials Chemistry A</i> , 2018, 6, 18912-18919.	10.3	87
33	Generation of Monodisperse Mesoporous Silica Microspheres with Controllable Size and Surface Morphology in a Microfluidic Device. <i>Advanced Functional Materials</i> , 2008, 18, 4014-4021.	14.9	82
34	Defect-induced ripening of zeolitic-imidazolate framework ZIF-8 and its implication to vapor-phase membrane synthesis. <i>Chemical Communications</i> , 2016, 52, 11669-11672.	4.1	62
35	Effects of zinc salts on the microstructure and performance of zeolitic-imidazolate framework ZIF-8 membranes for propylene/propane separation. <i>Microporous and Mesoporous Materials</i> , 2018, 259, 155-162.	4.4	53
36	Defect-dependent stability of highly propylene-selective zeolitic-imidazolate framework ZIF-8 membranes. <i>Journal of Membrane Science</i> , 2017, 529, 105-113.	8.2	51

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37	Facile synthesis of Cd-substituted zeolitic-imidazolate framework Cd-ZIF-8 and mixed-metal CdZn-ZIF-8. <i>Microporous and Mesoporous Materials</i> , 2018, 264, 35-42.	4.4	51
38	Selective Removal of Radioactive Cesium from Nuclear Waste by Zeolites: On the Origin of Cesium Selectivity Revealed by Systematic Crystallographic Studies. <i>Journal of Physical Chemistry C</i> , 2017, 121, 10594-10608.	3.1	49
39	Polycrystalline metal-organic framework (MOF) membranes for molecular separations: Engineering prospects and challenges. <i>Journal of Membrane Science</i> , 2021, 640, 119802.	8.2	48
40	On the nanogate-opening pressures of copper-doped zeolitic imidazolate framework ZIF-8 for the adsorption of propane, propylene, isobutane, and n-butane. <i>Journal of Materials Science</i> , 2019, 54, 5513-5527.	3.7	46
41	Linker-Doped Zeolitic Imidazolate Frameworks (ZIFs) and Their Ultrathin Membranes for Tunable Gas Separations. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 18377-18385.	8.0	44
42	<i>in situ</i> formation of zeolitic-imidazolate framework thin films and composites using modified polymer substrates. <i>Journal of Materials Chemistry A</i> , 2019, 7, 9680-9689.	10.3	40
43	Polyimide/ZIF-7 mixed-matrix membranes: understanding the <i>in situ</i> confined formation of the ZIF-7 phases inside a polymer and their effects on gas separations. <i>Journal of Materials Chemistry A</i> , 2020, 8, 11210-11217.	10.3	40
44	Zeolitic imidazolate framework membranes for gas separations: Current state-of-the-art, challenges, and opportunities. <i>Journal of Industrial and Engineering Chemistry</i> , 2021, 98, 17-41.	5.8	40
45	Strain of MFI crystals in membranes: An <i>in situ</i> synchrotron X-ray study. <i>Microporous and Mesoporous Materials</i> , 2005, 84, 332-337.	4.4	38
46	In-situ linker doping as an effective means to tune zeolitic-imidazolate framework-8 (ZIF-8) fillers in mixed-matrix membranes for propylene/propane separation. <i>Journal of Membrane Science</i> , 2020, 596, 117689.	8.2	35
47	Conversion of methane to higher hydrocarbons in pulsed DC barrier discharge at atmospheric pressure. <i>Korean Journal of Chemical Engineering</i> , 2001, 18, 196-201.	2.7	34
48	Generation of covalently functionalized hierarchical IRMOF-3 by post-synthetic modification. <i>Chemical Engineering Journal</i> , 2012, 181-182, 740-745.	12.7	34
49	High-Flux Zeolitic Imidazolate Framework Membranes for Propylene/Propane Separation by Postsynthetic Linker Exchange. <i>Angewandte Chemie</i> , 2018, 130, 162-167.	2.0	34
50	On the Efficient Separation of Gas Mixtures with the Mixed-Linker Zeolitic-Imidazolate Framework-7-8. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 39631-39644.	8.0	32
51	Highly Propylene-Selective Mixed-Matrix Membranes by <i>in Situ</i> Metal-Organic Framework Formation Using a Polymer-Modification Strategy. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 25949-25957.	8.0	32
52	Ethane diffusion in mixed linker zeolitic imidazolate framework-7-8 by pulsed field gradient NMR in combination with single crystal IR microscopy. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 23967-23975.	2.8	31
53	$\frac{1}{4}$ -Tiles and mortar approach: A simple technique for the facile fabrication of continuous b-oriented MFI silicalite-1 thin films. <i>Microporous and Mesoporous Materials</i> , 2009, 122, 288-293.	4.4	30
54	Synthesis of a new open framework cerium silicate and its structure determination by single crystal X-ray diffraction. Electronic supplementary information (ESI) available: powder XRD patterns, TG data. See http://www.rsc.org/suppdata/cc/b2/b206738m/ . <i>Chemical Communications</i> , 2002, , 2398-2399.	4.1	28

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55	Translational dynamics of water in a nanoporous layered silicate. <i>Physical Review B</i> , 2005, 71, .	3.2	26
56	Use of silver nanoparticles for managing <i>Gibberella fujikuroi</i> on rice seedlings. <i>Crop Protection</i> , 2015, 74, 65-69.	2.1	25
57	Delayed Linker Addition (DLA) Synthesis for Hybrid SOD ZIFs with Unsubstituted Imidazolate Linkers for Propylene/Propane and n-Butane/i-Butane Separations. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 10103-10111.	13.8	23
58	Synthesis of Ultrathin Zeolitic Imidazolate Framework ZIF-8 Membranes on Polymer Hollow Fibers Using a Polymer Modification Strategy for Propylene/Propane Separation. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 14947-14953.	3.7	22
59	Synthesis and gas permeation properties of highly b-oriented MFI silicalite-1 thin membranes with controlled microstructure. <i>Microporous and Mesoporous Materials</i> , 2011, 141, 175-183.	4.4	21
60	Synergistic effects of Nb ₂ O ₅ promoter on Ru/Al ₂ O ₃ for an aqueous-phase hydrodeoxygenation of glycerol to hydrocarbons. <i>Applied Catalysis A: General</i> , 2018, 551, 49-62.	4.3	20
61	Transforming polymer hollow fiber membrane modules to mixed-matrix hollow fiber membrane modules for propylene/propane separation. <i>Journal of Membrane Science</i> , 2020, 612, 118429.	8.2	20
62	Adsorption Equilibrium and Kinetics of Nitrogen, Methane and Carbon Dioxide Gases onto ZIF-8, Cu _{10%} /ZIF-8, and Cu _{30%} /ZIF-8. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 6653-6661.	3.7	19
63	Highly H ₂ O permeable ionic liquid encapsulated metal-organic framework membranes for energy-efficient air-dehumidification. <i>Journal of Materials Chemistry A</i> , 2020, 8, 23645-23653.	10.3	19
64	Rational design of epoxy/ ZIF-8 nanocomposites for enhanced suppression of copper ion migration. <i>Polymer</i> , 2018, 150, 159-168.	3.8	18
65	Effects of metal-organic framework-derived iron carbide phases for CO hydrogenation activity to hydrocarbons. <i>Fuel</i> , 2020, 281, 118779.	6.4	17
66	The polymeric upper bound for N ₂ /NF ₃ separation and beyond; ZIF-8 containing mixed matrix membranes. <i>Journal of Membrane Science</i> , 2015, 486, 29-39.	8.2	16
67	Selective adsorption of carbon dioxide, methane and nitrogen using resorcinol-formaldehyde-xerogel activated carbon. <i>Adsorption</i> , 2017, 23, 933-944.	3.0	15
68	Metal-organic framework membranes: Unprecedented opportunities for gas separations. <i>AIChE Journal</i> , 2021, 67, e17258.	3.6	15
69	Fine-sized Pt nanoparticles dispersed on PdPt bimetallic nanocrystals with non-covalently functionalized graphene toward synergistic effects on the oxygen reduction reaction. <i>Electrochimica Acta</i> , 2017, 257, 412-422.	5.2	14
70	Zeolitic Imidazolate Framework Membranes: Novel Synthesis Methods and Progress Toward Industrial Use. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2022, 13, 529-555.	6.8	14
71	Continuous synthesis of high quality metal-organic framework HKUST-1 crystals and composites via aerosol-assisted synthesis. <i>Polyhedron</i> , 2018, 153, 226-233.	2.2	13
72	Enhancing the propylene/propane separation performances of ZIF-8 membranes by post-synthetic surface polymerization. <i>Journal of Materials Chemistry A</i> , 2022, 10, 1940-1947.	10.3	13

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73	Super-hierarchical Ni/porous-Ni/V ₂ O ₅ nanocomposites. RSC Advances, 2017, 7, 40383-40391.	3.6	12
74	Propylene-Selective Thin Zeolitic Imidazolate Framework Membranes on Ceramic Tubes by Microwave Seeding and Solvothermal Secondary Growth. Crystals, 2018, 8, 373.	2.2	12
75	Computational Design of Functional Amyloid Materials with Cesium Binding, Deposition, and Capture Properties. Journal of Physical Chemistry B, 2018, 122, 7555-7568.	2.6	12
76	Flow synthesis of polycrystalline ZIF-8 membranes on polyvinylidene fluoride hollow fibers for recovery of hydrogen and propylene. Journal of Industrial and Engineering Chemistry, 2020, 88, 319-327.	5.8	12
77	Self-diffusion of pure and mixed gases in mixed-linker zeolitic imidazolate framework-7-8 by high field diffusion NMR. Microporous and Mesoporous Materials, 2019, 288, 109603.	4.4	11
78	Nano-gate opening pressures for the adsorption of isobutane, <i>n</i> -butane, propane, and propylene gases on bimetallic Co/Zn based zeolitic imidazolate frameworks. Dalton Transactions, 2019, 48, 4685-4695.	3.3	11
79	Influence of doped metal center on morphology and pore structure of ZIF-8. MRS Communications, 2019, 9, 288-291.	1.8	11
80	Adsorption of Carbon Dioxide, Methane, and Nitrogen Gases onto ZIF Compounds with Zinc, Cobalt, and Zinc/Cobalt Metal Centers. Journal of Nanomaterials, 2019, 2019, 1-11.	2.7	11
81	Rapid Thermal Processing of Mesoporous Silica Films: A Simple Method to Fabricate Films Micrometers Thick for Microelectromechanical Systems (MEMS) Applications. Industrial & Engineering Chemistry Research, 2005, 44, 8933-8937.	3.7	5
82	Delayed Linker Addition (DLA) Synthesis for Hybrid SOD ZIFs with Unsubstituted Imidazolate Linkers for Propylene/Propane and n-Butane/i-Butane Separations. Angewandte Chemie, 2021, 133, 10191-10199.	2.0	5
83	Recent Progress on Metal-Organic Framework Membranes for Gas Separations: Conventional Synthesis vs. Microwave-Assisted Synthesis. Membrane Journal, 2017, 27, 1-42.	0.4	5
84	Time-Dependent Ni ²⁺ -Ion Exchange in Zeolites Y (FAU, Si/Al = 1.56) and Their Single-Crystal Structures. Journal of Physical Chemistry C, 2016, 120, 28563-28574.	3.1	4
85	Enhancing air-dehumidification performance of polyimide membranes by generating hydrophilic Poly(amic acid) domains using partial hydrolysis. Journal of Membrane Science, 2021, 621, 119006.	8.2	4
86	Structure of a cyclohexane sorption complex of partially dehydrated, fully Mn ²⁺ -exchanged zeolite Y (FAU, Si/Al = 1.56). Microporous and Mesoporous Materials, 2018, 264, 139-146.	4.4	3
87	Effective aperture tuning of a zeolitic-imidazole framework CdIF-1 by controlled thermal amorphization. Journal of Materials Chemistry A, 2022, 10, 4992-4998.	10.3	3
88	Fabrication of Thin Metal-Organic Framework MOF Films on Metal-Ion-crosslinked GO-modified Supports. MRS Advances, 2017, 2, 2497-2504.	0.9	2
89	Influence of 2-ethylimidazole linker-doping in ZIF-8 crystals on intracrystalline self-diffusion of gas molecules by high field diffusion NMR. Microporous and Mesoporous Materials, 2021, 315, 110897.	4.4	2
90	Metal-organic framework membranes: Unprecedented opportunities for gas separations. AIChE Journal, 2021, 67, e17258.	3.6	2

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91	Crystallographic Study of Water Distribution, Dehydration, Rehydration, Demethylation, and Decomposition Processes in Zeolitic Imidazolate Framework ZIF-8. <i>Journal of Physical Chemistry C</i> , 2019, 123, 31032-31042.	3.1	1