Fateme Rezaei

List of Publications by Year in descending order

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119 papers	6,179 citations	50170 46 h-index	79541 73 g-index
120 all docs	120 docs citations	120 times ranked	5093 citing authors

#	Article	IF	Citations
1	Carbon Capture and Utilization Update. Energy Technology, 2017, 5, 834-849.	1.8	424
2	3D-Printed Metalâ€“Organic Framework Monoliths for Gas Adsorption Processes. ACS Applied Materials & Interfaces, 2017, 9, 35908-35916.	4.0	216
3	Structured adsorbents in gas separation processes. Separation and Purification Technology, 2010, 70, 243-256.	3.9	213
4	SO_x/NO_x Removal from Flue Gas Streams by Solid Adsorbents: A Review of Current Challenges and Future Directions. Energy & Fuels, 2015, 29, 5467-5486.	2.5	213
5	Oxidative dehydrogenation of propane to propylene with carbon dioxide. Applied Catalysis B: Environmental, 2018, 220, 429-445.	10.8	209
6	3D-Printed Zeolite Monoliths for CO₂ Removal from Enclosed Environments. ACS Applied Materials & Interfaces, 2016, 8, 27753-27761.	4.0	201
7	Recent Advances in 3D Printing of Structured Materials for Adsorption and Catalysis Applications. Chemical Reviews, 2021, 121, 6246-6291.	23.0	151
8	Optimum structured adsorbents for gas separation processes. Chemical Engineering Science, 2009, 64, 5182-5191.	1.9	150
9	Development of Short-Carbon-Fiber-Reinforced Polypropylene Composite for Car Bonnet. Polymer-Plastics Technology and Engineering, 2008, 47, 351-357.	1.9	129
10	Aminosilane-Grafted Polymer/Silica Hollow Fiber Adsorbents for CO₂ Capture from Flue Gas. ACS Applied Materials & Interfaces, 2013, 5, 3921-3931.	4.0	127
11	Selective dehydration of methanol to dimethyl ether on ZSM-5 nanocrystals. Applied Catalysis B: Environmental, 2012, 119-120, 56-61.	10.8	111
12	Stability of Supported Amine Adsorbents to SO₂ and NO_x in Postcombustion CO₂ Capture. 1. Single-Component Adsorption. Industrial & Engineering Chemistry Research, 2013, 52, 12192-12201.	1.8	111
13	MOF-74 and UTSA-16 film growth on monolithic structures and their CO2 adsorption performance. Chemical Engineering Journal, 2017, 313, 1346-1353.	6.6	107
14	Formulation of Aminosilica Adsorbents into 3D-Printed Monoliths and Evaluation of Their CO₂ Capture Performance. ACS Applied Materials & Interfaces, 2017, 9, 7489-7498.	4.0	106
15	Uniform mesoporous ZSM-5 single crystals catalyst with high resistance to coke formation for methanol deoxygenation. Microporous and Mesoporous Materials, 2012, 151, 26-33.	2.2	98
16	Recent advances in development of amine functionalized adsorbents for CO2 capture. Adsorption, 2020, 26, 5-50.	1.4	94
17	Development of 3D-printed polymer-zeolite composite monoliths for gas separation. Chemical Engineering Journal, 2018, 348, 109-116.	6.6	90
18	Yield of gasoline-range hydrocarbons as a function of uniform ZSM-5 crystal size. Catalysis Communications, 2011, 14, 37-41.	1.6	87

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19	Post-spinning infusion of poly(ethyleneimine) into polymer/silica hollow fiber sorbents for carbon dioxide capture. Chemical Engineering Journal, 2013, 221, 166-175.	6.6	81
20	Combined Capture and Utilization of CO₂ for Syngas Production over Dual-Function Materials. ACS Sustainable Chemistry and Engineering, 2018, 6, 13551-13561.	3.2	80
21	UTSA-16 Growth within 3D-Printed Co-Kaolin Monoliths with High Selectivity for CO₂/CH₄, CO₂/N₂, and CO₂/H₂ Separation. ACS Applied Materials & Interfaces, 2018, 10, 19076-19086.	4.0	79
22	Catalytic cracking of n-hexane for producing light olefins on 3D-printed monoliths of MFI and FAU zeolites. Chemical Engineering Journal, 2018, 333, 545-553.	6.6	75
23	Selective formation of light olefin by n-hexane cracking over HZSM-5: Influence of crystal size and acid sites of nano- and micrometer-sized crystals. Chemical Engineering Journal, 2012, 191, 528-533.	6.6	74
24	Novel Zeolite-5A@MOF-74 Composite Adsorbents with Coreâ€“Shell Structure for H₂ Purification. ACS Applied Materials & Interfaces, 2018, 10, 29656-29666.	4.0	71
25	Development of bismuth-mordenite adsorbents for iodine capture from off-gas streams. Chemical Engineering Journal, 2020, 391, 123583.	6.6	69
26	Shaping amine-based solid CO2 adsorbents: Effects of pelletization pressure on the physical and chemical properties. Microporous and Mesoporous Materials, 2015, 204, 34-42.	2.2	66
27	Abatement of gaseous volatile organic compounds: A process perspective. Catalysis Today, 2020, 350, 100-119.	2.2	66
28	Improving Adsorptive Performance of CaO for High-Temperature CO₂ Capture through Fe and Ga Doping. Energy & Fuels, 2019, 33, 1404-1413.	2.5	65
29	Comparison of Traditional and Structured Adsorbents for CO₂ Separation by Vacuum-Swing Adsorption. Industrial & Engineering Chemistry Research, 2010, 49, 4832-4841.	1.8	64
30	Methanol-to-olefin conversion on 3D-printed ZSM-5 monolith catalysts: Effects of metal doping, mesoporosity and acid strength. Microporous and Mesoporous Materials, 2019, 276, 1-12.	2.2	64
31	Stability of Supported Amine Adsorbents to SO₂ and NO_x in Postcombustion CO₂ Capture. 2. Multicomponent Adsorption. Industrial & Engineering Chemistry Research, 2014, 53, 12103-12110.	1.8	62
32	Evaluation of CO2 adsorption dynamics of polymer/silica supported poly(ethylenimine) hollow fiber sorbents in rapid temperature swing adsorption. International Journal of Greenhouse Gas Control, 2014, 21, 61-71.	2.3	62
33	Amine-Functionalized MIL-101 Monoliths for CO₂ Removal from Enclosed Environments. Energy & Fuels, 2019, 33, 2399-2407.	2.5	61
34	Poly(amide-imide)/Silica Supported PEI Hollow Fiber Sorbents for Postcombustion CO₂ Capture by RTSA. ACS Applied Materials & Interfaces, 2014, 6, 19336-19346.	4.0	57
35	Modeling of rapid temperature swing adsorption using hollow fiber sorbents. Chemical Engineering Science, 2014, 113, 62-76.	1.9	57
36	Abatement of gaseous volatile organic compounds: A material perspective. Catalysis Today, 2020, 350, 3-18.	2.2	56

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37	Light olefins from renewable resources: Selective catalytic dehydration of bioethanol to propylene over zeolite and transition metal oxide catalysts. Catalysis Today, 2016, 276, 62-77.	2.2	55
38	3D-printed ZSM-5 monoliths with metal dopants for methanol conversion in the presence and absence of carbon dioxide. Applied Catalysis B: Environmental, 2019, 245, 486-495.	10.8	55
39	Development of 3D-Printed Polymer-MOF Monoliths for CO₂ Adsorption. Industrial & Engineering Chemistry Research, 2020, 59, 7151-7160.	1.8	55
40	Multicomponent adsorptive separation of CO2, CO, CH4, N2, and H2 over core-shell zeolite-5A@MOF-74 composite adsorbents. Chemical Engineering Journal, 2020, 384, 123251.	6.6	54
41	Gelâ€“Printâ€“Grow: A New Way of 3D Printing Metalâ€“Organic Frameworks. ACS Applied Materials & Interfaces, 2020, 12, 56108-56117.	4.0	53
42	Oxidative dehydrogenation of ethane to ethylene in an integrated CO2 capture-utilization process. Applied Catalysis B: Environmental, 2020, 278, 119329.	10.8	53
43	Development of Potassium- and Sodium-Promoted CaO Adsorbents for CO₂ Capture at High Temperatures. Industrial & Engineering Chemistry Research, 2017, 56, 8292-8300.	1.8	52
44	Composite Polymer/Oxide Hollow Fiber Contactors: Versatile and Scalable Flow Reactors for Heterogeneous Catalytic Reactions in Organic Synthesis. Angewandte Chemie - International Edition, 2015, 54, 6470-6474.	7.2	50
45	MOF-GO Hybrid Nanocomposite Adsorbents for Methane Storage. Industrial & Engineering Chemistry Research, 2018, 57, 17470-17479.	1.8	50
46	CO₂ Capture from Air Using Amineâ€Functionalized Kaolinâ€Based Zeolites. Chemical Engineering and Technology, 2017, 40, 1999-2007.	0.9	49
47	The effects of cell density and intrinsic porosity on structural properties and adsorption kinetics in 3D-printed zeolite monoliths. Chemical Engineering Science, 2020, 218, 115564.	1.9	47
48	Hydrogenolysis of glycerol over Ni, Cu, Zn, and Zr supported on H-beta. Chemical Engineering Journal, 2017, 317, 1-8.	6.6	46
49	Stability of amine-based hollow fiber CO2 adsorbents in the presence of NO and SO2. Fuel, 2015, 160, 153-164.	3.4	44
50	Synthesis of SAPO-34@ZSM-5 and SAPO-34@Silicalite-1 Coreâ€“Shell Zeolite Composites for Ethanol Dehydration. Industrial & Engineering Chemistry Research, 2018, 57, 1446-1453.	1.8	43
51	Ceria nanostructured catalysts for conversion of methanol and carbon dioxide to dimethyl carbonate. Catalysis Today, 2020, 350, 120-126.	2.2	41
52	Structured zeolite NaX coatings on ceramic cordierite monolith supports for PSA applications. Microporous and Mesoporous Materials, 2010, 130, 38-48.	2.2	40
53	Thermal Management of Structured Adsorbents in CO₂ Capture Processes. Industrial & Engineering Chemistry Research, 2012, 51, 4025-4034.	1.8	40
54	Aminosilaneâ€Grafted Zirconiaâ€“Titaniaâ€“Silica Nanoparticles/Torlon Hollow Fiber Composites for CO₂ Capture. ChemSusChem, 2016, 9, 1166-1177.	3.6	38

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55	MOF immobilization on the surface of polymer-cordierite composite monoliths through in-situ crystal growth. Separation and Purification Technology, 2017, 183, 173-180.	3.9	38
56	Synthesis of Cr, Cu, Ni, and Y-Doped 3D-Printed ZSM-5 Monoliths and Their Catalytic Performance for n-Hexane Cracking. ACS Applied Energy Materials, 2018, 1, 2740-2748.	2.5	38
57	Adsorption of iodine from aqueous solutions by aminosilane-grafted mesoporous alumina. Chemical Engineering Journal, 2021, 415, 128968.	6.6	37
58	Carbon Hollow Fiber-Supported Metal-Organic Framework Composites for Gas Adsorption. Energy Technology, 2018, 6, 694-701.	1.8	36
59	Adsorption of Ethane and Ethylene over 3D-Printed Ethane-Selective Monoliths. ACS Sustainable Chemistry and Engineering, 2018, 6, 15228-15237.	3.2	35
60	Highly efficient Pt/Mo-Fe/Ni-based Al2O3-CeO2 catalysts for dry reforming of methane. Catalysis Today, 2020, 350, 80-90.	2.2	34
61	3D-printed HZSM-5 and 3D-HZM5@SAPO-34 structured monoliths with controlled acidity and porosity for conversion of methanol to dimethyl either. Fuel, 2020, 280, 118628.	3.4	34
62	The effect of wall porosity and zeolite film thickness on the dynamic behavior of adsorbents in the form of coated monoliths. Separation and Purification Technology, 2011, 81, 191-199.	3.9	33
63	Adsorptive Removal of Formaldehyde from Air Using Mixed-Metal Oxides. Industrial & Engineering Chemistry Research, 2018, 57, 12916-12925.	1.8	33
64	CO₂ Sorption Performance of Composite Polymer/Aminosilica Hollow Fiber Sorbents: An Experimental and Modeling Study. Industrial & Engineering Chemistry Research, 2015, 54, 1783-1795.	1.8	30
65	Direct aldol and nitroaldol condensation in an aminosilane-grafted Si/Zr/Ti composite hollow fiber as a heterogeneous catalyst and continuous-flow reactor. Journal of Catalysis, 2016, 341, 149-159.	3.1	29
66	Binderless zeolite monoliths production with sacrificial biopolymers. Chemical Engineering Journal, 2021, 407, 128011.	6.6	27
67	Effects of Process Parameters on CO₂/H₂ Separation Performance of 3D-Printed MOF-74 Monoliths. ACS Sustainable Chemistry and Engineering, 2021, 9, 10902-10912.	3.2	27
68	Optimal design of engineered gas adsorbents: Pore-scale level. Chemical Engineering Science, 2012, 69, 270-278.	1.9	26
69	Optimizing ibuprofen concentration for rapid pharmacokinetics on biocompatible zinc-based MOF-74 and UTSA-74. Materials Science and Engineering C, 2020, 117, 111336.	3.8	26
70	High Surface Area Vanadium Phosphate Catalysts for n-Butane Oxidation. Industrial & Engineering Chemistry Research, 2009, 48, 7517-7528.	1.8	25
71	In…situ Formation of a Monodispersed Spherical Mesoporous Nanosilica–Torlon Hollow–Fiber Composite for Carbon Dioxide Capture. ChemSusChem, 2015, 8, 3439-3450.	3.6	25
72	Aminosilane-Grafted SiO₂–ZrO₂ Polymer Hollow Fibers as Bifunctional Microfluidic Reactor for Tandem Reaction of Glucose and Fructose to 5-Hydroxymethylfurfural. ACS Sustainable Chemistry and Engineering, 2018, 6, 17211-17219.	3.2	25

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73	Influence of Rare-Earth and Bimetallic Promoters on Various VPO Catalysts for Partial Oxidation of n-Butane. Catalysis Letters, 2009, 130, 504-516.	1.4	24
74	Porous polymeric hollow fibers as bifunctional catalysts for CO2 conversion to cyclic carbonates. Journal of CO2 Utilization, 2017, 21, 589-596.	3.3	24
75	Effect of Postâ€Functionalization Conditions on the Carbon Dioxide Adsorption Properties of Aminosilaneâ€Grafted Zirconia/Titania/Silicaâ€Poly(amideâ€imide) Composite Hollow Fiber Sorbents. Energy Technology, 2017, 5, 327-337.	1.8	24
76	3D-printed zeolite monoliths with hierarchical porosity for selective methanol to light olefin reaction. Reaction Chemistry and Engineering, 2018, 3, 733-746.	1.9	24
77	Curcumin Delivery on Metalâ€“Organic Frameworks: The Effect of the Metal Center on Pharmacokinetics within the M-MOF-74 Family. ACS Applied Bio Materials, 2021, 4, 3423-3432.	2.3	24
78	Structured Bifunctional Catalysts for CO₂ Activation and Oxidative Dehydrogenation of Propane. ACS Sustainable Chemistry and Engineering, 2021, 9, 5716-5727.	3.2	23
79	Solvothermal synthesis of vanadium phosphate catalysts for n-butane oxidation. Chemical Engineering Journal, 2009, 155, 514-522.	6.6	22
80	Combined Flue Gas Cleanup Process for Simultaneous Removal of SO_x, NO_x, and CO₂â€”A Techno-Economic Analysis. Energy & Fuels, 2017, 31, 4165-4172.	2.5	21
81	Direct Ink Writing of Metal Oxide/H-ZSM-5 Catalysts for n-Hexane Cracking: A New Method of Additive Manufacturing with High Metal Oxide Loading. ACS Applied Materials & Interfaces, 2021, 13, 781-794.	4.0	21
82	Integrated direct air capture and oxidative dehydrogenation of propane with CO2 at isothermal conditions. Applied Catalysis B: Environmental, 2022, 303, 120907.	10.8	21
83	Mixed Alkanolamineâ€Polyethylenimine Functionalized Silica for CO₂ capture. Energy Technology, 2019, 7, 253-262.	1.8	19
84	Atomic Layer Deposited Ni/ZrO₂â€“SiO₂ for Combined Capture and Oxidation of VOCs. ACS Applied Materials & Interfaces, 2020, 12, 39318-39334.	4.0	19
85	Engineering Porous Polymer Hollow Fiber Microfluidic Reactors for Sustainable Câ€“H Functionalization. ACS Applied Materials & Interfaces, 2017, 9, 16288-16295.	4.0	18
86	Advanced buffer materials for indoor air CO2control in commercial buildings. Indoor Air, 2017, 27, 1213-1223.	2.0	18
87	Analysis of equilibrium and dynamic adsorption of benzene vapor over unimodal and bimodal silica-based mixed-metal oxides. Chemical Engineering Journal, 2020, 396, 125273.	6.6	18
88	Mixing Mg-MOF-74 with Zn-MOF-74: A Facile Pathway of Controlling the Pharmacokinetic Release Rate of Curcumin. ACS Applied Bio Materials, 2021, 4, 6874-6880.	2.3	18
89	Diffusion kinetics of ethane, ethylene, and their binary mixtures in ethane-selective adsorbents. Separation and Purification Technology, 2020, 230, 115872.	3.9	17
90	PDMS/PAI-HF composite membrane containing immobilized palladium nanoparticles for 4-nitrophenol reduction. Chemical Engineering Journal, 2021, 410, 128326.	6.6	17

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91	Screening of Adsorbent/Catalyst Composite Monoliths for Carbon Capture-Utilization and Ethylene Production. ACS Applied Materials & Interfaces, 2021, 13, 55198-55207.	4.0	17
92	Toluene Abatement by Simultaneous Adsorption and Oxidation over Mixed-Metal Oxides. Industrial & Engineering Chemistry Research, 2020, 59, 13762-13772.	1.8	16
93	Assessment of CO₂/CH₄ Separation Performance of 3D-Printed Carbon Monoliths in Pressure Swing Adsorption. Industrial & Engineering Chemistry Research, 2021, 60, 16445-16456.	1.8	16
94	A Novel Method of 3D Printing Highâ€Loaded Oxide/Hâ€ZSMâ€5 Catalyst Monoliths for Carbon Dioxide Reduction in Tandem with Propane Dehydrogenation. Advanced Sustainable Systems, 2021, 5, 2000257.	2.7	16
95	Amine-Based Latex Coatings for Indoor Air CO₂ Control in Commercial Buildings. ACS Applied Materials & Interfaces, 2019, 11, 16594-16604.	4.0	15
96	Analysis of dynamic <scp>CO₂</scp> capture over <scp>13X</scp> zeolite monoliths in the presence of <scp>SO_x</scp>, <scp>NO_x</scp> and humidity. AICHE Journal, 2020, 66, e16297.	1.8	15
97	Investigating the microstructure of high-calcium fly ash-based alkali-activated material for aqueous Zn sorption. Environmental Research, 2021, 198, 110484.	3.7	15
98	Combined Ibuprofen and Curcumin Delivery Using Mg-MOF-74 as a Single Nanocarrier. ACS Applied Bio Materials, 2022, 5, 265-271.	2.3	15
99	Metal-Doped Kâ€“Ca Double Salts with Improved Capture Performance and Stability for High-Temperature CO₂ Adsorption. Energy & Fuels, 2021, 35, 4258-4266.	2.5	14
100	Formulation and processing of dual functional Adsorbent/Catalyst structured monoliths using an additively manufactured contactor for direct Capture/Conversion of CO2 with cogeneration of ethylene. Chemical Engineering Journal, 2022, 431, 133224.	6.6	14
101	Process evaluation and kinetic analysis of 3D-printed monoliths comprised of CaO and Cr/H-ZSM-5 in combined CO2 Capture-C2H6 oxidative dehydrogenation to C2H4. Chemical Engineering Journal, 2022, 435, 134706.	6.6	14
102	Oxidative dehydrogenation of propane over 3D printed mixed metal oxides/H-ZSM-5 monolithic catalysts using CO2 as an oxidant. Catalysis Today, 2021, 374, 173-184.	2.2	13
103	Advanced pore characterization and adsorption of light gases over aerogel-derived activated carbon. Microporous and Mesoporous Materials, 2021, 313, 110833.	2.2	13
104	Aminosilane-grafted bismuth-alumina adsorbents: Role of amine loading and bismuth content in iodine immobilization from aqueous solutions. Chemical Engineering Journal, 2021, 409, 128277.	6.6	13
105	Reduced building energy consumption by combined indoor CO2 and H2O composition control. Applied Energy, 2022, 322, 119526.	5.1	13
106	Enhancing the Ethylene Yield over Hybrid Adsorbent Catalyst Materials in CO2-Assisted Oxidative Dehydrogenation of Ethane by Tuning Catalyst Support Properties. Energy & Fuels, 2020, 34, 14483-14492.	2.5	12
107	Investigation of Combined Captureâ€“Destruction of Toluene over Pd/MIL-101 and TiO₂/MIL-101 Dual Function Materials. Energy & Fuels, 2021, 35, 13256-13267.	2.5	12
108	Diffusion kinetics of CO 2 in amineâ€impregnated MILâ€101, alumina, and silica adsorbents. AICHE Journal, 2020, 66, e16785.	1.8	11

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109	Diffusion Kinetics of CO₂, CH₄, and their Binary Mixtures in Porous Organic Cage CC3. Journal of Physical Chemistry C, 2019, 123, 24172-24180.	1.5	10
110	Structureâ€“Property Relationship of Geopolymers for Aqueous Pb Removal. ACS Omega, 2020, 5, 21689-21699.	1.6	10
111	Atomic layer deposited Pt/TiO2-SiO2 and Pt/ZrO2-SiO2 for sequential adsorption and oxidation of VOCs. Chemical Engineering Journal, 2022, 444, 136603.	6.6	10
112	Directly Printed Oxide/ZSM-5 Bifunctional Catalysts for Methanol Conversion to Dimethyl Ether with Exceptional Stability, Conversion, and Selectivity. Energy & Fuels, 2021, 35, 2619-2629.	2.5	9
113	Direct Air Capture of CO 2 in Enclosed Environments: Design under Uncertainty and Techno-Economic Analysis. Computer Aided Chemical Engineering, 2018, 44, 2179-2184.	0.3	8
114	Passive Control of Indoor Formaldehyde by Mixed-Metal Oxide Latex Paints. Environmental Science & Technology, 2021, 55, 9255-9265.	4.6	8
115	Metal- and solvent-free synthesis of aminoalcohols under continuous flow conditions. Reaction Chemistry and Engineering, 2020, 5, 289-299.	1.9	4
116	Analysis of Sequential Adsorptionâ€“Oxidation of VOCs on Atomic Layer-Deposited PtNi/ZrO₂â€“SiO₂ Dual-Function Materials. Energy & Fuels, 2022, 36, 6989-6998.	2.5	3
117	Exceptionally High Gravimetric Methane Storage in Aerogel-Derived Carbons. Industrial & Engineering Chemistry Research, 2020, 59, 19383-19391.	1.8	2
118	Modeling of temperature swing adsorption-oxidation of volatile organic compounds. Chemical Engineering Science, 2022, 250, 117356.	1.9	2
119	Hydrocarbon Molecules Separation using Nanoporous Materials. , 2020, , 217-264.		0