Abdelhamid Sayari

List of Publications by Year
in descending order

113	14,364	18436 62	26548 107
papers	citations	h-index	g-index

114	114	114	10275
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Periodic Mesoporous Silica-Based Organicâ"Inorganic Nanocomposite Materials. Chemistry of Materials, 2001, 13, 3151-3168.	3.2	814
2	Catalysis by Crystalline Mesoporous Molecular Sieves. Chemistry of Materials, 1996, 8, 1840-1852.	3.2	765
3	Sulfated Zirconia-Based Strong Solid-Acid Catalysts: Recent Progress. Catalysis Reviews - Science and Engineering, 1996, 38, 329-412.	5.7	616
4	Stabilization of Amine-Containing CO₂ Adsorbents: Dramatic Effect of Water Vapor. Journal of the American Chemical Society, 2010, 132, 6312-6314.	6.6	531
5	Flue gas treatment via CO2 adsorption. Chemical Engineering Journal, 2011, 171, 760-774.	6.6	476
6	Applications of Pore-Expanded Mesoporous Silica. 5. Triamine Grafted Material with Exceptional CO2Dynamic and Equilibrium Adsorption Performance. Industrial & Engineering Chemistry Research, 2007, 46, 446-458.	1.8	450
7	Applications of Pore-Expanded Mesoporous Silica. 2. Development of a High-Capacity, Water-Tolerant Adsorbent for CO2. Industrial & Engineering Chemistry Research, 2005, 44, 8007-8013.	1.8	364
8	Applications of Pore-Expanded Mesoporous Silicas. 3. Triamine Silane Grafting for Enhanced CO2Adsorption. Industrial & Engineering Chemistry Research, 2006, 45, 3248-3255.	1.8	362
9	New Insights into the Interactions of CO₂ with Amine-Functionalized Silica. Industrial & Engineering Chemistry Research, 2008, 47, 9406-9412.	1.8	361
10	Modeling adsorption of CO2 on amine-functionalized mesoporous silica. 2: Kinetics and breakthrough curves. Chemical Engineering Journal, 2010, 161, 182-190.	6.6	348
11	Simple Synthesis Route to Monodispersed SBA-15 Silica Rods. Journal of the American Chemical Society, 2004, 126, 14348-14349.	6.6	338
12	Applications of Pore-Expanded Mesoporous Silica. 1. Removal of Heavy Metal Cations and Organic Pollutants from Wastewater. Chemistry of Materials, 2005, 17, 212-216.	3.2	317
13	Polyethylenimine-Impregnated Mesoporous Silica: Effect of Amine Loading and Surface Alkyl Chains on CO₂ Adsorption. Langmuir, 2011, 27, 12411-12416.	1.6	303
14	CO₂-Induced Degradation of Amine-Containing Adsorbents: Reaction Products and Pathways. Journal of the American Chemical Society, 2012, 134, 13834-13842.	6.6	278
15	Effect of pore expansion and amine functionalization ofÂmesoporous silica on CO2 adsorption over a wide range ofÂconditions. Adsorption, 2009, 15, 318-328.	1.4	268
16	Comprehensive study of ultra-microporous nitrogen-doped activated carbon for CO2 capture. Carbon, 2015, 93, 68-80.	5.4	263
17	Stability of amine-functionalized CO₂ adsorbents: a multifaceted puzzle. Chemical Society Reviews, 2019, 48, 3320-3405.	18.7	260
18	Adsorption of CO₂-Containing Gas Mixtures over Amine-Bearing Pore-Expanded MCM-41 Silica: Application for Gas Purification. Industrial & Engineering Chemistry Research, 2010, 49, 359-365.	1.8	253

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19	Expanding the Pore Size of MCM-41 Silicas:â€‰ Use of Amines as Expanders in Direct Synthesis and Postsynthesis Procedures. Journal of Physical Chemistry B, 1999, 103, 3651-3658.	1.2	234
20	Amine-bearing mesoporous silica for CO2 removal from dry and humid air. Chemical Engineering Science, 2010, 65, 3695-3698.	1.9	233
21	Activated carbon with optimum pore size distribution for hydrogen storage. Carbon, 2016, 99, 289-294.	5.4	215
22	New Insights into the Synthesis, Morphology, and Growth of Periodic Mesoporous Organosilicas. Chemistry of Materials, 2000, 12, 3857-3863.	3.2	200
23	Relations between Pore Structure Parameters and Their Implications for Characterization of MCM-41 Using Gas Adsorption and X-ray Diffraction. Chemistry of Materials, 1999, 11, 492-500.	3.2	194
24	Understanding the Effect of Water on CO₂ Adsorption. Chemical Reviews, 2021, 121, 7280-7345.	23.0	194
25	CO2 capture on polyethylenimine-impregnated hydrophobic mesoporous silica: Experimental and kinetic modeling. Chemical Engineering Journal, 2011, 173, 72-79.	6.6	186
26	New Approaches to Pore Size Engineering of Mesoporous Silicates. Advanced Materials, 1998, 10, 1376-1379.	11.1	185
27	Adsorption of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" display="inline" overflow="scroll"><mml:mrow><mml:msub><mml:mrow><mml:mrow><mml:mi mathvariant="normal">CO</mml:mi></mml:mrow></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mm from dry gases on MCM-41 silica at ambient temperature and high pressure. 1: Pure <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si2.gif" display="inline" overflow="scroll"><mml:mrow><mml:msub><mm. Chemical Engineering Science, 2009, 64, 3721-3728.	1.9	181
28	Thermal, Oxidative, and CO₂-Induced Degradation of Supported Polyethylenimine Adsorbents. Industrial & Engineering Chemistry Research, 2012, 51, 6887-6894.	1.8	178
29	CO₂ Deactivation of Supported Amines: Does the Nature of Amine Matter?. Langmuir, 2012, 28, 4241-4247.	1.6	176
30	Modeling CO2 adsorption on amine-functionalized mesoporous silica: 1. A semi-empirical equilibrium model. Chemical Engineering Journal, 2010, 161, 173-181.	6.6	172
31	Adsorption of copper on amine-functionalized SBA-15 prepared by co-condensation: Equilibrium properties. Chemical Engineering Journal, 2011, 166, 445-453.	6.6	167
32	Amine-Bearing Mesoporous Silica for CO₂ and H₂S Removal from Natural Gas and Biogas. Langmuir, 2009, 25, 13275-13278.	1.6	166
33	Adsorption of CO2 from dry gases on MCM-41 silica at ambient temperature and high pressure. 2: Adsorption of CO2/N2, CO2/CH4 and CO2/H2 binary mixtures. Chemical Engineering Science, 2009, 64, 3729-3735.	1.9	149
34	Further investigations of CO2 capture using triamine-grafted pore-expanded mesoporous silica. Chemical Engineering Journal, 2010, 158, 513-519.	6.6	146
35	Effect of the Pore Length on CO₂ Adsorption over Amine-Modified Mesoporous Silicas. Energy & Fuels, 2011, 25, 4206-4210.	2.5	144
36	New Approach to Evaluate Pore Size Distributions and Surface Areas for Hydrophobic Mesoporous Solids. Journal of Physical Chemistry B, 1999, 103, 10670-10678.	1.2	135

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37	Molecularly Ordered Nanoporous Organosilicates Prepared with and without Surfactants. Journal of the American Chemical Society, 2005, 127, 12194-12195.	6.6	135
38	Adsorption of heavy metals on amine-functionalized SBA-15 prepared by co-condensation: Applications to real water samples. Desalination, 2012, 285, 62-67.	4.0	128
39	Periodic mesoporous materials: synthesis, characterization and potential applications. Studies in Surface Science and Catalysis, 1996, , 1-46.	1.5	123
40	A General Correlation for the129Xe NMR Chemical Shiftâ^'Pore Size Relationship in Porous Silica-Based Materials. Langmuir, 2002, 18, 5653-5656.	1.6	119
41	Light alkane dehydrogenation over mesoporous Cr2O3/Al2O3 catalysts. Applied Catalysis A: General, 2010, 389, 155-164.	2.2	114
42	A highly efficient CaO-based CO2 sorbent prepared by a citrate-assisted solâ€“gel technique. Chemical Engineering Journal, 2015, 262, 913-920.	6.6	113
43	CO2 capture using triamine-grafted SBA-15: The impact of the support pore structure. Chemical Engineering Journal, 2018, 334, 1260-1269.	6.6	113
44	A Unified Interpretation of High-Temperature Pore Size Expansion Processes in MCM-41 Mesoporous Silicas. Journal of Physical Chemistry B, 1999, 103, 4590-4598.	1.2	110
45	Degradation of amine-supported CO2 adsorbents in the presence of oxygen-containing gases. Microporous and Mesoporous Materials, 2011, 145, 146-149.	2.2	106
46	Applications of pore-expanded mesoporous silica 6. Novel synthesis of monodispersed supported palladium nanoparticles and their catalytic activity for Suzuki reaction. Journal of Catalysis, 2007, 246, 60-65.	3.1	105
47	Nanoporous zirconium oxide prepared using the supramolecular templating approach. Catalysis Letters, 1996, 38, 219-223.	1.4	102
48	Isothermal versus Non-isothermal Adsorptionâ^'Desorption Cycling of Triamine-Grafted Pore-Expanded MCM-41 Mesoporous Silica for CO₂ Capture from Flue Gas. Energy & Fuels, 2010, 24, 5273-5280.	2.5	101
49	Applications of Pore-Expanded Mesoporous Silica. 7. Adsorption of Volatile Organic Compounds. Environmental Science & Technology, 2007, 41, 4761-4766.	4.6	88
50	Simultaneous Adsorption of H₂S and CO₂ on Triamine-Grafted Pore-Expanded Mesoporous MCM-41 Silica. Energy & Fuels, 2011, 25, 1310-1315.	2.5	86
51	Unprecedented Expansion of the Pore Size and Volume of Periodic Mesoporous Silica. Angewandte Chemie - International Edition, 2000, 39, 2920-2922.	7.2	85
52	Supported Polytertiary Amines: Highly Efficient and Selective SO₂ Adsorbents. Environmental Science & Technology, 2014, 48, 2025-2034.	4.6	85
53	Enhanced Adsorption Efficiency through Materials Design for Direct Air Capture over Supported Polyethylenimine. ChemSusChem, 2016, 9, 2796-2803.	3.6	82
54	A Unified Approach to CO₂â€“Amine Reaction Mechanisms. ACS Omega, 2020, 5, 26125-26133.	1.6	80

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55	New insights into pore-size expansion of mesoporous silicates using long-chain amines. Microporous and Mesoporous Materials, 2000, 35-36, 545-553.	2.2	77
56	SBA-15 Templated Mesoporous Carbon:â€‰ New Insights into the SBA-15 Pore Structure. Chemistry of Materials, 2005, 17, 6108-6113.	3.2	74
57	Oxidative degradation of silica-supported polyethylenimine for CO₂adsorption: insights into the nature of deactivated species. Physical Chemistry Chemical Physics, 2014, 16, 1529-1535.	1.3	74
58	Synthesis of Periodic Mesoporous Phenylenesilica under Acidic Conditions with Novel Molecular Order in the Pore Walls. Chemistry of Materials, 2003, 15, 4886-4889.	3.2	72
59	Influence of regeneration conditions on the cyclic performance of amine-grafted mesoporous silica for CO2 capture: An experimental and statistical study. Chemical Engineering Science, 2010, 65, 4166-4172.	1.9	71
60	Periodic mesoporous organosilicas functionalized with a wide variety of amines for CO2 adsorption. Physical Chemistry Chemical Physics, 2013, 15, 9792.	1.3	69
61	Triamine-grafted pore-expanded mesoporous silica for CO2 capture: Effect of moisture and adsorbent regeneration strategies. Adsorption, 2010, 16, 567-575.	1.4	64
62	Adsorption of CO2-containing gas mixtures over amine-bearing pore-expanded MCM-41 silica: application for CO2 separation. Adsorption, 2011, 17, 395-401.	1.4	64
63	Adsorption of copper on amine-functionalized SBA-15 prepared by co-condensation: Kinetics properties. Chemical Engineering Journal, 2011, 166, 454-459.	6.6	64
64	Selective removal of SO2 over tertiary amine-containing materials. Chemical Engineering Journal, 2014, 240, 462-468.	6.6	64
65	Highly Ordered MCM-41 Silica Prepared in the Presence of Decyltrimethylammonium Bromide. Journal of Physical Chemistry B, 2000, 104, 4835-4839.	1.2	62
66	Comparative study of triglyceride transesterification in the presence of catalytic amounts of sodium, magnesium, and calcium methoxides. Applied Catalysis A: General, 2008, 339, 45-52.	2.2	61
67	Ethane dehydrogenation over pore-expanded mesoporous silica-supported chromium oxide: 2. Catalytic properties and nature of active sites. Journal of Molecular Catalysis A, 2009, 301, 159-165.	4.8	60
68	Nitrogen-Doped Carbons: Remarkably Stable Materials for CO₂ Capture. Energy & Fuels, 2014, 28, 2727-2731.	2.5	59
69	Nonionic oligomeric polymer directed synthesis of highly ordered large pore periodic mesoporous organosilica. Chemical Communications, 2002, , 2582-2583.	2.2	54
70	Optimization of copper removal efficiency by adsorption on amine-modified SBA-15: Experimental design methodology. Chemical Engineering Journal, 2011, 167, 91-98.	6.6	52
71	Insights into the Hydrothermal Stability of Triamineâ€Functionalized SBAâ€15 Silica for CO₂ Adsorption. ChemSusChem, 2017, 10, 4037-4045.	3.6	50
72	Nitrogen Adsorption Study of MCM-41 Molecular Sieves Synthesized Using Hydrothermal Restructuring. Adsorption, 2000, 6, 47-51.	1.4	49

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73	Applications of pore-expanded MCM-41 silica: 4. Synthesis of a highly active base catalyst. Catalysis Communications, 2007, 8, 829-833.	1.6	40
74	Grafted propyldiethanolamine for selective removal of SO 2 in the presence of CO 2. Chemical Engineering Journal, 2016, 289, 142-149.	6.6	40
75	Removal of cadmium from aqueous solutions by adsorption onto polyethylenimine-functionalized mesocellular silica foam: Equilibrium properties. Journal of the Taiwan Institute of Chemical Engineers, 2016, 66, 372-378.	2.7	39
76	Rhodium ComplexedC2-PAMAM Dendrimers Supported on Large Pore Davisil Silica as Catalysts for the Hydroformylation of Olefins. Advanced Synthesis and Catalysis, 2005, 347, 1379-1388.	2.1	38
77	Long-Term Effect of Steam Exposure on CO₂ Capture Performance of Amine-Grafted Silica. ACS Applied Materials & Interfaces, 2017, 9, 43747-43754.	4.0	36
78	Molecularly Ordered Biphenyl-Bridged Mesoporous Organosilica Prepared under Acidic Conditions. Chemistry of Materials, 2007, 19, 4117-4119.	3.2	35
79	Amine-modified mesoporous silica for quantitative adsorption and release of hydroxytyrosol and other phenolic compounds from olive mill wastewater. Journal of the Taiwan Institute of Chemical Engineers, 2017, 70, 111-118.	2.7	34
80	Ethane dehydrogenation over pore-expanded mesoporous silica supported chromium oxide: 1. Catalysts preparation and characterization. Journal of Molecular Catalysis A, 2009, 301, 152-158.	4.8	31
81	Mesoporous Silicateâ˜Surfactant Composites with Hydrophobic Surfaces and Tailored Pore Sizes. Journal of Physical Chemistry B, 2002, 106, 10096-10101.	1.2	29
82	Molecularâ€Ł evel Insights into the Oxidative Degradation of Grafted Amines. Chemistry - A European Journal, 2013, 19, 10543-10550.	1.7	29
83	Physicochemical Properties Can Be Key Determinants of Mesoporous Silica Nanoparticle Potency in Vitro. ACS Nano, 2018, 12, 12062-12079.	7.3	29
84	Sulfated Zirconia as a Cocatalyst in Fischerâ˜Tropsch Synthesis. Energy & Fuels, 1996, 10, 561-565.	2.5	26
85	Synthesis and Physicochemical Characterization of Mesoporous<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" id="M1"><mml:mtext>S</mml:mtext><mml:mtext>i</mml:mtext><mml:msub><mml:mrow><mml:mtext>O</mml:mtext></mml:mrow> Journal of Nanomaterials, 2014, 2014, 1-12.	1.5	26
86	Synthesis of onion-like mesoporous silica from sodium silicate in the presence of Î±,Ï‰-diamine surfactant. Microporous and Mesoporous Materials, 2008, 114, 387-394.	2.2	25
87	Synthesis of MCM-48 Silica Using a Gemini Surfactant with a Rigid Spacer. Chemistry of Materials, 2006, 18, 4147-4150.	3.2	22
88	Mesoporous Organosilicates from Multiple Precursors: Co-Condensation or Phase Segregation/Separation?. Chemistry of Materials, 2008, 20, 2980-2984.	3.2	22
89	Substrate dependence on the fixation of CO2 to cyclic carbonates over reusable porous hybrid solids. Journal of CO2 Utilization, 2018, 26, 564-574.	3.3	22
90	Production of ultra highly pure H2 and higher hydrocarbons from methane in one step at mild temperatures and development of the catalyst under non-equilibrium reaction conditions. Chemical Communications, 2001, , 1952-1953.	2.2	21

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91	Modification of Surface and Structural Properties of Ordered Mesoporous Silicates. Adsorption, 1999, 5, 39-45.	1.4	19
92	Bifunctional MCM-41 aluminosilicate supported Ir with adjusted metal and acid functionality for catalytic ring opening of 1,2-dimethylcyclohexane. Journal of Catalysis, 2016, 344, 729-740.	3.1	15
93	Solid Phase Extraction of Bio-Oil Model Compounds and Lignin-Derived Bio-Oil Using Amine-Functionalized Mesoporous Silicas. ACS Sustainable Chemistry and Engineering, 2018, 6, 9716-9724.	3.2	15
94	Catalysis Over Pore-Expanded MCM-41 Mesoporous Materials. Topics in Catalysis, 2010, 53, 154-167.	1.3	14
95	Effect of regeneration conditions on the cyclic performance of amine-modified SBA-15 for removal of copper from aqueous solutions: Composite surface design methodology. Desalination, 2011, 277, 54-60.	4.0	14
96	Solâ€“Gel Assisted Preparation of Chromiaâ€“Silica Catalysts for Non-Oxidative Dehydrogenation of Propane. Catalysis Letters, 2008, 126, 164-172.	1.4	13
97	One-pot synthesis of large-pore AlMCM-41 aluminosilicates with high stability and adjustable acidity. Microporous and Mesoporous Materials, 2018, 262, 166-174.	2.2	13
98	Synthesis and Characterization of Titanium-Substituted Large Pore SSZ-42 Zeolite. Catalysis Letters, 2001, 77, 227-231.	1.4	12
99	Covalently Immobilized Polyethylenimine for CO₂ Adsorption. Industrial & Engineering Chemistry Research, 2020, 59, 6944-6950.	1.8	11
100	Odd-even effect in the synthesis of mesoporous silicate molecular sieves in the presence of alkyl cetyl dimethyl ammonium bromide. Journal of Porous Materials, 1996, 3, 77-82.	1.3	9
101	Facile synthesis route to monodispersed platelet-like SBA-15 silica. Journal of Porous Materials, 2012, 19, 745-749.	1.3	8
102	Novel porous organocatalysts for cycloaddition of CO2 and epoxides. RSC Advances, 2019, 9, 24527-24538.	1.7	5
103	Vanadium Containing Large Pore Zeolites with ZSM-12 and SSZ-24 Structures. Materials Research Society Symposia Proceedings, 1994, 371, 87.	0.1	4
104	MESOPOROUS MATERIALS. , 2003, , 39-68.		4
105	Modeling Adsorption of Copper on Amine-Functionalized SBA-15: Predicting Breakthrough Curves. Journal of Environmental Engineering, ASCE, 2013, 139, 95-103.	0.7	4
106	Mesoporous Silica and Silicaâ€“Organic Hybrids. , 2004, , 852-860.		3
107	Environmentally Friendly Gas Phase Grafting of Mesoporous Silicas. Chemical Engineering Journal, 2021, 430, 132627.	6.6	2
108	Adsorption Separation of Methyl Chloride from Nitrogen Using ZSM-5 and Mesoporous SBA-15. Adsorption Science and Technology, 2006, 24, 79-99.	1.5	1

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109	Photophysical Properties of Methyl Triazone Included in MCMâ€41^{Â¶}. Photochemistry and Photobiology, 2005, 81, 949-952.	1.3	0
110	Hydrothermally stable onion-like mesoporous silica. Studies in Surface Science and Catalysis, 2008, 174, 293-296.	1.5	0
111	UREASE IMMOBILIZATION ON PORE-EXPANDED MESOPOROUS SILICA AND ITS CATALYTIC EFFECT ON HYDROLYSIS OF UREA. , 2008, , .		0
112	Carbon Dioxide Capture from Post-combustion Streams Using Amine-functionalized Nanoporous Materials. , 2012, , 407-432.		0
113	ADSORPTION OF VOLATILE ORGANIC COMPOUNDS ON PORE EXPANDED MESOPOROUS MATERIALS. , 2008, , .		0