

Abdelhamid Sayari

List of Publications by Year in descending order

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113
papers

14,364
citations

21215

62
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30277

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114
all docs

114
docs citations

114
times ranked

11643
citing authors

#	ARTICLE	IF	CITATIONS
1	Understanding the Effect of Water on CO ₂ Adsorption. <i>Chemical Reviews</i> , 2021, 121, 7280-7345.	23.0	194
2	Environmentally Friendly Gas Phase Grafting of Mesoporous Silicas. <i>Chemical Engineering Journal</i> , 2021, 430, 132627.	6.6	2
3	Covalently Immobilized Polyethylenimine for CO ₂ Adsorption. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 6944-6950.	1.8	11
4	A Unified Approach to CO ₂ Amine Reaction Mechanisms. <i>ACS Omega</i> , 2020, 5, 26125-26133.	1.6	80
5	Novel porous organocatalysts for cycloaddition of CO ₂ and epoxides. <i>RSC Advances</i> , 2019, 9, 24527-24538.	1.7	5
6	Stability of amine-functionalized CO ₂ adsorbents: a multifaceted puzzle. <i>Chemical Society Reviews</i> , 2019, 48, 3320-3405.	18.7	260
7	CO ₂ capture using triamine-grafted SBA-15: The impact of the support pore structure. <i>Chemical Engineering Journal</i> , 2018, 334, 1260-1269.	6.6	113
8	One-pot synthesis of large-pore AlMCM-41 aluminosilicates with high stability and adjustable acidity. <i>Microporous and Mesoporous Materials</i> , 2018, 262, 166-174.	2.2	13
9	Physicochemical Properties Can Be Key Determinants of Mesoporous Silica Nanoparticle Potency <i>in Vitro</i> . <i>ACS Nano</i> , 2018, 12, 12062-12079.	7.3	29
10	Substrate dependence on the fixation of CO ₂ to cyclic carbonates over reusable porous hybrid solids. <i>Journal of CO₂ Utilization</i> , 2018, 26, 564-574.	3.3	22
11	Solid Phase Extraction of Bio-Oil Model Compounds and Lignin-Derived Bio-Oil Using Amine-Functionalized Mesoporous Silicas. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 9716-9724.	3.2	15
12	Insights into the Hydrothermal Stability of Triamine-Functionalized SBA-15 Silica for CO ₂ Adsorption. <i>ChemSusChem</i> , 2017, 10, 4037-4045.	3.6	50
13	Long-Term Effect of Steam Exposure on CO ₂ Capture Performance of Amine-Grafted Silica. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 43747-43754.	4.0	36
14	Amine-modified mesoporous silica for quantitative adsorption and release of hydroxytyrosol and other phenolic compounds from olive mill wastewater. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2017, 70, 111-118.	2.7	34
15	Removal of cadmium from aqueous solutions by adsorption onto polyethylenimine-functionalized mesocellular silica foam: Equilibrium properties. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2016, 66, 372-378.	2.7	39
16	Bifunctional MCM-41 aluminosilicate supported Ir with adjusted metal and acid functionality for catalytic ring opening of 1,2-dimethylcyclohexane. <i>Journal of Catalysis</i> , 2016, 344, 729-740.	3.1	15
17	Enhanced Adsorption Efficiency through Materials Design for Direct Air Capture over Supported Polyethylenimine. <i>ChemSusChem</i> , 2016, 9, 2796-2803.	3.6	82
18	Grafted propyl-diethanolamine for selective removal of SO ₂ in the presence of CO ₂ . <i>Chemical Engineering Journal</i> , 2016, 289, 142-149.	6.6	40

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19	Activated carbon with optimum pore size distribution for hydrogen storage. Carbon, 2016, 99, 289-294.	5.4	215
20	Comprehensive study of ultra-microporous nitrogen-doped activated carbon for CO ₂ capture. Carbon, 2015, 93, 68-80.	5.4	263
21	A highly efficient CaO-based CO ₂ sorbent prepared by a citrate-assisted sol-gel technique. Chemical Engineering Journal, 2015, 262, 913-920.	6.6	113
22	Synthesis and Physicochemical Characterization of Mesoporous <small>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></small> Journal of Nanomaterials, 2014, 2014, 1-12.	1.5	26
23	Selective removal of SO ₂ over tertiary amine-containing materials. Chemical Engineering Journal, 2014, 240, 462-468.	6.6	64
24	Oxidative degradation of silica-supported polyethylenimine for CO ₂ adsorption: insights into the nature of deactivated species. Physical Chemistry Chemical Physics, 2014, 16, 1529-1535.	1.3	74
25	Supported Polytertiary Amines: Highly Efficient and Selective SO ₂ Adsorbents. Environmental Science & Technology, 2014, 48, 2025-2034.	4.6	85
26	Nitrogen-Doped Carbons: Remarkably Stable Materials for CO ₂ Capture. Energy & Fuels, 2014, 28, 2727-2731.	2.5	59
27	Periodic mesoporous organosilicas functionalized with a wide variety of amines for CO ₂ adsorption. Physical Chemistry Chemical Physics, 2013, 15, 9792.	1.3	69
28	Modeling Adsorption of Copper on Amine-Functionalized SBA-15: Predicting Breakthrough Curves. Journal of Environmental Engineering, ASCE, 2013, 139, 95-103.	0.7	4
29	Molecular-Level Insights into the Oxidative Degradation of Grafted Amines. Chemistry - A European Journal, 2013, 19, 10543-10550.	1.7	29
30	Carbon Dioxide Capture from Post-combustion Streams Using Amine-functionalized Nanoporous Materials. , 2012, , 407-432.		0
31	Facile synthesis route to monodispersed platelet-like SBA-15 silica. Journal of Porous Materials, 2012, 19, 745-749.	1.3	8
32	Thermal, Oxidative, and CO ₂ -Induced Degradation of Supported Polyethylenimine Adsorbents. Industrial & Engineering Chemistry Research, 2012, 51, 6887-6894.	1.8	178
33	CO ₂ Deactivation of Supported Amines: Does the Nature of Amine Matter?. Langmuir, 2012, 28, 4241-4247.	1.6	176
34	CO ₂ -Induced Degradation of Amine-Containing Adsorbents: Reaction Products and Pathways. Journal of the American Chemical Society, 2012, 134, 13834-13842.	6.6	278
35	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
36	Effect of the Pore Length on CO ₂ Adsorption over Amine-Modified Mesoporous Silicas. Energy & Fuels, 2011, 25, 4206-4210.	2.5	144

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37	Polyethylenimine-Impregnated Mesoporous Silica: Effect of Amine Loading and Surface Alkyl Chains on CO ₂ Adsorption. Langmuir, 2011, 27, 12411-12416.	1.6	303
38	Simultaneous Adsorption of H ₂ S and CO ₂ on Triamine-Grafted Pore-Expanded Mesoporous MCM-41 Silica. Energy & Fuels, 2011, 25, 1310-1315.	2.5	86
39	Degradation of amine-supported CO ₂ adsorbents in the presence of oxygen-containing gases. Microporous and Mesoporous Materials, 2011, 145, 146-149.	2.2	106
40	CO ₂ capture on polyethylenimine-impregnated hydrophobic mesoporous silica: Experimental and kinetic modeling. Chemical Engineering Journal, 2011, 173, 72-79.	6.6	186
41	Adsorption of CO ₂ -containing gas mixtures over amine-bearing pore-expanded MCM-41 silica: application for CO ₂ separation. Adsorption, 2011, 17, 395-401.	1.4	64
42	Adsorption of copper on amine-functionalized SBA-15 prepared by co-condensation: Equilibrium properties. Chemical Engineering Journal, 2011, 166, 445-453.	6.6	167
43	Adsorption of copper on amine-functionalized SBA-15 prepared by co-condensation: Kinetics properties. Chemical Engineering Journal, 2011, 166, 454-459.	6.6	64
44	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
45	Flue gas treatment via CO ₂ adsorption. Chemical Engineering Journal, 2011, 171, 760-774.	6.6	476
46	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
47	Modeling adsorption of CO ₂ on amine-functionalized mesoporous silica. 2: Kinetics and breakthrough curves. Chemical Engineering Journal, 2010, 161, 182-190.	6.6	348
48	Triamine-grafted pore-expanded mesoporous silica for CO ₂ capture: Effect of moisture and adsorbent regeneration strategies. Adsorption, 2010, 16, 567-575.	1.4	64
49	Catalysis Over Pore-Expanded MCM-41 Mesoporous Materials. Topics in Catalysis, 2010, 53, 154-167.	1.3	14
50	Light alkane dehydrogenation over mesoporous Cr ₂ O ₃ /Al ₂ O ₃ catalysts. Applied Catalysis A: General, 2010, 389, 155-164.	2.2	114
51	Further investigations of CO ₂ capture using triamine-grafted pore-expanded mesoporous silica. Chemical Engineering Journal, 2010, 158, 513-519.	6.6	146
52	Modeling CO ₂ adsorption on amine-functionalized mesoporous silica: 1. A semi-empirical equilibrium model. Chemical Engineering Journal, 2010, 161, 173-181.	6.6	172
53	Amine-bearing mesoporous silica for CO ₂ removal from dry and humid air. Chemical Engineering Science, 2010, 65, 3695-3698.	1.9	233
54	Influence of regeneration conditions on the cyclic performance of amine-grafted mesoporous silica for CO ₂ capture: An experimental and statistical study. Chemical Engineering Science, 2010, 65, 4166-4172.	1.9	71

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55	Stabilization of Amine-Containing CO ₂ Adsorbents: Dramatic Effect of Water Vapor. Journal of the American Chemical Society, 2010, 132, 6312-6314.	6.6	531
56	Adsorption of CO ₂ -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
57	Isothermal versus Non-isothermal Adsorption-Desorption Cycling of Triamine-Grafted Pore-Expanded MCM-41 Mesoporous Silica for CO ₂ Capture from Flue Gas. Energy & Fuels, 2010, 24, 5273-5280.	2.5	101
58	Effect of pore expansion and amine functionalization of mesoporous silica on CO ₂ adsorption over a wide range of conditions. Adsorption, 2009, 15, 318-328.	1.4	268
59	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
60	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
61	Adsorption of CO ₂ from dry gases on MCM-41 silica at ambient temperature and high pressure. 1: Pure CO ₂ from dry gases on MCM-41 silica at ambient temperature and high pressure. 1: Pure	1.9	181
62	Adsorption of CO ₂ from dry gases on MCM-41 silica at ambient temperature and high pressure. 2: Adsorption of CO ₂ /N ₂ , CO ₂ /CH ₄ and CO ₂ /H ₂ binary mixtures. Chemical Engineering Science, 2009, 64, 3729-3735.	1.9	149
63	Amine-Bearing Mesoporous Silica for CO ₂ and H ₂ S Removal from Natural Gas and Biogas. Langmuir, 2009, 25, 13275-13278.	1.6	166
64	Sol-Gel Assisted Preparation of Chromia-Silica Catalysts for Non-Oxidative Dehydrogenation of Propane. Catalysis Letters, 2008, 126, 164-172.	1.4	13
65	Synthesis of onion-like mesoporous silica from sodium silicate in the presence of 1,3-diamine surfactant. Microporous and Mesoporous Materials, 2008, 114, 387-394.	2.2	25
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	New Insights into the Interactions of CO ₂ with Amine-Functionalized Silica. Industrial & Engineering Chemistry Research, 2008, 47, 9406-9412.	1.8	361
68	Mesoporous Organosilicates from Multiple Precursors: Co-Condensation or Phase Segregation/Separation?. Chemistry of Materials, 2008, 20, 2980-2984.	3.2	22
69	Hydrothermally stable onion-like mesoporous silica. Studies in Surface Science and Catalysis, 2008, 174, 293-296.	1.5	0
70	UREASE IMMOBILIZATION ON PORE-EXPANDED MESOPOROUS SILICA AND ITS CATALYTIC EFFECT ON HYDROLYSIS OF UREA. , 2008, , .		0
71	ADSORPTION OF VOLATILE ORGANIC COMPOUNDS ON PORE EXPANDED MESOPOROUS MATERIALS. , 2008, , .		0
72	Molecularly Ordered Biphenyl-Bridged Mesoporous Organosilica Prepared under Acidic Conditions. Chemistry of Materials, 2007, 19, 4117-4119.	3.2	35

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73	Applications of Pore-Expanded Mesoporous Silica. 7. Adsorption of Volatile Organic Compounds. Environmental Science & Technology, 2007, 41, 4761-4766.	4.6	88
74	Applications of Pore-Expanded Mesoporous Silica. 5. Triamine Grafted Material with Exceptional CO ₂ Dynamic and Equilibrium Adsorption Performance. Industrial & Engineering Chemistry Research, 2007, 46, 446-458.	1.8	450
75	Applications of pore-expanded MCM-41 silica: 4. Synthesis of a highly active base catalyst. Catalysis Communications, 2007, 8, 829-833.	1.6	40
76	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
77	Applications of Pore-Expanded Mesoporous Silicas. 3. Triamine Silane Grafting for Enhanced CO ₂ Adsorption. Industrial & Engineering Chemistry Research, 2006, 45, 3248-3255.	1.8	362
78	Synthesis of MCM-48 Silica Using a Gemini Surfactant with a Rigid Spacer. Chemistry of Materials, 2006, 18, 4147-4150.	3.2	22
79	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
80	SBA-15 Templated Mesoporous Carbon: New Insights into the SBA-15 Pore Structure. Chemistry of Materials, 2005, 17, 6108-6113.	3.2	74
81	Rhodium Complexed C ₂ -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
82	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
83	Molecularly Ordered Nanoporous Organosilicates Prepared with and without Surfactants. Journal of the American Chemical Society, 2005, 127, 12194-12195.	6.6	135
84	Applications of Pore-Expanded Mesoporous Silica. 2. Development of a High-Capacity, Water-Tolerant Adsorbent for CO ₂ . Industrial & Engineering Chemistry Research, 2005, 44, 8007-8013.	1.8	364
85	Photophysical Properties of Methyl Triazine Included in MCM-41. Photochemistry and Photobiology, 2005, 81, 949-952.	1.3	0
86	Mesoporous Silica and Silica-Organic Hybrids. , 2004, , 852-860.		3
87	Simple Synthesis Route to Monodispersed SBA-15 Silica Rods. Journal of the American Chemical Society, 2004, 126, 14348-14349.	6.6	338
88	Synthesis of Periodic Mesoporous Phenylene-silica under Acidic Conditions with Novel Molecular Order in the Pore Walls. Chemistry of Materials, 2003, 15, 4886-4889.	3.2	72
89	MESOPOROUS MATERIALS. , 2003, , 39-68.		4
90	Mesoporous Silicate-Surfactant Composites with Hydrophobic Surfaces and Tailored Pore Sizes. Journal of Physical Chemistry B, 2002, 106, 10096-10101.	1.2	29

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91	A General Correlation for the ^{129}Xe NMR Chemical Shift vs Pore Size Relationship in Porous Silica-Based Materials. <i>Langmuir</i> , 2002, 18, 5653-5656.	1.6	119
92	Nonionic oligomeric polymer directed synthesis of highly ordered large pore periodic mesoporous organosilica. <i>Chemical Communications</i> , 2002, , 2582-2583.	2.2	54
93	Production of ultra highly pure H_2 and higher hydrocarbons from methane in one step at mild temperatures and development of the catalyst under non-equilibrium reaction conditions. <i>Chemical Communications</i> , 2001, , 1952-1953.	2.2	21
94	Periodic Mesoporous Silica-Based Organic-Inorganic Nanocomposite Materials. <i>Chemistry of Materials</i> , 2001, 13, 3151-3168.	3.2	814
95	Synthesis and Characterization of Titanium-Substituted Large Pore SSZ-42 Zeolite. <i>Catalysis Letters</i> , 2001, 77, 227-231.	1.4	12
96	Unprecedented Expansion of the Pore Size and Volume of Periodic Mesoporous Silica. <i>Angewandte Chemie - International Edition</i> , 2000, 39, 2920-2922.	7.2	85
97	New insights into pore-size expansion of mesoporous silicates using long-chain amines. <i>Microporous and Mesoporous Materials</i> , 2000, 35-36, 545-553.	2.2	77
98	Nitrogen Adsorption Study of MCM-41 Molecular Sieves Synthesized Using Hydrothermal Restructuring. <i>Adsorption</i> , 2000, 6, 47-51.	1.4	49
99	Highly Ordered MCM-41 Silica Prepared in the Presence of Decyltrimethylammonium Bromide. <i>Journal of Physical Chemistry B</i> , 2000, 104, 4835-4839.	1.2	62
100	New Insights into the Synthesis, Morphology, and Growth of Periodic Mesoporous Organosilicas. <i>Chemistry of Materials</i> , 2000, 12, 3857-3863.	3.2	200
101	Modification of Surface and Structural Properties of Ordered Mesoporous Silicates. <i>Adsorption</i> , 1999, 5, 39-45.	1.4	19
102	Relations between Pore Structure Parameters and Their Implications for Characterization of MCM-41 Using Gas Adsorption and X-ray Diffraction. <i>Chemistry of Materials</i> , 1999, 11, 492-500.	3.2	194
103	New Approach to Evaluate Pore Size Distributions and Surface Areas for Hydrophobic Mesoporous Solids. <i>Journal of Physical Chemistry B</i> , 1999, 103, 10670-10678.	1.2	135
104	Expanding the Pore Size of MCM-41 Silicas: Use of Amines as Expanders in Direct Synthesis and Postsynthesis Procedures. <i>Journal of Physical Chemistry B</i> , 1999, 103, 3651-3658.	1.2	234
105	A Unified Interpretation of High-Temperature Pore Size Expansion Processes in MCM-41 Mesoporous Silicas. <i>Journal of Physical Chemistry B</i> , 1999, 103, 4590-4598.	1.2	110
106	New Approaches to Pore Size Engineering of Mesoporous Silicates. <i>Advanced Materials</i> , 1998, 10, 1376-1379.	11.1	185
107	Catalysis by Crystalline Mesoporous Molecular Sieves. <i>Chemistry of Materials</i> , 1996, 8, 1840-1852.	3.2	765
108	Sulfated Zirconia-Based Strong Solid-Acid Catalysts: Recent Progress. <i>Catalysis Reviews - Science and Engineering</i> , 1996, 38, 329-412.	5.7	616

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109	Sulfated Zirconia as a Cocatalyst in Fischer-Tropsch Synthesis. Energy & Fuels, 1996, 10, 561-565.	2.5	26
110	Nanoporous zirconium oxide prepared using the supramolecular templating approach. Catalysis Letters, 1996, 38, 219-223.	1.4	102
111	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
112	Periodic mesoporous materials: synthesis, characterization and potential applications. Studies in Surface Science and Catalysis, 1996, , 1-46.	1.5	123
113	Vanadium Containing Large Pore Zeolites with ZSM-12 and SSZ-24 Structures. Materials Research Society Symposia Proceedings, 1994, 371, 87.	0.1	4