Cova Pevida

List of Publications by Year
in descending order

145 papers	10,658 citations	30070 54 h-index	33894 99 g-index
146 all docs	146 docs citations	146 times ranked	8309 citing authors

#	Article	IF	Citations
1	Influence of torrefaction on the grindability and reactivity of woody biomass. Fuel Processing Technology, 2008, 89, 169-175.	7.2	634
2	CO2 capture by adsorption with nitrogen enriched carbons. Fuel, 2007, 86, 2204-2212.	6.4	451
3	Thermal behaviour and kinetics of coal/biomass blends during co-combustion. Bioresource Technology, 2010, 101, 5601-5608.	9.6	445
4	Surface modification of activated carbons for CO2 capture. Applied Surface Science, 2008, 254, 7165-7172.	6.1	417
5	Silica-templated melamineâ€“formaldehyde resin derived adsorbents for CO2 capture. Carbon, 2008, 46, 1464-1474.	10.3	307
6	Hypercrosslinked organic polymer networks as potential adsorbents for pre-combustion CO2 capture. Journal of Materials Chemistry, 2011, 21, 5475.	6.7	302
7	Post-combustion CO2 capture with a commercial activated carbon: Comparison of different regeneration strategies. Chemical Engineering Journal, 2010, 163, 41-47.	12.7	292
8	Valorisation of spent coffee grounds as CO2 adsorbents for postcombustion capture applications. Applied Energy, 2012, 99, 272-279.	10.1	243
9	Preparation of carbon dioxide adsorbents from the chemical activation of ureaâ€“formaldehyde and melamineâ€“formaldehyde resins. Fuel, 2007, 86, 22-31.	6.4	233
10	Sustainable biomass-based carbon adsorbents for post-combustion CO2 capture. Chemical Engineering Journal, 2013, 230, 456-465.	12.7	211
11	Development of low-cost biomass-based adsorbents for postcombustion CO2 capture. Fuel, 2009, 88, 2442-2447.	6.4	187
12	Mechanical durability and combustion characteristics of pellets from biomass blends. Bioresource Technology, 2010, 101, 8859-8867.	9.6	186
13	Developing almond shell-derived activated carbons as CO2 adsorbents. Separation and Purification Technology, 2010, 71, 102-106.	7.9	185
14	Production of microporous biochars by single-step oxidation: Effect of activation conditions on CO2 capture. Applied Energy, 2014, 114, 551-562.	10.1	181
15	Single particle ignition and combustion of anthracite, semi-anthracite and bituminous coals in air and simulated oxy-fuel conditions. Combustion and Flame, 2014, 161, 1096-1108.	5.2	174
16	High-pressure co-gasification of coal with biomass and petroleum coke. Fuel Processing Technology, 2009, 90, 926-932.	7.2	173
17	Evaluation of Activated Carbon Adsorbents for CO₂Capture in Gasification. Energy & Fuels, 2009, 23, 2790-2796.	5.1	166
18	Kinetics of CO2 adsorption on cherry stone-based carbons in CO2/CH4 separations. Chemical Engineering Journal, 2017, 307, 249-257.	12.7	148

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19	Oxy-fuel combustion of coal and biomass blends. Energy, 2012, 41, 429-435.	8.8	144
20	Application of thermogravimetric analysis to the evaluation of aminated solid sorbents for CO2 capture. Journal of Thermal Analysis and Calorimetry, 2008, 92, 601-606.	3.6	143
21	Effect of biomass blending on coal ignition and burnout during oxy-fuel combustion. Fuel, 2008, 87, 2753-2759.	6.4	141
22	Combustion of single biomass particles in air and in oxy-fuel conditions. Biomass and Bioenergy, 2014, 64, 162-174.	5.7	138
23	Co-gasification of different rank coals with biomass and petroleum coke in a high-pressure reactor for H2-rich gas production. Bioresource Technology, 2010, 101, 3230-3235.	9.6	131
24	Breakthrough adsorption study of a commercial activated carbon for pre-combustion CO2 capture. Chemical Engineering Journal, 2011, 171, 549-556.	12.7	129
25	Different Approaches for the Development of Low-Cost CO2 Adsorbents. Journal of Environmental Engineering, ASCE, 2009, 135, 426-432.	1.4	125
26	A comparison of different methods for predicting coal devolatilisation kinetics. Journal of Analytical and Applied Pyrolysis, 2001, 58-59, 685-701.	5.5	119
27	Kinetic models comparison for steam gasification of different nature fuel chars. Journal of Thermal Analysis and Calorimetry, 2008, 91, 779-786.	3.6	117
28	On the limits of CO2 capture capacity of carbons. Separation and Purification Technology, 2010, 74, 225-229.	7.9	117
29	Biomass devolatilization at high temperature under N2 and CO2: Char morphology and reactivity. Energy, 2015, 91, 655-662.	8.8	109
30	High-pressure gasification reactivity of biomass chars produced at different temperatures. Journal of Analytical and Applied Pyrolysis, 2009, 85, 287-293.	5.5	108
31	Kinetic models comparison for non-isothermal steam gasification of coalâ€“biomass blend chars. Chemical Engineering Journal, 2010, 161, 276-284.	12.7	108
32	Characterisation of model compounds and a synthetic coal by TG/MS/FTIR to represent the pyrolysis behaviour of coal. Journal of Analytical and Applied Pyrolysis, 2004, 71, 747-763.	5.5	105
33	Effect of oxy-fuel combustion with steam addition on coal ignition and burnout in an entrained flow reactor. Energy, 2011, 36, 5314-5319.	8.8	105
34	Grindability and combustion behavior of coal and torrefied biomass blends. Bioresource Technology, 2015, 191, 205-212.	9.6	101
35	Oxy-fuel combustion kinetics and morphology of coal chars obtained in N2 and CO2 atmospheres in an entrained flow reactor. Applied Energy, 2012, 91, 67-74.	10.1	97
36	Pelletization of wood and alternative residual biomass blends for producing industrial quality pellets. Fuel, 2019, 251, 739-753.	6.4	94

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37	Evaluation of ammonia modified and conventionally activated biomass based carbons as CO2 adsorbents in postcombustion conditions. Separation and Purification Technology, 2011, 80, 96-104.	7.9	93
38	Ammoxidation of carbon materials for CO2 capture. Applied Surface Science, 2010, 256, 6843-6849.	6.1	86
39	Kinetic models for the oxy-fuel combustion of coal and coal/biomass blend chars obtained in N2 and CO2 atmospheres. Energy, 2012, 48, 510-518.	8.8	86
40	Production of fuel-cell grade H2 by sorption enhanced steam reforming of acetic acid as a model compound of biomass-derived bio-oil. Applied Catalysis B: Environmental, 2016, 184, 64-76.	20.2	81
41	Adsorption performance indicators for the CO2/CH4 separation: Application to biomass-based activated carbons. Fuel Processing Technology, 2016, 142, 361-369.	7.2	81
42	Removal of naphthalene from aqueous solution on chemically modified activated carbons. Water Research, 2007, 41, 333-340.	11.3	76
43	CO2 capture activity of a novel CaO adsorbent stabilized with (ZrO2+Al2O3+CeO2)-based additive under mild and realistic calcium looping conditions. Journal of CO2 Utilization, 2021, 53, 101747.	6.8	76
44	Predicting Mixed-Gas Adsorption Equilibria on Activated Carbon for Precombustion CO₂ Capture. Langmuir, 2013, 29, 6042-6052.	3.5	74
45	Coal structure and reactivity changes induced by chemical demineralisation. Fuel Processing Technology, 2002, 79, 273-279.	7.2	72
46	Application of response surface methodology to assess the combined effect of operating variables on high-pressure coal gasification for H2-rich gas production. International Journal of Hydrogen Energy, 2010, 35, 1191-1204.	7.1	72
47	Carbon adsorbents for CO2 capture from bio-hydrogen and biogas streams: Breakthrough adsorption study. Chemical Engineering Journal, 2015, 269, 148-158.	12.7	71
48	Comparison of the gasification performance of multiple biomass types in a bubbling fluidized bed. Energy Conversion and Management, 2018, 176, 309-323.	9.2	66
49	A comparison of two methods for producing CO2 capture adsorbents. Energy Procedia, 2009, 1, 1107-1113.	1.8	65
50	Biomass co-firing under oxy-fuel conditions: A computational fluid dynamics modelling study and experimental validation. Fuel Processing Technology, 2014, 120, 22-33.	7.2	65
51	CFD modeling of oxy-coal combustion: Prediction of burnout, volatile and NO precursors release. Applied Energy, 2013, 104, 653-665.	10.1	59
52	Effects of activated carbon properties on the adsorption of naphthalene from aqueous solutions. Applied Surface Science, 2007, 253, 5741-5746.	6.1	58
53	Biogas purification by means of adsorption on pine sawdust-based activated carbon: Impact of water vapor. Chemical Engineering Journal, 2018, 353, 197-207.	12.7	58
54	CFD modelling of oxy-coal combustion in an entrained flow reactor. Fuel Processing Technology, 2011, 92, 1489-1497.	7.2	56

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55	A study of oxy-coal combustion with steam addition and biomass blending by thermogravimetric analysis. Journal of Thermal Analysis and Calorimetry, 2012, 109, 49-55.	3.6	56
56	Development of adsorbent technologies for post-combustion CO2 capture. Energy Procedia, 2009, 1, 881-884.	1.8	53
57	Dynamic Performance of Biomass-Based Carbons for CO₂/CH₄ Separation. Approximation to a Pressure Swing Adsorption Process for Biogas Upgrading. Energy & Fuels, 2016, 30, 5005-5015.	5.1	53
58	Microporous phenolâ€"formaldehyde resin-based adsorbents for pre-combustion CO2 capture. Fuel, 2011, 90, 2064-2072.	6.4	52
59	Effect of operating conditions on the sorption enhanced steam reforming of blends of acetic acid and acetone as bio-oil model compounds. Applied Energy, 2016, 177, 579-590.	10.1	52
60	Response surface methodology as an efficient tool for optimizing carbon adsorbents for CO2 capture. Fuel Processing Technology, 2013, 106, 55-61.	7.2	50
61	Hydrogen production from food wastes and gas post-treatment by CO2 adsorption. Waste Management, 2012, 32, 60-66.	7.4	49
62	Unconventional biomass fuels for steam gasification: Kinetic analysis and effect of ash composition on reactivity. Energy, 2018, 155, 426-437.	8.8	48
63	Influence of storage time on the quality and combustion behaviour of pine woodchips. Energy, 2010, 35, 3066-3071.	8.8	47
64	Winery wastes as precursors of sustainable porous carbons for environmental applications. Journal of Cleaner Production, 2018, 193, 614-624.	9.3	46
65	Synthetic coal chars for the elucidation of NO heterogeneous reduction mechanisms. Fuel, 2007, 86, 41-49.	6.4	45
66	Developing activated carbon adsorbents for pre-combustion CO2 capture. Energy Procedia, 2009, 1, 599-605.	1.8	44
67	Oxy-coal combustion in an entrained flow reactor: Application ofÂspecific char and volatile combustion and radiation models for oxy-firing conditions. Energy, 2013, 62, 255-268.	8.8	44
68	Experimental and Simulation Study of Adsorption in Postcombustion Conditions Using a Microporous Biochar. 1. CO₂ and N₂ Adsorption. Industrial & Engineering Chemistry Research, 2016, 55, 3097-3112.	3.7	43
69	On the effect of biogas composition on the H2 production by sorption enhanced steam reforming (SESR). Renewable Energy, 2020, 160, 575-583.	8.9	43
70	Influence of morphology, porosity and crystal structure of CaCO3 precursors on the CO2 capture performance of CaO-derived sorbents. Chemical Engineering Journal, 2013, 217, 71-81.	12.7	42
71	Pelletization properties of raw and torrefied pine sawdust: Effect of co-pelletization, temperature, moisture content and glycerol addition. Fuel, 2018, 215, 290-297.	6.4	41
72	Influence of oxidation upon the CO2 capture performance of a phenolic-resin-derived carbon. Fuel Processing Technology, 2013, 110, 53-60.	7.2	40

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73	Relationship between structure and reactivity of carbonaceous materials. Journal of Thermal Analysis and Calorimetry, 2004, 76, 593-602.	3.6	39
74	Assessing the influence of biomass properties on the gasification process using multivariate data analysis. Energy Conversion and Management, 2019, 184, 649-660.	9.2	39
75	NO emissions in oxyâ€coal combustion with the addition of steam in an entrained flow reactor. , 2011, 1, 180-190.		38
76	Green coffee based CO2 adsorbent with high performance in postcombustion conditions. Fuel, 2015, 140, 633-648.	6.4	37
77	Microalgae: Potential precursors of CO2 adsorbents. Journal of CO2 Utilization, 2018, 26, 454-464.	6.8	37
78	Pyrolysis of activated carbons exhausted with organic compounds. Journal of Analytical and Applied Pyrolysis, 2005, 74, 518-524.	5.5	36
79	Post-combustion CO2 capture adsorbents from spent coffee grounds. Energy Procedia, 2013, 37, 134-141.	1.8	36
80	CO 2 adsorbent pellets produced from pine sawdust: Effect of coal tar pitch addition. Applied Energy, 2015, 144, 182-192.	10.1	35
81	Evaluating the Feasibility of a TSA Process Based on Steam Stripping in Combination with Structured Carbon Adsorbents To Capture CO₂ from a Coal Power Plant. Energy & Fuels, 2017, 31, 9760-9775.	5.1	35
82	Renewable hydrogen production from biogas by sorption enhanced steam reforming (SESR): A parametric study. Energy, 2021, 218, 119491.	8.8	33
83	Experimental and Simulation Study of Adsorption in Postcombustion Conditions Using a Microporous Biochar. 2. H₂O, CO₂, and N₂ Adsorption. Industrial & Engineering Chemistry Research, 2016, 55, 6854-6865.	3.7	32
84	Preparation and Evaluation of a Coconut Shell-Based Activated Carbon for CO2/CH4 Separation. Energies, 2018, 11, 1748.	3.1	32
85	Heterogeneous reduction of nitric oxide on synthetic coal chars. Fuel, 2005, 84, 2275-2279.	6.4	31
86	Cyclic operation of a fixed-bed pressure and temperature swing process for CO2 capture: Experimental and statistical analysis. International Journal of Greenhouse Gas Control, 2013, 12, 35-43.	4.6	31
87	Influence of Water Vapor on CO₂ Adsorption Using a Biomass-Based Carbon. Industrial & Engineering Chemistry Research, 2014, 53, 15488-15499.	3.7	31
88	Standing out the key role of ultramicroporosity to tailor biomass-derived carbons for CO2 capture. Journal of CO2 Utilization, 2018, 26, 1-7.	6.8	31
89	The influence of the precursor and synthesis method on the CO2 capture capacity of carpet waste-based sorbents. Journal of Environmental Management, 2011, 92, 2810-2817.	7.8	30
90	Modeling a biogas upgrading PSA unit with a sustainable activated carbon derived from pine sawdust. Sensitivity analysis on the adsorption of CO2 and CH4 mixtures. Chemical Engineering Journal, 2022, 428, 132564.	12.7	30

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91	Intrinsic char reactivity of plastic waste (PET) during CO2 gasification. Fuel Processing Technology, 2010, 91, 1776-1781.	7.2	29
92	Effect of the Pressure and Temperature of Devolatilization on the Morphology and Steam Gasification Reactivity of Coal Chars. Energy & Fuels, 2010, 24, 5586-5595.	5.1	29
93	Evaluation of the cyclic capacity of low-cost carbon adsorbents for post-combustion CO2 capture. Energy Procedia, 2011, 4, 1228-1234.	1.8	29
94	Towards Bio-upgrading of Biogas: Biomass Waste-based Adsorbents. Energy Procedia, 2014, 63, 6527-6533.	1.8	29
95	Optimization of a Bubbling Fluidized Bed Plant for Low-Temperature Gasification of Biomass. Energies, 2017, 10, 306.	3.1	28
96	Cherryâ€stonesâ€based activated carbons as potential adsorbents for CO₂/CH₄ separation: effect of the activation parameters. , 2015, 5, 812-825.		27
97	Thermodynamic Analysis of Biomass Gasification Using Aspen Plus: Comparison of Stoichiometric and Non-Stoichiometric Models. Energies, 2021, 14, 189.	3.1	27
98	Comparison between the reactivity of coal and synthetic coal modelsâ˜†. Fuel, 2003, 82, 2001-2006.	6.4	26
99	Pelletization of torrefied biomass with solid and liquid bio-additives. Renewable Energy, 2020, 151, 175-183.	8.9	26
100	Water Vapor Adsorption on Biomass Based Carbons under Post-Combustion CO2 Capture Conditions: Effect of Post-Treatment. Materials, 2016, 9, 359.	2.9	25
101	Co-pelletization of pine sawdust and refused derived fuel (RDF) to high-quality waste-derived pellets. Journal of Cleaner Production, 2021, 328, 129635.	9.3	25
102	Theoretical and experimental study on the fluidity performance of hard-to-fluidize carbon nanotubes-based CO2 capture sorbents. Frontiers of Chemical Science and Engineering, 2022, 16, 1460-1475.	4.4	23
103	Heterogeneous reaction mechanisms of the reduction of nitric oxide on carbon surfaces: a theoretical analysis. Theoretical Chemistry Accounts, 2010, 127, 95-108.	1.4	21
104	Water vapour adsorption by a coffee-based microporous carbon: effect on CO₂capture. Journal of Chemical Technology and Biotechnology, 2015, 90, 1592-1600.	3.2	21
105	Vacuum swing CO2 adsorption cycles in Waste-to-Energy plants. Chemical Engineering Journal, 2020, 382, 122841.	12.7	21
106	Kinetic Parameters and Reactivity for the Steam Gasification of Coal Chars Obtained under Different Pyrolysis Temperatures and Pressures. Energy & Fuels, 2011, 25, 3574-3580.	5.1	20
107	Precombustion CO2 capture by means of phenolâ€“formaldehyde resin-derived carbons: From equilibrium to dynamic conditions. Separation and Purification Technology, 2012, 98, 531-538.	7.9	20
108	Ignition and NO Emissions of Coal and Biomass Blends under Different Oxy-fuel Atmospheres. Energy Procedia, 2013, 37, 1405-1412.	1.8	19

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109	Toward sustainable hydrogen storage and carbon dioxide capture in post-combustion conditions. Journal of Environmental Chemical Engineering, 2017, 5, 1628-1637.	6.7	19
110	Carbon Monoliths in Adsorption-based Post-combustion CO2 Capture. Energy Procedia, 2017, 114, 2341-2352.	1.8	19
111	Separation of CO2 in a Solid Waste Management Incineration Facility Using Activated Carbon Derived from Pine Sawdust. Energies, 2017, 10, 827.	3.1	19
112	Improved CO2 adsorption capacity and fluidization behavior of silica-coated amine-functionalized multi-walled carbon nanotubes. Journal of Environmental Chemical Engineering, 2021, 9, 105786.	6.7	19
113	Numerical investigation of NO emissions from an entrained flow reactor under oxy-coal conditions. Fuel Processing Technology, 2012, 93, 53-64.	7.2	17
114	Simplistic approach for preliminary screening of potential carbon adsorbents for CO2 separation from biogas. Journal of CO2 Utilization, 2018, 28, 207-215.	6.8	17
115	Measuring heat capacity of activated carbons for CO2 capture. Journal of CO2 Utilization, 2019, 33, 148-156.	6.8	17
116	Blends of bio-oil/biogas model compounds for high-purity H2 production by sorption enhanced steam reforming (SESR): Experimental study and energy analysis. Chemical Engineering Journal, 2022, 432, 134396.	12.7	16
117	Surface characterisation of synthetic coal chars made from model compounds. Carbon, 2004, 42, 1345-1350.	10.3	15
118	Influence of the operation conditions on CO2 capture by CaO-derived sorbents prepared from synthetic CaCO3. Chemosphere, 2013, 93, 2148-2158.	8.2	15
119	Evaluation of Microporous Biochars Produced by Single-step Oxidation for Postcombustion CO2 Capture under Humid Conditions. Energy Procedia, 2014, 63, 693-702.	1.8	15
120	Sustainable coffeeâ€based CO₂ adsorbents: toward a greener production via hydrothermal carbonization. , 2018, 8, 309-323.		15
121	Thermogravimetricâ€“mass spectrometric study on the evolution of nitrogen compounds during coal devolatilisation. Journal of Analytical and Applied Pyrolysis, 2002, 65, 57-70.	5.5	14
122	Physicochemical properties of debris ejected from C/C brakes with different structural orders. Carbon, 2008, 46, 994-1002.	10.3	14
123	Ignition behavior of coal and biomass blends under oxy-firing conditions with steam additions. , 2013, 3, 397-414.		14
124	Residual pyrolysis biochar as additive to enhance wood pellets quality. Renewable Energy, 2021, 180, 850-859.	8.9	13
125	Templated polymeric materials as adsorbents for the postcombustion capture of CO2. Energy Procedia, 2009, 1, 869-874.	1.8	12
126	The importance of thermal behaviour and petrographic composition for understanding the characteristics of a Portuguese perhydrous Jurassic coal. International Journal of Coal Geology, 2010, 84, 237-247.	5.0	11

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127	Phenol-Formaldehyde Resin-Based Carbons for CO2 Separation at Sub-Atmospheric Pressures. Energies, 2016, 9, 189.	3.1	11
128	Experimental Study on the Kinetics of CO₂ and H₂O Adsorption on Honeycomb Carbon Monoliths under Cement Flue Gas Conditions. ACS Sustainable Chemistry and Engineering, 2022, 10, 2107-2124.	6.7	11
129	Effect of coâ€gasification of biomass and petroleum coke with coal on the production of gases. , 2012, 2, 304-313.		10
130	HiPerCap: A New FP7 Project for Development and Assessment of Novel and Emerging Post-combustion CO2 Capture Technologies. Energy Procedia, 2014, 63, 6166-6172.	1.8	10
131	Adsorption-based Process Modelling for Post-combustion CO2 Capture. Energy Procedia, 2017, 114, 2353-2361.	1.8	10
132	Enhanced capacity to CO2 sorption in humid conditions with a K-doped biocarbon. Journal of Energy Chemistry, 2019, 34, 208-219.	12.9	10
133	Changes in coal char reactivity and texture during combustion in an entrained flow reactor. Journal of Thermal Analysis and Calorimetry, 2007, 90, 859-863.	3.6	8
134	Adsorption Performance Indicator to Screen Carbon Adsorbents for Post-combustion CO2 Capture. Energy Procedia, 2017, 114, 2362-2371.	1.8	8
135	Current status of CO2 capture from coal facilities. , 2019, , 31-58.		8
136	H2 production by steam reforming with in situ CO2 capture of biomass-derived bio-oil. Energy Procedia, 2014, 63, 6815-6823.	1.8	7
137	Doped phenol-formaldehyde resins as precursors for precombustion CO2 capture adsorbents. Energy Procedia, 2011, 4, 1222-1227.	1.8	5
138	Dynamic cyclic performance of phenol-formaldehyde resin-derived carbons for pre-combustion CO2 capture: An experimental study. Energy Procedia, 2013, 37, 127-133.	1.8	4
139	Progress in pilot, largeâ€scale projects as an inducement for CCUS deployment. , 2013, 3, 97-98.		2
140	CO2 Adsorption on Activated Carbon Based Olive Stone: A Comparison of Langmuir and Freundlich Models. Advances in Science, Technology and Innovation, 2018, , 1099-1100.	0.4	1
141	Decarbonisation of the electricity sector? CCUS still imperative. , 2018, 8, 396-397.		1
142	Biomass Pelletization: Contribution to Renewable Power Generation Scenarios. Biofuels and Biorefineries, 2019, , 269-294.	0.5	1
143	STUDY OF THE EVOLUTION OF NITROGEN COMPOUNDS DURING COAL DEVOLATILIZATION. Clean Air, 2005, 6, 393-408.	0.0	1
144	Raw Materials, Selection, Preparation and Characterization. Green Energy and Technology, 2011, , 11-22.	0.6	0

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145	Olive stones based carbon foam: synthesis, characterization and application on post-combustion CO2 adsorption. Journal of Porous Materials, 0, , 1.	2.6	0