

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 1123911	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/AU2018/050840	International filing date (<i>day/month/year</i>) 09 August 2018	(Earliest) Priority Date (<i>day/month/year</i>) 09 August 2017
Applicant COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION		
This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau. This international search report consists of a total of 4 sheets. <input type="checkbox"/> It is also accompanied by a copy of each prior art document cited in this report.		
<p>1. Basis of the report</p> <p>a. With regard to the language, the international search was carried out on the basis of:</p> <p style="margin-left: 20px;"><input checked="" type="checkbox"/> The international application in the language in which it was filed.</p> <p style="margin-left: 20px;"><input type="checkbox"/> A translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).</p> <p>b. <input type="checkbox"/> This international search report has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).</p> <p>c. <input type="checkbox"/> With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.</p> <p>2. <input type="checkbox"/> Certain claims were found unsearchable (See Box No. II).</p> <p>3. <input type="checkbox"/> Unity of invention is lacking (See Box No. III).</p> <p>4. With regard to the title,</p> <p style="margin-left: 20px;"><input checked="" type="checkbox"/> the text is approved as submitted by the applicant.</p> <p style="margin-left: 20px;"><input type="checkbox"/> the text has been established by this Authority to read as follows:</p> <p>5. With regard to the abstract,</p> <p style="margin-left: 20px;"><input checked="" type="checkbox"/> the text is approved as submitted by the applicant.</p> <p style="margin-left: 20px;"><input type="checkbox"/> the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.</p> <p>6. With regard to the drawings,</p> <p>a. the figure of the drawings to be published with the abstract is Figure No. 2</p> <p style="margin-left: 20px;"><input checked="" type="checkbox"/> as suggested by the applicant.</p> <p style="margin-left: 20px;"><input type="checkbox"/> as selected by this Authority, because the applicant failed to suggest a figure.</p> <p style="margin-left: 20px;"><input type="checkbox"/> as selected by this Authority, because this figure better characterizes the invention.</p> <p>b. <input type="checkbox"/> none of the figures is to be published with the abstract.</p>		

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2018/050840

A. CLASSIFICATION OF SUBJECT MATTER

B01J 20/34 (2006.01) A61M 16/22 (2006.01) B01J 20/22 (2006.01) B01J 20/28 (2006.01) B01D 53/62 (2006.01)
B01D 53/04 (2006.01)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPOQUE databases: PATENW with IPC/CPC class marks; B01D -53/04, 53/0415, 2253/204, 53/86, 53/14, 53/62, 53/1475, 2257/504, 2259/4541; Y02C10/08; A61M - 16/22, 16/06, 16/0093; A62B -18/02; 7/10; B63C11/24, A62D9; B01J - 20/22, 20/226, 20/30, 20/3007, 20/3078, 20/3092, 20/3483, 20/3491, 2220/56, 2220/62, 2220/66, 2220/68 and Keywords (SIFSIX-3-NI, SIF6-3-M, MOF, rebreathe, anaesthetic, mask, carbon dioxide, adsorb, pellets, extrude, bed, packing, cartridge) & like terms. Applicant name searched in Auspat, Espacenet and in internal databases managed by IP Australia. Espacenet, Google Advanced Patent Search and GOOGLE Scholar with keywords (MOF, SiFsix, SiFsix-3-Ni, adsorbent, CO2, activation, extrude, pellet and like terms).

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Documents are listed in the continuation of Box C		



Further documents are listed in the continuation of Box C



See patent family annex

* Special categories of cited documents:		
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	
"P" document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search
19 September 2018

Date of mailing of the international search report
19 September 2018

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INTERNATIONAL SEARCH REPORT C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		International application No. PCT/AU2018/050840
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	US 2009/0032023 A1 (PASTRE et al.) 05 February 2009 Claims 1, 5 - 6; paragraphs [0006], [0017], [0022],[0070], [0071] and [0080] As above	25 - 36 1 - 24
Y A	US 2017/0137450 A1 (KING ABDULLAH UNIVERSITY OF SCIENCE AND TECHNOLOGY [SA]) 18 May 2017 Abstract, paragraphs [0019] - [0025], [0029] - [0035] and [0038] - [0039] As above	25 - 36 1 - 24
A	WO 2016/036814 A1 (KING ABDULLAH UNIVERSITY OF SCIENCE AND TECHNOLOGY [SA]) 10 March 2016 Abstract and paragraphs [0038] - [0041]	1 - 36
A	US 2017/0144099 A1 (MOHAMED EDDAOUDI et al.) 25 May 2017 Claim 1 and Example 1	1 - 36
A	Sameh K. Elsaidi et al., Chem. Commun., 2015, 51, pages 15530 - 15533 Whole document	1 - 36

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

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This Annex lists known patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document/s Cited in Search Report		Patent Family Member/s	
Publication Number	Publication Date	Publication Number	Publication Date
US 2009/0032023 A1	05 February 2009	US 2009032023 A1	05 Feb 2009
		AU 2007222441 A1	13 Sep 2007
		CN 101437601 A	20 May 2009
		EP 1996311 A1	03 Dec 2008
		RU 2008139799 A	20 Apr 2010
		TW 200744703 A	16 Dec 2007
		WO 2007101797 A1	13 Sep 2007
US 2017/0137450 A1	18 May 2017	US 2017137450 A1	18 May 2017
		EP 3157937 A1	26 Apr 2017
		WO 2015195791 A1	23 Dec 2015
WO 2016/036814 A1	10 March 2016	WO 2016036814 A1	10 Mar 2016
		EP 3188819 A1	12 Jul 2017
		US 2017246584 A1	31 Aug 2017
US 2017/0144099 A1	25 May 2017	None	

End of Annex