



SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 18 84 06 53

Classification of the application (IPC):

B01D 15/36, B01D 15/04, B01D 39/06, B01J 39/10, B01J 47/016, B01J 47/018, B01J 20/06, B01J 20/04, B01J 20/28, B01J 20/30, B01J 20/32, C02F 1/42, C22B 3/42, C22B 26/12

Technical fields searched (IPC):

B01J, B01D, C02F, C22B

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X,P	WO 2018089932 A1 (LILAC SOLUTIONS INC [US]) 17 May 2018 (2018-05-17) * claims 1-7,9,10,1-15,35-42 * * examples 1-8 * * paragraph [0052] - paragraph [0060] *	1-16
X Y	JIA-LI XIAO ET AL: "Lithium ion recovery from brine using granulated polyacrylamide-MnO ₂ ion-sieve" <i>CHEMICAL ENGINEERING JOURNAL</i> AMSTERDAM, NL 27 May 2015 (2015-05-27), vol. 279, DOI: 10.1016/j.cej.2015.05.075, ISSN: 1385-8947, pages 659-666, XP055568674 * abstract * * 3.2. Preparation of the granulated PAM-MnO ₂ ion-sieve;page 660, right-hand column - page 661, left-hand column * * table 2 * * 3.4. Batch experiments for Li ⁺ adsorption on the granulated PAM-MnO ₂ ion-sieve; 3.5. Continuous flow experiments in the granular PAM-MnO ₂ ion-sieve packed column for Li ⁺ recovery from brine and LiCl solutions;page 661 *	15, 16 1-14
X Y	ZANDVAKILI SAEID ET AL: "Preparation and characterisation of lithium ion exchange composite for the recovery of lithium from brine" <i>MINERAL PROCESSING AND EXTRACTIVE METALLURGY</i> , 12 June 2017 (2017-06-12), vol. 127, no. 3, pages 176-181 URL: https://www.tandfonline.com/doi/pdf/10.1080/03719553.2017.1334983?needAccess=true , ISSN: 2572-6641 [retrieved on 22 March 2021 (2021-03-22)] XP055788496 * abstract * * Synthesis of ion sieve and preparation of composite adsorbent;page 176, right-hand column - page 177, left-hand column * * Batch experiments;page 177, left-hand column *	15, 16 1-14

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search The Hague	Date of completion of the search 24 March 2021	Examiner Kaluza, Nicoleta
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CATEGORY OF CITED DOCUMENTS

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Application number:
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DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X	WO 2015171109 A1 (SIMBOL INC [US]) 12 November 2015 (2015-11-12)	1, 15, 16
Y	* claims 1,2,8 * * paragraph [0018] - paragraph [0027] * * paragraphs [0030], [0033] *	1-14

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search The Hague	Date of completion of the search 24 March 2021	Examiner Kaluza, Nicoleta
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ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 18 84 06 53

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date		
WO2018089932	A1	17-05-2018	AR 112849 A1	26-12-2019	
		CA 3042432 A1	17-05-2018		
		CL 2019001294 A1	11-10-2019		
		CN 110139712 A	16-08-2019		
		EP 3538266 A1	18-09-2019		
		JP 2019535503 A	12-12-2019		
		KR 20190072667 A	25-06-2019		
		US 2018133619 A1	17-05-2018		
		US 2019046898 A1	14-02-2019		
		US 2020289958 A1	17-09-2020		
		WO 2018089932 A1	17-05-2018		
		WO2015171109	A1	12-11-2015	NONE