



SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 19 91 14 90

Classification of the application (IPC):
H01M 4/525, H01M 4/505, C01G 53/00

Technical fields searched (IPC):
C01G, H01M

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
Y A	WO 2012020768 A1 (AGC SEIMI CHEMICAL CO LTD [JP]; KAWASATO TAKESHI [JP] ET AL.) 16 February 2012 (2012-02-16) * paragraphs [0043], [0095]; claims *	1-6, 10-15 7-9
Y A	US 2017110726 A1 (AIDA TAIRA [JP] ET AL) 20 April 2017 (2017-04-20) * claims; examples 1-3 *	1-6, 10-15 7-9
A	JP 2015191847 A (SUMITOMO METAL MINING CO) 02 November 2015 (2015-11-02) * paragraphs [0023], [0024], [0041]; claims *	1-15
A	JP 2016162601 A (JX NIPPON MINING & METALS CORP) 05 September 2016 (2016-09-05) * paragraphs [0003], [0012] - [0014], [0020]; claims *	1-15
A	WO 2016013674 A1 (SUMITOMO METAL MINING CO [JP]) 28 January 2016 (2016-01-28) * claims; examples *	1-15
A	US 9764962 B2 (IMAHASHI TAIKI [JP]; WATANABE HIROYASU [JP] ET AL.) 19 September 2017 (2017-09-19) * the whole document *	1-15

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 Munich	Date of completion of the search 03 February 2023	Examiner Nobis, Barbara
---------------------------	--	----------------------------

CATEGORY OF CITED DOCUMENTS

X: particularly relevant if taken alone	P: intermediate document
Y: particularly relevant if combined with another document of the same category	T: theory or principle underlying the invention
A: technological background	E: earlier patent document, but published on, or after the filing date
O: non-written disclosure	D: document cited in the application
& : member of the same patent family, corresponding document	L: document cited for other reasons

Disclaimer: this document has been automatically generated using data structured in accordance with WIPO standard ST.36 from the database of search reports of the European Patent Office. For technical reasons, its content and layout may differ from that of the original publication. Only the original published information is legally binding.



SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 19 91 14 90

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-6, 10-15

Nickel manganese cobalt composite hydroxide, lithium nickel manganese cobalt composite oxide and lithium ion secondary battery containing the same

2. claims: 7-9

Method for producing a nickel manganese cobalt composite hydroxide

All further search fees have been paid within the fixed time limit. The present (supplementary) European search report has been drawn up for all claims.

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 Munich	Date of completion of the search 03 February 2023	Examiner Nobis, Barbara
---------------------------	--	----------------------------

CATEGORY OF CITED DOCUMENTS

X: particularly relevant if taken alone	P: intermediate document
Y: particularly relevant if combined with another document of the same category	T: theory or principle underlying the invention
A: technological background	E: earlier patent document, but published on, or after the filing date
O: non-written disclosure	D: document cited in the application
& : member of the same patent family, corresponding document	L: document cited for other reasons

Disclaimer: this document has been automatically generated using data structured in accordance with WIPO standard ST.36 from the database of search reports of the European Patent Office. For technical reasons, its content and layout may differ from that of the original publication. Only the original published information is legally binding.



ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 19 91 14 90

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on 03-02-2023
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO2012020768 A1	16-02-2012	AU 2011290195 A1	14-02-2013
		JP WO2012020768 A1	28-10-2013
		WO 2012020768 A1	16-02-2012
US 2017110726 A1	20-04-2017	CN 106133960 A	16-11-2016
		CN 113247967 A	13-08-2021
		CN 113277570 A	20-08-2021
		JP 6241349 B2	06-12-2017
		JP 2015191844 A	02-11-2015
		KR 20160138048 A	02-12-2016
		US 2017110726 A1	20-04-2017
		US 2019341610 A1	07-11-2019
		WO 2015146598 A1	01-10-2015
JP 2015191847 A	02-11-2015	JP 6344007 B2	20-06-2018
		JP 2015191847 A	02-11-2015
JP 2016162601 A	05-09-2016	NONE	
WO2016013674 A1	28-01-2016	JP 6747291 B2	26-08-2020
		JP WO2016013674 A1	27-04-2017
		WO 2016013674 A1	28-01-2016
US 9764962 B2	19-09-2017	CN 103459321 A	18-12-2013
		CN 106159255 A	23-11-2016
		EP 2698351 A1	19-02-2014
		ES 2661935 T3	04-04-2018
		JP 6089433 B2	08-03-2017
		JP 6665060 B2	13-03-2020
		JP 2012230898 A	22-11-2012
		JP 2016197611 A	24-11-2016
		JP 2019108264 A	04-07-2019
		KR 20140016314 A	07-02-2014
		TW 201304259 A	16-01-2013
		US 2014087262 A1	27-03-2014
		WO 2012141258 A1	18-10-2012