

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2019/085594

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. claims: 6, 10-13 (in full); 1-5 (in part)

Solid electrolyte membrane for a solid-state battery and method for the production thereof.

2. claims: 7-9 (in full); 1-5 (in part)

Anode unit for a solid-state battery and method for producing the anode unit.

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: **6, 10-13 (in full); 1-5 (in part)**

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

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A. CLASSIFICATION OF SUBJECT MATTER		
H01M 4/00 (2006.01)i		
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) H01M		
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) EPO-Internal, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5238759 A (PLICHTA EDWARD J [US] ET AL) 24 August 1993 (1993-08-24) column 2: "DESCRIPTION OF THE PREFERRED EMBODIMENT"	1-6,10-13
T	ISHIDA T ET AL. "Mechanical alloying of polymer/metal systems" <i>JOURNAL OF MATERIALS SCIENCE LETTERS, CHAPMAN AND HALL LTD. LONDON, GB</i> , Vol. 12, No. 23, 01 December 1993 (1993-12-01), pages 1851-1853 DOI: 10.1007/BF00540008 ISSN: 0261-8028, XP002110105 the whole document	
A	CN 105489931 A (GUOLIAN AUTOMOBILE POWER CELL INST CO LTD ET AL.) 13 April 2016 (2016-04-13) p. 7 f: [0054-9];the whole document	1-6,10-13
A	DE 112012000513 T5 (SUMITOMO ELECTRIC INDUSTRIES [JP]) 24 October 2013 (2013-10-24) the whole document	1-6,10-13
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
<p>* Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"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)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"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</p> <p>"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</p> <p>"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</p> <p>"&" document member of the same patent family</p>		
Date of the actual completion of the international search 03 March 2020		Date of mailing of the international search report 24 June 2020
Name and mailing address of the ISA/EP European Patent Office p.b. 5818, Patentlaan 2, 2280 HV Rijswijk Netherlands Telephone No. (+31-70)340-2040 Facsimile No. (+31-70)340-3016		Authorized officer Radeck, Stephanie Telephone No.

C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
T	LU PENGHAO ET AL. "Study on (100-x)(70Li ₂ S-30P ₂ S ₅)-xLi ₂ ZrO ₃ glass-ceramic electrolyte for all-solid-state lithium-ion batteries" <i>JOURNAL OF POWER SOURCES, ELSEVIER SA, CH</i> , Vol. 356, 02 May 2017 (2017-05-02), pages 163-171 DOI: 10.1016/J.JPOWSOUR.2017.04.083 ISSN: 0378-7753, XP085025292	

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/EP2019/085594

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
US	5238759	A	24 August 1993	CA	2091380	A1	02 October 1993
				US	5238759	A	24 August 1993
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CN	105489931	A	13 April 2016	NONE			
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DE	112012000513	T5	24 October 2013	CN	103329334	A	25 September 2013
				DE	112012000513	T5	24 October 2013
				JP	5376412	B2	25 December 2013
				JP	WO2012099178	A1	30 June 2014
				KR	20130143609	A	31 December 2013
				US	2013302698	A1	14 November 2013
				WO	2012099178	A1	26 July 2012
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