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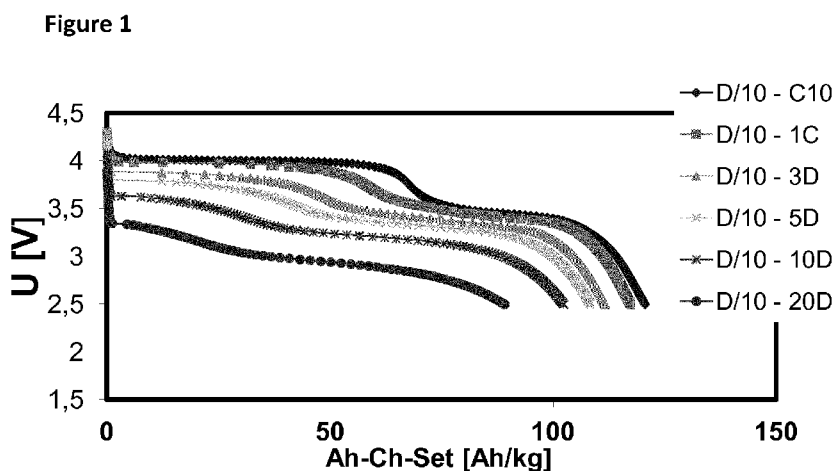
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(54) Title: MIXED SULPHATE CONTAINING LITHIUM-MANGANESE-METAL PHOSPHATE



(57) Abstract: The present invention relates to a sulphate containing mixed Lithium-manganese iron phosphate of formula  $\text{Li}_x\text{Fe}_y\text{M}_{1-y}\text{M}_{1-(y+z)}(\text{PO}_4)_u(\text{SO}_4)_v$  wherein M is a metal selected from the group Co, Ni, Al, Mg, Sn, Pb, Nb, B, Cu, Cr, Mo, Ru, V, Ga, Ca, Sr, Ba, Ti, Zr, Cd and mixtures thereof and wherein  $0.9 \leq x \leq 1.5$ ,  $0 \leq y < 1$ , and  $0.5 \leq (y + z) \leq 1$  and  $0.0 < u \leq 1.0$  and  $0 < v \leq 0.25$ , a process for producing it as well as its use as cathode material in a secondary lithium-ion battery.

**INTERNATIONAL SEARCH REPORT**

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**A. CLASSIFICATION OF SUBJECT MATTER**  
 INV. C01B25/37 H01M4/525  
 ADD.  
 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)  
 C01B 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, CHEM ABS Data, 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	FR 2 932 396 A1 (CENTRE NAT RECH SCIENT [FR]; UNIV PICARDIE [FR]) 18 December 2009 (2009-12-18)	1-9,15
Y	page 15, line 19 - page 22, line 5	10-14
X	US 2010/297496 A1 (RAVET NATHALIE [CA] ET AL) 25 November 2010 (2010-11-25)	1-9,15
Y	paragraphs [0008] - [0070] example 1d	10-14
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A	paragraphs [0013] - [0029] example 1	
A	US 2007/054187 A1 (NUSPL GERHARD [DE] ET AL) 8 March 2007 (2007-03-08) cited in the application the whole document	1-15

Further documents are listed in the continuation of Box C.

See patent family annex.

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- "&" document member of the same patent family

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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