Title (en)

LITHIUM ION SOLID-STATE BATTERY AND METHOD FOR PRODUCING THE SAME

Title (de)

LITHIUM-IONEN-FESTKÖRPERAKKUMULATOR SOWIE VERFAHREN ZUR HERSTELLUNG DESSELBEN

Title (fr)

ACCUMULATEUR À L'ÉTAT SOLIDE À IONS LITHIUM ET PROCÉDÉ DE FABRICATION DE CELUI-CI

Publication

EP 3560022 A1 20191030 (DE)

Application

EP 17811831 A 20171118

Priority

- DE 102016015191 A 20161221
- DE 2017000391 W 20171118

Abstract (en)

[origin: WO2018113807A1] The invention relates to a lithium ion solid-state battery, comprising an anode, a cathode and a solid electrolyte, wherein the solid electrolyte has a layer thickness between 100 µm and 800 µm, preferably between 200 µm and 500 µm and especially advantageously between 200 µm and 300 µm. The lithium ion solid-state battery comprises a mixture of lithium vanadium phosphate (LVP), lithium aluminum titanium phosphate (LATP), and lithium titanium phosphate (LTP). In order to produce a lithium ion solid-state battery according to the inventon, a pre-calcined electrolyte powder is pressed and is sintered to form an electrolyte layer. Then, the electrodes are applied and sintered on both sides. Before an electrode layer is applied, at least one intermediate layer can optionally be applied to the solid electrolyte for improved attachment of the electrode layer to the solid electrolyte. Preferably all common standard printing processes, such as screen printing, offset printing, or ink-jet printing, can be used to apply the layers.

IPC 8 full level

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Citation (examination)

- JP 2015028854 A 20150212 - NGK SPARK PLUG CO, et al
- US 2010216032 A1 20100826 - BABA MAMORU [JP], et al
- JP 5715003 B2 20150507
- US 9419308 B2 20160816 - SANO ATSUSHI [JP]
- JP 2001126758 A 20010511 - KYOCERA CORP
- See also references of WO 2018113807A1

Designated contracting state (EPC)

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DOCDB simple family (application)

DE 102016015191 A 20161221; CN 201780071920 A 20171118; DE 2017000391 W 20171118; EP 17811831 A 20171118; JP 2019527197 A 20171118; US 201716462248 A 20171118