

Title (en)
METHOD FOR OPERATING A LITHIUM-ION BATTERY

Title (de)
VERFAHREN ZUM BETREIBEN EINER LITHIUMIONENBATTERIE

Title (fr)
PROCEDE DE FONCTIONNEMENT D'UN ACCUMULATEUR DU TYPE LITHIUM-ION

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EP 2896083 A1 20150722 (FR)

Application
EP 13759783 A 20130912

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Abstract (en)
[origin: WO2014041074A1] The invention relates to a method for operating a lithium-ion battery including at least one cell that includes: a negative electrode (14) (the first electrode) and a positive electrode (11) (the second electrode), between which a lithium-ion-conducting electrolyte is placed, and a third lithium-ion source electrode. Said method includes: a) a step for preparing said first electrode, said step including a lithiation operation, via the third electrode, of an electrode including a material made of at least one metal or semi-metal element M capable of forming an alloy with lithium such as to obtain said first electrode, including an active material that includes an alloy of at least one metal or semi-metal element M and lithium in a molar ratio Li/M up to 5, said step also being carried out under conditions sufficient to obtain said active material having a molar ratio Li/M (M being the metal or semi-metal element M as defined above) at least equal to 1/3 of the molar ratio when said material is completely alloyed with lithium; and b) a step of operation of said battery via cycling in lithium, between said negative electrode and said positive electrode, without totally delithiating said negative electrode, said step being carried out in a capacity domain corresponding to, at most, 2/3 of the total reversible capacity of the active material of said negative electrode.

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Citation (search report)
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Cited by
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