

ABSTRACT

METHOD FOR PRODUCING A POROUS ANODE FOR A LITHIUM-ION SECONDARY BATTERY, RESULTING ANODE, AND MICROBATTERY COMPRISING SAID ANODE

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Method for manufacturing an anode having a porosity of between 25% and 50% by volume, wherein

- (a) a substrate and a colloidal suspension or a paste composed of monodispersed primary nanoparticles, in the form of agglomerates or dispersed, is provided of at least one active material of anode A selected from niobium oxides and mixed oxides of niobium with titanium, germanium, cerium, lanthanum, copper or tungsten, with an average primary diameter  $D_{50}$  of between 2 nm and 100 nm,
- (b) on at least one face of said substrate a layer of said colloidal suspension or paste provided in step (a) is deposited by a method selected from the group including: electrophoresis, extrusion, a printing process and preferably inkjet printing or flexographic printing, a coating method and preferably doctor blade coating, roll coating, curtain coating, dip coating or through a slot die;
- (c) said layer obtained in step (b) is dried and consolidated by pressing and/or heating to obtain a porous layer.

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