

ABSTRACT**POROUS ELECTRODES FOR ELECTROCHEMICAL DEVICES**

5 The invention relates to a method for producing a porous electrode, said electrode comprising a layer deposited on a substrate, said layer being binder-free and having a porosity of more than 30 volume %, and preferably less than 50 volume %, and pores having an average diameter of less than 50 nm, said method being characterized in that: (a) a colloidal suspension is provided, containing aggregates or agglomerates of
10 nanoparticles of at least one material P having an average primary diameter D_{50} of less than or equal to 80 nm, and preferably less than or equal to 50 nm, said aggregates or agglomerates having an average diameter comprised between 80 nm and 300 nm (preferably between 100 nm and 200 nm), (b) a substrate is provided, (c) a porous, preferably mesoporous, electrode layer is deposited on said substrate
15 by electrophoresis, by ink-jet, by doctor blade, by roll coating, by curtain coating or by dip-coating, from said colloidal suspension provided in step (a); (d) said layer obtained in step (c) is dried, preferably in an air flow, (e) optionally, consolidation of the porous, preferably mesoporous electrode layer obtained in step (d) by pressing and/or heating.

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Figure 2(a)