Title (en)

ELECTRODES FOR ENERGY STORAGE DEVICES

Title (de)

ELEKTRODEN FÜR ENERGIESPEICHEREINRICHTUNGEN

Title (fr)

ÉLECTRODES POUR DISPOSITIFS DE STOCKAGE D'ÉNERGIE

Publication

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Application

EP 20837301 A 20200706

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- US 202063003341 P 20200401
- US 202063041801 P 20200619
- US 2020040943 W 20200706

Abstract (en)

[origin: WO2021007183A1] An electrode active layer is disclosed that includes a network of high aspect ratio carbon elements (e.g., carbon nanotubes, carbon nanotube bundles, graphene flakes, or the like) that provides a highly electrically conductive scaffold that entangles or enmeshes the active material, thereby supporting the layer. A surface treatment can be applied to the high aspect ratio carbon elements to promote adhesion to the active material and any underlying electrode layers improving the overall cohesion and mechanical stability of the active layer. This surface treatment forms only a thin (in some cases even monomolecular) layer on the network, leaving the large void spaces that are free of any bulk binder material and so may instead be filled with active material. The resulting active layer may be formed with excellent mechanical stability even at large thickness and high active material mass loading.

IPC 8 full level

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CPC (source: EP KR)

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Citation (search report)

See references of WO 2021007183A1

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