Title (en)

NANO-ENGINEERED COATINGS FOR ANODE ACTIVE MATERIALS, CATHODE ACTIVE MATERIALS, AND SOLID-STATE ELECTROLYTES AND METHODS OF MAKING BATTERIES CONTAINING NANO-ENGINEERED COATINGS

Title (de)

NANOSTRUKTURIERTE BESCHICHTUNGEN FÜR ANODENAKTIVMATERIALIEN, KATHODENAKTIVMATERIALIEN UND FESTSTOFFELEKTROLYTEN SOWIE VERFAHREN ZUR HERSTELLUNG VON BATTERIEN MIT NANOSTRUKTURIERTEN BESCHICHTUNGEN

Title (fr)

REVÊTEMENTS NANO-MODIFIÉS POUR MATÉRIAUX ACTIFS D'ANODE, MATÉRIAUX ACTIFS DE CATHODE, ET ÉLECTROLYTES SOLIDES ET PROCÉDÉS DE FABRICATION DE BATTERIES CONTENANT DES REVÊTEMENTS NANO-MODIFIÉS

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Abstract (en)

[origin: CN107851840A] The present disclosure relates to a nano-engineered coating for cathode active materials, anode active materials, and solid state electrolyte materials for reducing corrosion and enhancing cycle lifeof a battery, and processes for applying the disclosed coating. Also disclosed is a solid state battery including a solid electrolyte layer having a solid electrolyte particle coated by a protective coating with a thickness of 100 nm or less. The protective coating is obtained by atomic layer deposition (ALD) or molecular layer deposition (MLD). Further disclosed is a solid electrolyte layer for asolid state battery, including a porous scaffold coated by a first, solid electrolyte coating. The solid electrolyte coating has a thickness of 60 mu m or less and a weight loading of at least 20 wt.% (or preferable at least 40 wt.% or at least 50 wt.%). Further disclosed is a cathode composite layer for a solid state battery.

IPC 8 full level

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Cited by

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