Title (en)

METHOD FOR PRODUCING ELECTRODE FOR ELECTROCHEMICAL ELEMENT AND METHOD FOR PRODUCING ELECTROCHEMICAL ELEMENT WITH THE ELECTRODE

Title (de)

VERFAHREN ZUR HERSTELLUNG EINER ELEKTRODE FÜR EIN ELEKTROCHEMISCHES ELEMENT UND VERFAHREN ZUR HERSTELLUNG EINES ELEKTROCHEMISCHEN ELEMENTS MIT DER ELEKTRODE

Title (fr)

PROCEDES DE PRODUCTION D'ELECTRODE POUR PILE ELECTROCHIMIQUE ET DE CETTE PILE AVEC L'ELECTRODE

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2006131992A1] To provide a method for producing an electrode for electrochemical element which is improved in energy density and is excellent in output characteristics. The present invention provides a method for producing an electrode for an electrochemical element, characterized by absorbing monomers for polymerization on a surface of a conductive porous material having a specific surface area of 100 to 3000m²g⁻¹ and having an average pore diameter in the range of 0.4 to 100nm, performing electrolysis polymerization by applying pulse voltage using said conductive porous material as an electrode in electrolyte solution to stack said monomers for polymerization, and forming a conductive polymer layer on the surface of the conductive porous material : wherein a thin and uniform electrode film is formed, namely the electrode for electrochemical element which is excellent in output characteristics and improves energy density is manufactured according to the method.
In addition, the present invention provides a method for producing an electrochemical element, characterized by forming a conductive polymer layer on the surface of the conductive porous material within an outer casing by a step of absorbing monomers for polymerization on a surface of a conductive porous material having a specific surface area of 100 to 3000m²g⁻¹ and having an average pore diameter in the range of 0.4 to 100nm forming a electrochemical cell by using the conductive porous material wherein the monomers for polymerization are absorbed in the pores, putting said electrochemical cell and the electrolyte solution in an outer casing , and performing electrolysis polymerization of the monomers for polymerization in said electrolyte solution by applying pulse voltage from a external electrode of the outer casing to stack said monomer for polymerization : wherein it is possible to produce an electrochemical element with the said electrode for the electrochemical element in the series of the steps through the electrolysis polymerization, thereby reducing the number of steps required for producing the electrochemical element.

IPC 8 full level

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