

Title (en)

METHOD FOR THE PREPARATION OF NANOSTRUCTURES AND NANOWIRES

Title (de)

VERFAHREN ZUR HERSTELLUNG VON NANOSTRUKTUREN UND NANODRÄHTEN

Title (fr)

PROCÉDÉ DE PRÉPARATION DE NANOSTRUCTURES ET DE NANOFILS

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2008034471A1] A process for producing porous nanostructures suitable for the manufacture of 5 nanowires and processes for manufacturing of the nanowires by using said nanostructure are disclosed. The process for obtaining the nanostructure of the invention comprises the steps of cleaning and polishing the surface of an aluminum metal substrate, forming a porous oxide layer bearing nanoholes on said aluminum substrate, immersing the porous structure into a basic zincate solution for etching 10 the bottoms and walls of the nanoholes and depositing a thin and substantially pure Zn film extending from the bottom of the nanoholes through the aluminum substrate. Nanowires are fabricated by either the step of utilizing so obtained etched nanostructure as an electrode and subjecting the same to a metal electro-deposition operation, or immersing the porous structure into a solution comprising the desired 15 metal to be deposited within said porous structure.

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