

Title (en)

MICRO-NANO PROCESSING METHOD FOR ALUMINUM OR ALUMINUM ALLOY SURFACE

Title (de)

MIKRO-NANOVERARBEITUNGSVERFAHREN FÜR ALUMINIUM- ODER ALUMINIUMLEGIERUNGSOBERFLÄCHE

Title (fr)

PROCEDE DE MICRO-NANO-TRAITEMENT POUR SURFACE EN ALUMINIUM OU EN ALLIAGE D'ALUMINIUM

Publication

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Application

EP 13876766 A 20130916

Priority

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- CN 2013083591 W 20130916

Abstract (en)

A micro-nano processing method of an aluminum or aluminum alloy surface includes a step of placing aluminum or an aluminum alloy as an anode in an electrolyte containing hydrochloric acid, sulfuric acid, phosphoric acid, and an etching inhibitor for DC electrochemical etching, where the concentration of hydrochloric acid is 1.5 to 3 mol/L, the concentration of sulfuric acid is 0.9 to 1.2 mol/L, and the concentration of phosphoric acid is 0.6 to 1 mol/L. A method for integrating aluminum or an aluminum alloy and a plastic includes the following steps: forming a micro-nano porous structure on an aluminum or aluminum alloy surface by using the micro-nano processing method; and closely combining a plastic and the aluminum or aluminum alloy surface by means of the micro-nano porous structure. An aluminum or aluminum alloy structure has a micro-nano porous structure formed on the surface of the aluminum or aluminum alloy structure by using the micro-nano processing method. By using this method, the micro-nano hole processing efficiency is high, the quality is high, and the method is environmental friendly.

IPC 8 full level

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