

Title (en)

A method for precisely controlled masked anodization

Title (de)

Verfahren zur präzise gesteuerten maskierten Anodisierung

Title (fr)

Procédé pour anodisation de masque contrôlée avec précision

Publication

EP 2458037 A1 20120530 (EN)

Application

EP 11162495 A 20110414

Priority

US 41819410 P 20101130

Abstract (en)

The present invention is related to a method for masked anodization of an anodizable layer on a substrate, for example an aluminium layer present on a sacrificial layer, wherein the sacrificial layer needs to be removed from a cavity comprising a Micro or Nano Electromechanical System (MEMS or NEMS). Anodization of an Al layer leads to the formation of elongate pores, through which the sacrificial layer can be removed. According to the method of the invention, the anodization of the Al layer is done with the help of a first mask which defines the area to be anodized, and a second mask which defines a second area to be anodized, said second area surrounding the first area. Anodization of the areas defined by the first and second mask leads to the formation of an anodized structure in the form of a closed ring around the first area, which forms a barrier against unwanted lateral anodization in the first area.

IPC 8 full level

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CPC (source: EP US)

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Citation (applicant)

- HELLIN RICO ET AL., J. ELECTROCHEM. SOC., vol. 154, no. 9, 2007
- MEI ET AL.: "Formation mechanism of alumina nanotubes and nanowires from highly ordered porous anodic alumina template", JOURNAL OF APPLIED PHYSICS, vol. 97, 2005, pages 034305

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