

Microstructures of Si Surfaces Fabricated by Electrochemical Anodic Oxidation with Agarose Stamps

Authors : Hang Zhou, Limin Zhu

Abstract : This paper investigates the fabrication of microstructures on Si surfaces by using electrochemical anodic oxidation with agarose stamps. The fabricating process is based on a selective anodic oxidation reaction that occurs in the contact area between a stamp and a Si substrate. The stamp which is soaked in electrolyte previously acts as a current flow channel. After forming the oxide patterns as an etching mask, a KOH aqueous is used for the wet etching of Si. A complicated microstructure array of 1 cm² was fabricated by the method with high accuracy.

Keywords : microstructures, anodic oxidation, silicon, agarose stamps

Conference Title : ICMIP 2017 : International Conference on Microfabrication, Integration and Packaging

Conference Location : Barcelona, Spain

Conference Dates : February 26-27, 2017