

Parametric Study and Thickness Evaluation of Photoresist Development for the Formation of Microgap Electrodes Using Surface Nanoprofiler

Abstract

A compact nanolaboratory on single chip is one of the challenging tasks for future reproductively of sensitive and selective lab-on-chip. This paper reports a simple and controllable technique for patterning microgap structures on (PR-1 2000A) positive photoresist. For the pattern transformation conventional lithography technique was used integrated with precise resolution mask namely chrome mask. This technique provides an especially simple method for the formation of micro features sizes of gaps onto the photoresist. The thickness of developed microgap structures on photoresist directly relates with the coating speed of spin coater.

Keywords: Chrome Mask, Lab-on-Chip, Microgap, Photoresist, Spin Coating, Surface Nanoprofiler