**New Physics: Sae Mulli**,
Vol. 64, No. 8, August 2014, pp. 791∼794

DOI: 10.3938/NPSM.64.791

# Improving the Pore-channel Uniformity through Back-side Treatment of Anodic Aluminum Oxide

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(Received 1 July 2014 : revised 6 August 2014 : accepted 11 August 2014)

In this research, we fabricated an array of nanometer-scale channels by using porous anodic aluminum oxide with the bottom barrier layer removed to open up the pores on both ends. However, the aluminum and oxide layers remaining underneath affect the removal of the barrier, leading to a locally-uneven etching process and a nonuniform pore-size distribution across the sample's surface. To increase the pore-channel uniformity, we removed the oxide layer at the bottom separately and compared the pore-channel structures with and without the bottom oxide removed. We observed that when this removal process was applied, the channel arrays that formed at both the center and the edge of the sample had more uniform dimensions than those prepared without this additional back-side treatment.

PACS numbers: 81.16.Rf
Keywords: Anodic aluminum oxide, Pore-channel, Back-side treatment