Creative Periodic Nanopore Arrays With Double Line Imprint Technique

Sang- Yeob Sung and Bethanie J. H. Stadler

Electrical and Computer Engineering, University of Minnesota

Ni Ni Ni SiO n-Si n-Si AI Nanopore Ni electro-deposition pattern Template strip Double Imprint on Al lithography 60 **Fabrication** Ni is directly seedless electro deposited on Si nanopore array mold which is made by e-beam lithography or laser interference lithography. Double imprint on AI foil U of MN SEI 2.5kV X3.000 1µm

SEM of Anodized Aluminum

Anodization

WD 4.4mm

Motivation

 Fabricate large area periodic nanopore arrays.

 Mass production and reduce fabrication cost.



Si Line Mold (Made by Lightsymth Technologies)

 Fabricating self grow nanopore array with anodization Al foil.



MINNESOTA