

## Preparation of Anodic Aluminum Oxide Nano-template Using Al/Si substrate for Growing Nanomaterials

심랍, 박진호\*  
영남대학교  
(chpark@ynu.ac.kr\*)

Anodic aluminum oxide (AAO) nano-templates were prepared using the Al/Si substrates with the thickness of the aluminum films of about 200–300nm which were deposited by RF magnetron sputtering. The pores of various sizes and depths were fabricated electrochemically through anodic oxidation. The optimum morphological structure for growing various kinds of nanomaterials was formed by adjusting the applied potential, temperature, types of acid solution and their concentration. Scanning electron microscopy (SEM) investigations showed that hexagonal-close-packed nanopore arrays have smooth wall morphologies and well-defined diameters corresponding to the diameter of the applied template.