

## Preparation of Anodic Aluminum Oxide Nano-template Using Al/Ti/Si substrate

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Titanium and aluminum films were deposited on silicon by RF magnetron sputtering. The thickness of the titanium and aluminum films is about 100 nm and 3  $\mu\text{m}$ , respectively. Anodized aluminum oxide (AAO) nano-templates were prepared using the above Al/Ti/Si substrates. The pores of various sizes and depths were fabricated electrochemically through anodic oxidation. The optimum morphological structure 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.

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