

**Template synthesis -
A membrane based technology for generation of nano-/micro materials:
A review**

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In recent years there has been a tremendous spurt in the potential applications of metallic as well as non-metallic nano-/microstructures and materials. A variety of techniques are being used in their fabrication. Of late, a novel application of track etch technique, called "Template Synthesis", which is a membrane based technology, has been used in the synthesis of these structures and materials of very low dimensions-down to a few nm. This technique entails synthesis of the desired material (metal, semiconductor, polymer, metal-semiconductor junctions) within the pores of the template membranes having the custom made pores. This leads to the production of true replica of the pore geometry. We describe here in detail this technology besides reviewing other available methods.