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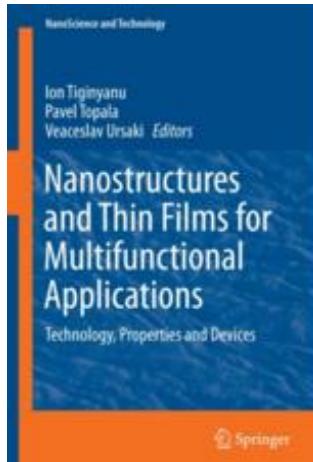
## Template Assisted Formation of Metal Nanotubes

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### Abstract

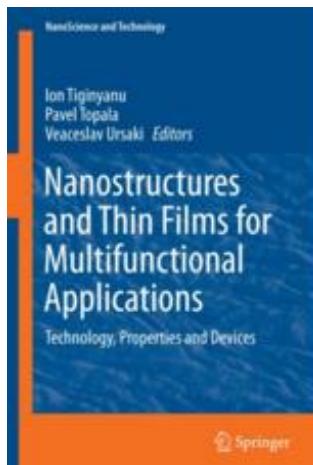
This chapter provides a review of methods for the production of metal nanotubes and their applications. The importance of nanotemplated growth of nanowires and nanotubes for nanofabrication, and the advantages of nanotubes over nanowires are revealed. Technological approaches for producing various templates, as well as advantages and drawbacks of specific templates, such as ion-track membranes, porous alumina templates, and porous semiconductor templates for nanofabrication are discussed, especially with respect to their suitability for the production of metal nanotubes. Technological methods applied for deposition of metal nanotubes with a focus on electrodeposition and electroless deposition are overviewed for each type of porous templates, and their mechanisms and peculiarities are evidenced. The prospects of application of nanomaterials based on porous nanotemplates in electronics, energy sector, optics, photonics, computers and communications, magnetism and biomedical sciences are explored.



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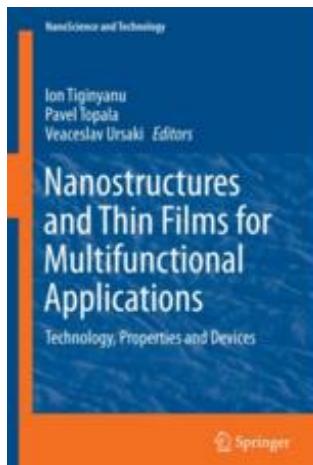
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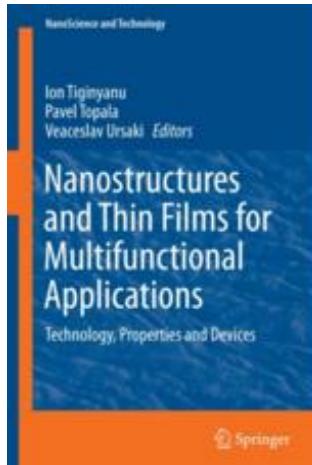
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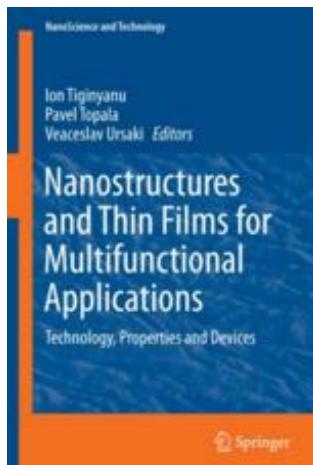
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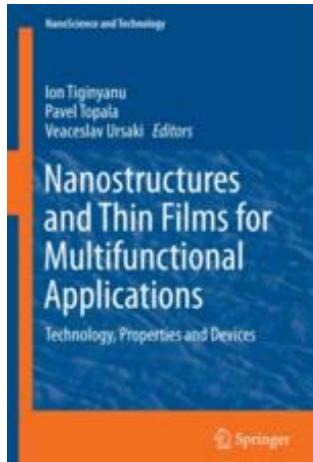
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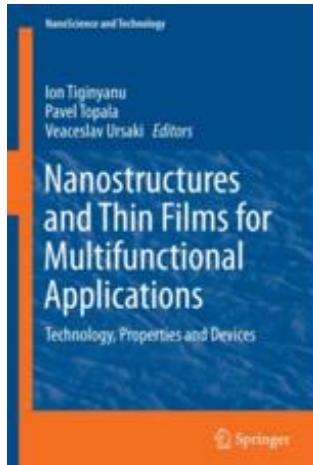
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