

## **Deposition and properties of CdTe nanowires prepared by template replication**

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We used the template method to prepare CdTe wires with diameters ranging from 80 nm to 1  $\mu\text{m}$ . As templates we used polycarbonate and polyethylene terephthalate ion track membranes and as the method of filling the pores of such membranes we employed electrochemical deposition. The conditions (i.e. bath composition and deposition potential) necessary to obtain the stoichiometric composition of the semiconductor were found. Scanning and transmission electron microscopy were employed for morphological characterization of the nano and microwires. Energy dispersive X-ray analysis was employed for determining the Cd/Te ratio. Selected area electron diffraction was employed for structural measurements. Reflection spectroscopy measurements were performed on nanowire arrays for determining the band gap of the deposited nanostructures.