

## **Templated Electrodeposition of Metal Nanorods into TiO<sub>2</sub> nanotubes**

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Homogenous and leakage free filling of TiO<sub>2</sub> nanotubes with metal, such as Ag, Au, Cu and Pt is achieved, by a novel electrochemical protocol. We reach nearly 100 % filling of the tubes with metals, that all yield well-controlled dimensions and well defined electrical properties of the metal oxide junctions. Our approach to fabrication of highly ordered metal nanowires is efficient and flexible with respect to the diameter and thickness of TiO<sub>2</sub> nanotubes.