Supporting Information

Rapid Sol-Gel Fabrication of High-Quality Thin-Film Stacks on Planar and Curved Substrates

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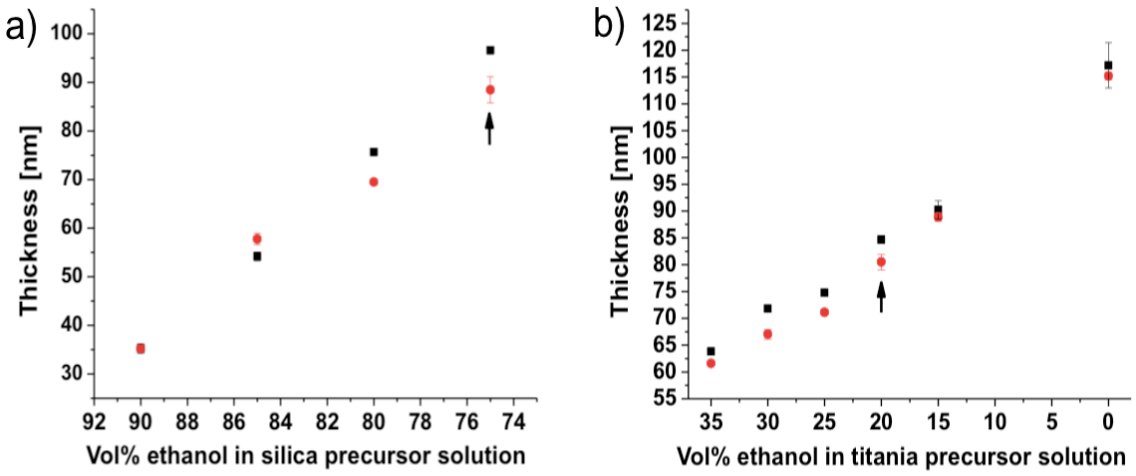

Figure S1. Graphs showing thickness of a) silica and b) titania thin films as a function of ethanol content of the respective precursor solutions (in volume percent). Film thicknesses were determined after a single deposition cycle (black) and after an additional heat treatment for at least 1 hour at 500 °C (red). For example, to fabricate a silica film with a thickness of 88±2 nm (arrow in (a)), 5 mL of the original silica stock solution was diluted with 15 mL ethanol. Likewise, to fabricate a 80±2 nm titania film (arrow in (b)), 16 mL of titania stock solution were diluted with 4 mL of ethanol. [See Experimental section of the paper for details on stock solution compositions.]

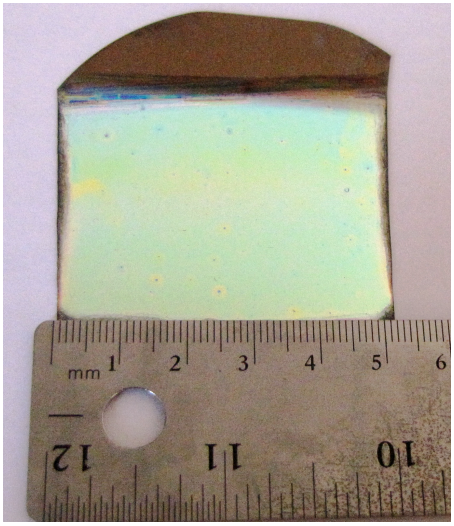

Figure S2. Photograph of a large-area (5x4 cm) thin-film Bragg stack consisting of 12 alternating layers of silica (88±2 nm) and titania (70±2 nm) deposited onto a silicon (100) wafer.

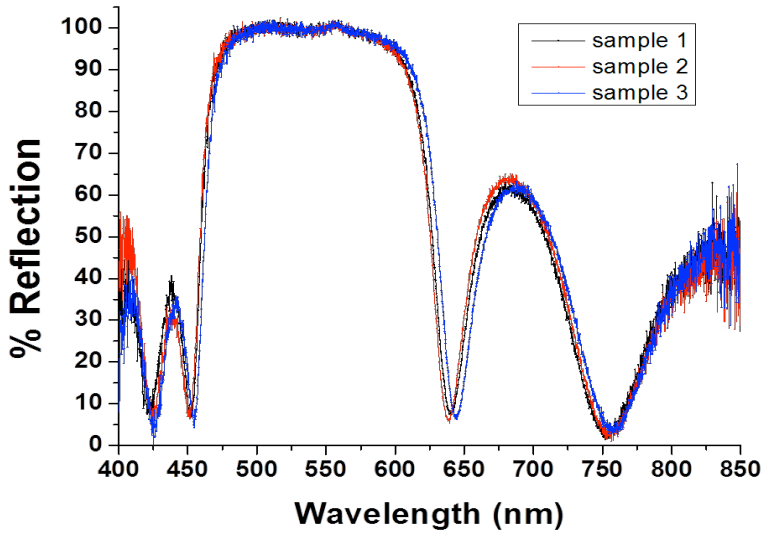

Figure S3. Optical reflection spectra of three thin-film Bragg stacks consisting of 12 alternating layers of silica and titania with thicknesses of 88±2 nm and 70±2 nm, respectively, deposited onto a silicon (100) wafer. The three samples were fabricated at different times but under the same experimental conditions (i.e., precursor solution composition, dip-coating parameters, drying and heat treatments) and demonstrate the excellent reproducibility of the deposition and processing method.