

Fig. 3 Transmission electron microscopy (TEM) image of an “as precipitated” titania nanosphere (*ca.* 200 nm diameter) synthesised *via* controlled hydrolysis of a mixture of novel precursor $[\text{Ti}(\text{OPr}^i)_3(\text{Krytox})]_n$ and titanium(IV) isopropoxide (TTIP), in supercritical carbon dioxide (Mag. 120 K)

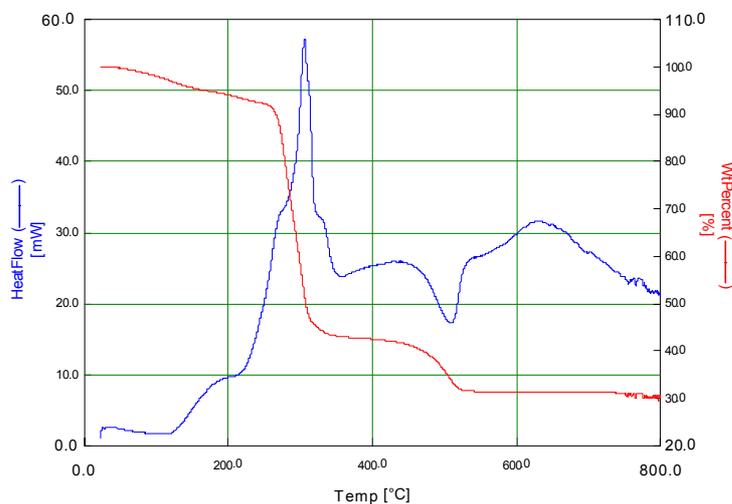


Fig. 4 TGA-DSC plots of titania nanospheres prepared *via* controlled hydrolysis of a mixture of novel precursor $[\text{Ti}(\text{OPr}^i)_3(\text{Krytox})]_n$ and titanium(IV) isopropoxide (TTIP), in supercritical carbon dioxide.

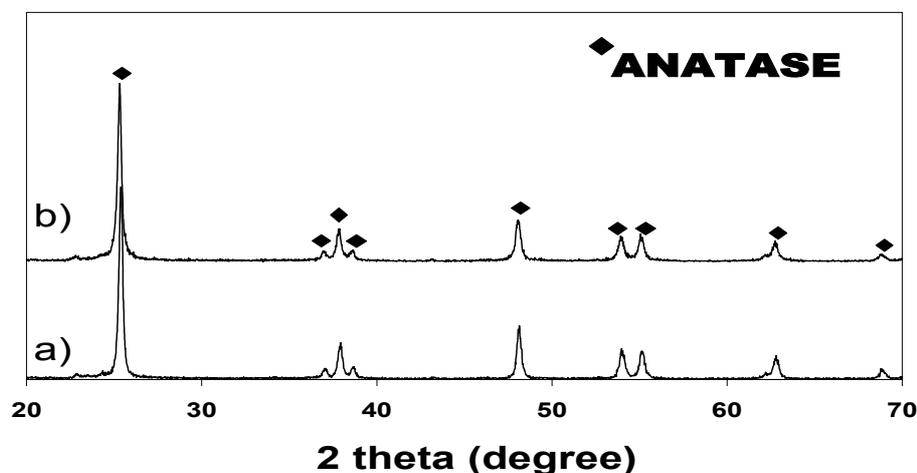


Fig. 5 X-ray diffraction (XRD) pattern of crystalline titania particles synthesised *via* (a) controlled hydrolysis of a mixture of novel precursor $[\text{Ti}(\text{OPr}^i)_3(\text{Krytox})]_n$ and titanium(IV) isopropoxide (TTIP) in supercritical carbon dioxide; (b) from hydrolysis of TTIP alone in supercritical carbon dioxide followed by heat treatment (600 °C in air).

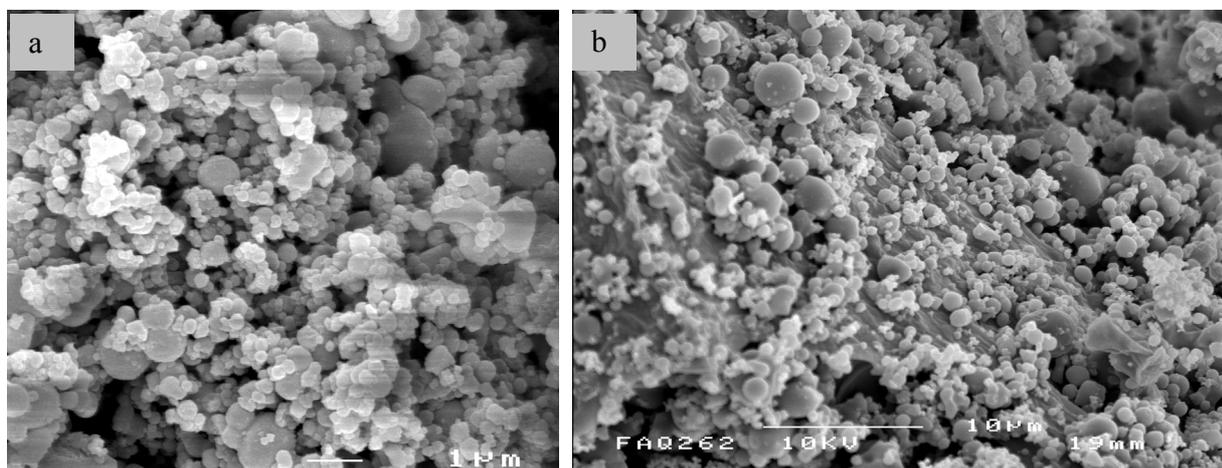


Fig. 6 Scanning electron microscopy (SEM) images of “as precipitated” titania nanospheres synthesised *via* controlled hydrolysis of a mixture of novel precursor $[\text{Ti}(\text{OPr}^i)_3(\text{Krytox})]_n$ and titanium(IV) isopropoxide (TTIP), in supercritical carbon dioxide using (a) 10 mL of water and (b) 8.0 mL of water.[±]