

080 Multi-Technique analysis of a commercially available nano-dispersion; a cautionary tale

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Poster Abstract

A commercially-available, metal oxide dispersion of nano-particles with a stated particle size of <50 nm has been analysed using an array of techniques including PCCS (Photon Cross Correlation Spectroscopy), laser diffraction, X-ray diffraction, SEM/ TEM plus image analysis. These have been employed to analyse size distribution and the crystallographic composition of the particles present. Contrary to expectation, it has been shown that the particles vary in composition considerably and that there is a significant amount of material with a particle size above 100 nm. It is concluded that commercially-available nano-particles may not always live up to expectations and that careful analysis is always required before use.