Dimensional nanometrology at NPL

Dr Andrew Yacoot

National Physical Laboratory, Hampton Road, Teddington, Middlesex, TW11 0LW, UK

Abstract

The current growth in nanotechnology is a driving force for improved nanometrology. The talk will give an overview of dimensional nanometrology activities at NPL. This will include the use of x-ray interferometry to investigate non-linearity in optical interferometer systems and as a positioning system. Atomic force microscopes can be regarded as the window on the nanoworld with applications that include imaging, manipulation, writing and metrology. The calibration route for these instruments is generally via calibrated transfer standards. The talk will cover the development of metrological atomic force microscopy to provide a method for calibration for artefacts and a route to traceability for atomic force microscopes.