Characterisation

Metrology

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<table>
<tr><td>Contact:</td><td colspan="7">Prof. Richard Leach
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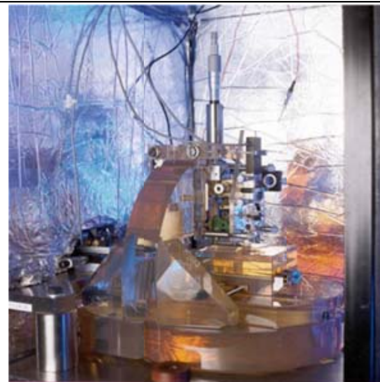
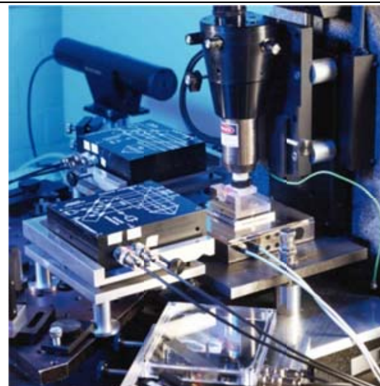
<tr><td>Material class:</td><td>Silicon</td><td>Polymer
X</td><td>Metal
X</td><td>Ceramic
X</td><td>Glass</td><td>Organic</td><td>Other</td></tr>
<tr><td>Short technology description:</td><td colspan="7">The main purpose of the infrastructure is to support industry by providing traceability and contract measurements. The infrastructure has several tools available and development projects including: optical thin film thickness metrology, areal surface texture traceability development (instrument, artefacts, software and characterisation tools), vibrating micro-CMM probe development, micro-CMM measurements, low force and mass metrology, measurement of absolute thickness using optical coherence tomography and vibrometry. NPL also has considerable experience in providing good practice solutions (including numerous good practice guides) and training.
The infrastructure’s state of the art MNT measuring equipment includes:
– NanoSurf IV – traceable stylus surface profile measuring instrument
– Metrological AFM – atomic force microscope with traceable interferometry in all its axes
– NPL Areal Instrument – areal stylus instrument with interferometry in all its axes
– Vertical scanning white light interferometer, confocal microscope and focus variation microscope
– Ellipsometer for thin film thickness measurement
– Zeiss F25 – micro co-ordinate measuring machine
– NPL low force balance</td></tr>
<tr><td rowspan="2">Typical structures and designs:</td><td colspan="7"></td></tr>
<tr><td colspan="7">
Metrological atomic force microscopy</td></tr>
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