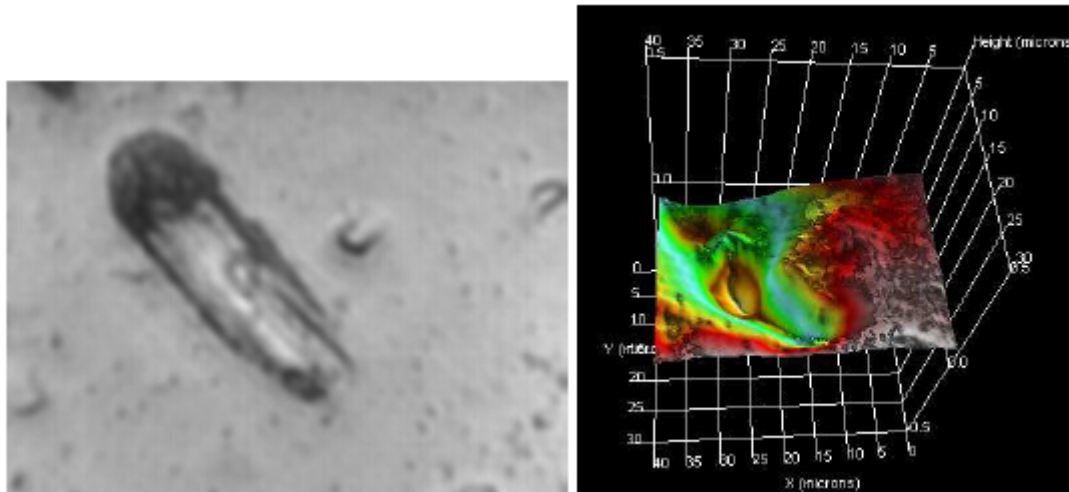


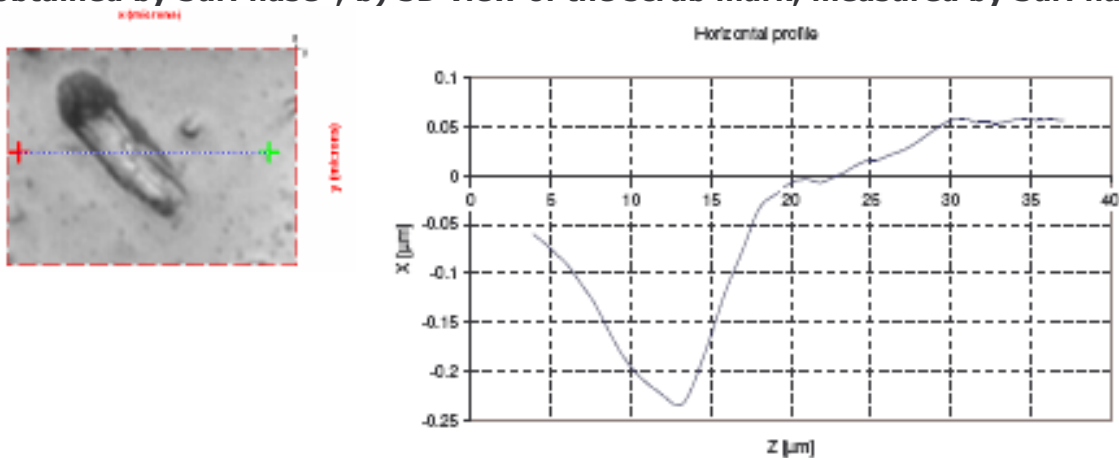
## Defectoscopy

Measurement of the size and depth (height) of defects can be quickly performed with SurPhase<sup>®</sup> and MicroPhase<sup>®</sup> systems in less than 5 sec.

Specifically, SurPhase<sup>®</sup> can be used to measure the depth of the scrub marks on the surface of a wafer. In the experiment, the x40 NA=0.65 objective is used and the field of view is 41.6 x 31.2  $\mu\text{m}$ .



**Figure 1. Defectoscopy of scrub marks on the wafer: a) image of a scrub mark obtained by SurPhase<sup>®</sup>; b) 3D view of the scrub mark, measured by SurPhase<sup>®</sup>.**



**Figure 2. 1D horizontal cross-cut through the 3D representation of the surface of the scrub mark. The depth of the scrub mark is seen to be about 0.25  $\mu\text{m}$ .**

The depth of the scrub is in the micrometer range. The profile of the mark can be obtained to observe the scrub mark in more detail.

The similar results were obtained with the MicroPhase measurement system, that was fit to the C-mount of the Olympus CX 61 microscope.

SurPhase<sup>®</sup> and MicroPhase<sup>®</sup> systems can be used to quickly non-destructively test the defects on the surface of the wafer samples.