

## Nano Indentation

**Category:**

C. Particle Characterisation in and ex-situ

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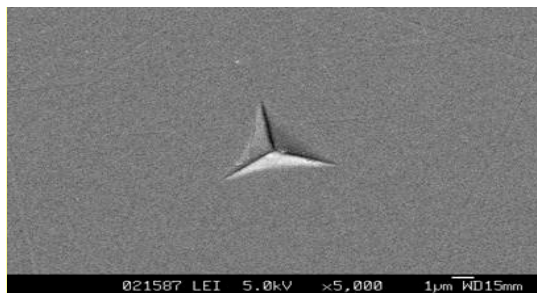
### Short technology description

The NanoTest 550 by Micro Materials Ltd allows instrumented hardness measurement and records the loading and the depth of penetration continuously in real time. This gives a so-called indentation hysteresis graph. It makes it possible to determine not only the hardness, but also the modulus of elasticity (Young's modulus) of the material. Interpreting and analysing the indentation graph is done according to a method proposed by Oliver and Pharr. The data are corrected for the deviation of the ideal geometry of the diamond indenter and the finite rigidity of the instrument itself.

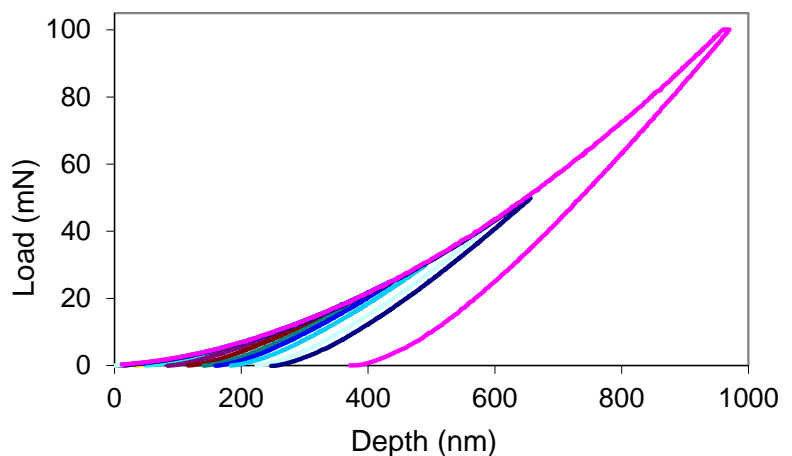
### Main Features (Equipment Capabilities):

- trigonal pyramidal (Berkovich) diamond
- other indenter geometries (sphere, cone)
- resolution : 10  $\mu$ N in force and 1 nm in displacement

### Typical Samples & Images:



load versus depth hysteresis curve



*Any further Information:*