Atomic Force Microscope (AFM)

Dimension 3100 from Digital Instruments, Veeco Metrology Group. Uses a stylus scanned across a sample in a raster fashion to obtain topography information. Scan possible in tapping mode or contact mode. Sub-nanometer resolution is limited by the sharpness of the tip and the environmental conditions, mostly vibrations and acoustic. Scan field limited to ~100x100 μm^2. Accurate measurement of steep or vertical sidewalls requires specialized tips. It is relatively slow if large areas are to be scanned.