



NANO-POSITIONING AND
SCANNING PROBE MICROSCOPES
FOR EXTREME ENVIRONMENTS



Ultra-high precision spatial positioning of objects is of prime importance in the emerging field of nanotechnology. attocube systems, a German company located in Munich, manufactures and provides ultra-high precision spatial positioning systems and complete probing tools which are particularly suitable for extreme environmental conditions such as cryogenic temperatures (10 mK – 300 K), high magnetic fields (+31 T) and ultra high vacuum environments (5×10^{-11} mbar).

Two principal product lines which meet today's market demands are currently offered:

First, ultra-compact nano-precise positioning devices provide linear and rotational movement of samples or probes. They are offered in different sizes and out of a variety of materials, and feature an unprecedented variety of applications particularly suitable for extreme environmental conditions. This represents a revolutionary advancement for the positioning market, leading to new research in many areas. Applications of these outstanding nanopositioning modules, well-known in many labs around the world, include scanning probe techniques such as scanning electron microscopy, confocal microscopy, scanning force microscopy, scanning tunneling microscopy and near-field optical microscopy, to name just a few. Furthermore, they are, for instance, suitable for general beam manipulation applications involving optical fibers and solid state waveguides.

The second product line contains easy-to-use, highly flexible low temperature Scanning Probe Microscopes like LT-AFM, LT-CFM, LT-SNOM, or LT-STM. These systems are based on these reliable positioning devices. Thus, the microscopist can perform in-situ coarse and fine positioning, smooth scanning or automatically focusing any samples in respect to any probes at temperatures down to the Millikelvin range, at high magnetic fields or under high vacuum conditions.

The product range is completed by innovative and highly flexible control systems for multiple SPM modes. Various SPM hardware and software modules make image acquiring a simple task. 2D and 3D software allow image processing for visually appealing, professional and publishable results.

attocube systems AG is focused on three markets. First, they provide nano-positioning systems for the R&D sector in the field of low temperature science. Second, the company produces microscopes capable for low-temperature applications in R&D. Finally attocube systems AG captures the markets of hightech industries that look for the qualities of these positioning systems, especially for the UHV-compatibility of attocube systems' products.

For further technical information concerning attocube systems' products, please visit the website www.attocube.com.