COVALENT METROLOGY

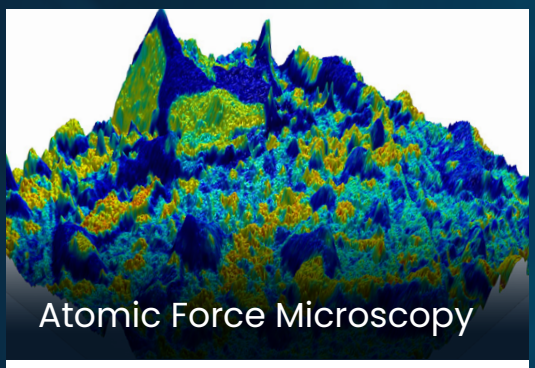
ANALYTICAL SERVICES

Scanning Probe Microscopy Services

With the Covalent Platform

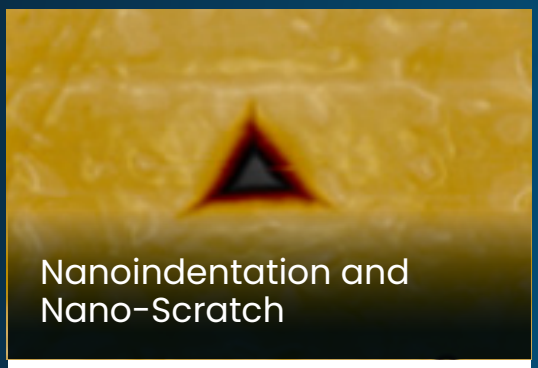
Recent innovations have made scanning probe microscopy (SPM) a hugely flexible and powerful technique for analyzing surface topography and material properties. Covalent experts rely on a combination of cutting-edge instrumentation and advanced software tools for data analysis to provide actionable, accurate insights in presentation-ready reports. The SPM team can accelerate your research and development work by making metrology partnership easy and efficient, with impactful data delivered at fast and reliable turnaround times.

The Solutions We Offer



Atomic Force Microscopy

Best height resolution for surface imaging (sub-Angstrom accuracy)



Nanoindentation and Nano-Scratch

Efficient measurement of mechanical and elastic properties

Advanced AFM Modes

Measure:

- **Electrical Properties:** Surface Charge, Work Function, Dielectric Properties, Conductance
  (Modes: *KPFM, EFM, c-AFM*)
- **Magnetic Properties:** Magnetic Domains, Magnetic Moment
  (Modes: *MFM*)
- **Ferroelectric Properties:** In-Plane / Out-of-Plane Polarization of Domains
  (Modes: *MFM*)
- **Mechanical Properties:** Adhesion, Modulus, Phase, Friction
  (Modes: *Phase Imaging, QNM, Lateral/Torsional Imaging, Force-deflection Spectroscopy*)

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Phone: (408) 498 - 4611

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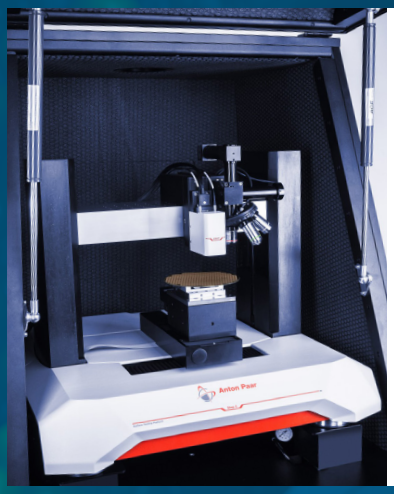
Cutting-Edge Instruments

Anton Paar Tosca AFM

- Streamlined AFM measurement 10X faster than conventional systems
- Broad scan range of up to 15 microns in vertical direction and 90 microns lateral direction

Bruker Nano Dimension
(with Icon and FastScan Heads)

- Low noise floor with high accuracy
- Acoustic and vibration isolation enclosure
- 200mm Wafer Stage



Anton Par STeP 6 Platform
(UNHT3 and NST3 Tester Heads)

- Integrated optical video microscopes enable synchronized panoramic imaging during force measurement
- Testing system enclosed in specialized acoustic chamber with anti-vibration table for maximum accuracy measurements

Covalent's Scanning Probe Microscopy Group

The expert materials analysts in Covalent's Scanning Probe Microscopy Group have a proven track record of helping scientists and engineers to better understand the optical, physical, and electrical properties of new products and technologies. The group is outfit with cutting-edge instrumentation for scanning probe metrology that enables next-generation analytical methods and capabilities. Using advanced software tools for data processing and analysis, Covalent helps clients access deeper insights and translate data into effective strategies for product and process optimization.

Get a quote at covalentmetrology.com

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