
Anton Paar
Surface Characterization
FACE YOUR SURFACE

Surface Characterization by Anton Paar

Coating Thickness Tester

Anton Paar's Calotest solutions provide quick, accurate, and inexpensive coating thickness determination for any kind of coating:

- Measuring times of 1 to 2 minutes only
- Simple analysis of single or multi-layered coating stacks with the ball-cratering method
- Suitable for flat, spherical, and cylindrical samples of PVD, CVD, thin or thick coatings, and more
- Special industrial Calotester with motor and hydraulic arm for big or bulky samples
- Software for automatic coating thickness calculation and customized data reports

Atomic Force Microscope

Tosca™ 400 combines high-level technology with ease of use. It takes AFM from complex to simple with useful features and automation functions:

- Fully automatic laser alignment with just two mouse-clicks
- Probemaster tool for easy and fast cantilever exchange
- The easiest engagement procedure on the AFM market
- Ready for scanning within seconds
- User-friendly control and analysis software for simple workflow templates and automated analysis

Scratch Testers

Anton Paar is the world leader in scratch testing and offers patented technology for accurate analysis of film-substrate systems:

- The only commercially available system with active force feedback for complex surface geometries
- Patented (US 8261600, EP 2065695) synchronized panorama with direct visual comparison of the scratch image and the scratch curve
- The ideal instruments for scratch depths up to 1000 µm and a load range up to 200 N
- True penetration depth measurements for elastic recovery studies

SAXS Systems

SAXSpace and SAXSpoint 2.0 small-angle X-ray scattering systems with the high-precision GISAXS Stage provide excellent resolution and the best possible data quality for the research of nanostructured surfaces:

- Brilliant X-ray sources and optics for the highest spectral purity and flux
- Scatterless beam collimation and state-of-the-art hybrid photon-counting (HPC) detectors for a high signal-to-noise ratio and excellent data quality
- Wide variety of sample stages, including GISAXS, GIWAXS (GIXD) stages for surface studies under controlled temperature and atmosphere
- Reliable operation with high uptimes, high sample throughput, and low maintenance costs

Instrumented Indentation Testers

The five Anton Paar indentation testers cover the widest range of high-precision indentation testing on the market:

- Characterization of thin films, coatings, or bulk materials of any type, whether soft, hard, brittle, or ductile
- Determination of hardness and elastic modulus, creep, relaxation, fatigue, and stress-strain
- Full force range: micro, nano, or ultra-nano range
- Analysis of soft and biological materials or measurement at temperatures up to 800 °C with specialized instrumentation

Tribometers

Based on decades of experience in tribology, Anton Paar provides you with the widest range of tribometers on the market:

- Tribological surface analysis solutions including a pin-on-disk tribometer, a ball-on-three-plates tribometer, a nano tribometer, and a high-temperature tribometer
- A rotating and a linear reciprocating module to simulate different types of motion
- Optional extensions for environmental control (temperature, humidity, vacuum), wear depth measurement, electrical contact resistance (ECR), and more
- 35 years of experience in robust and reliable tribology instrumentation with more than 1500 installed systems worldwide

Surface Charge Analyzer

SurPASS™ 3 empowers you to characterize the surface chemistry when researching new solid materials in all technical and biological fields:

- Pioneering in the analysis of interactions between macroscopic solid surfaces and aqueous solutions
- One parameter, many properties: The surface zeta potential gives insights into surface charge, electrostatic attraction or repulsion, isoelectric point, or adsorption kinetics
- An adjustable gap cell, clamping cell, and cylindrical cell are available to measure any sample geometry, size, or origin
- Typical fields of applications are membranes, biomaterials, semiconductors, cosmetics, detergents, and more

Face your surface

Surfaces in different forms and structures are an integral part of our everyday life. They are so common they might appear unremarkable, but there's more to it than meets the eye. People who do surface characterization dive from a macro into a micro and nano world of sharp peaks and soft valleys, witness hardness and softness, examine the impacts of stress and fatigue, pursue investigations into electric potentials, and test resistances.

What they have in common is the same mission: #missionsurface. It is to explore, analyze, and know every spot and corner of the macro, micro or nano world of their surface. This knowledge empowers them to provide reliable materials, or to develop even stronger ones.

These scientific explorers face their surface, every day. Anton Paar supports them in accessing the world of surfaces by providing high-level and easy-to-use technology.

Are you a surface explorer?

Gear up for your #missionsurface with Anton Paar
www.anton-paar.com/surface-characterization

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