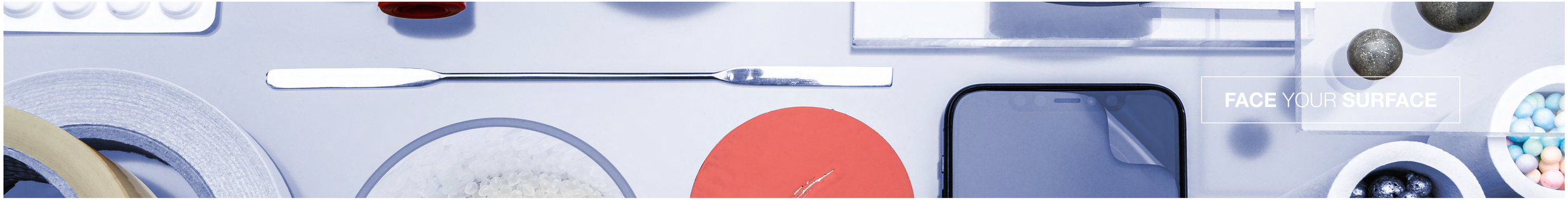
Anton Paar

Face Your **Surface**

Surface Characterization

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 only 1 to 2 minutes
- 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 Calotest with motor and hydraulic arm for big or bulky samples
- Software for automatic coating thickness calculation and customized data reports

Scratch testers

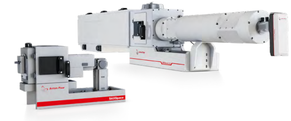
Anton Paar is the world leader in scratch testing and offers a patented technology for the accurate analysis of film-substrate systems:

- 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 5.0 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

All six indentation testers from Anton Paar 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, stress-strain, adhesive force, and viscoelastic properties
- 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, 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 1,500 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:

- Pioneer 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 them than meets the eye. People who perform 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, and pursue investigations into electric potentials and test resistances.

What they have in common is the same mission: #missionsurface. This means 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 technologies.

Are you a surface explorer?

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

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