

What we can extract from ordinary and / or next generation surface tester measurement



- Taking indenter edges into account
- Indentation stress strain curves
- Poisson's ratio determination
- Critical stress for Mode I fracture
- Critical stress for Mode II fracture
- Critical stress for Mode III fracture
- Physical adhesion strength determination
- Coating thickness determination
- Grade of anisotropy
- Single asperity roughness
- Multi asperity roughness
- Intrinsic stress determination
- Residual stress determination
- Profiling of functionally graded coatings (Young's modulus, Yield strength ...)
- Testing for coating homogeneity
- Elastic-plastic indentation model
- Oliver&Pharr for multi-layer coatings
- Tribology modeling with arbitrary load dots
- Asymmetric indenter analysis
- Tilting of indenter taken into account
- Real surface profile allowed for
- Curved surfaces and interfaces
- Thermo-mechanical properties determination
- Temperature fields taken into account
- Temperature fields evaluated
- Temperature depending mechanical parameters
- Nano fretting analysis and prediction
- Viscous parameter determination
- Residual stresses after impact experiments

If you want to know more, don't believe us or like to test some of the new possibilities then see us at:

1. **Booth #14**, SIO
2. **Poster EP-1**, The Oliver and Pharr Method for Coatings and Physical Scratch Test Analysis for Layered Materials, to be presented Thursday April 30, 2009 5:00 PM
3. **Talk E2-1-5**, Procedures and Equations for the Next Generation of Surface Testers Solving the Problem of Pile-Up, Sink-In and Making Area-Function-Calibration Obsolete, to be presented Monday April 27, 2009 11:50 AM and
4. Free of charge O&P-for-coatings **online analyzer service** until June 15th at www.siomec.de/services/O&PfC (Only for participants of the ICMCTF 2009!) Password: SIO+ICMCTF09
5. At home on Germany's biggest island Ruegen: SIO, Tankow 1, 18569 Ummanz, Germany; contact@siomec.de; www.siomec.de; Tel. ++49 173 3667359

You are a manufacturer of testing equipment and you'd like to improve or extend the parameter identification opportunities of your products? You want to make it fit for coatings without a Bückle or 1/10th rule? You want happy customers who do not need to bother about area functions and equipment driven "size effects"? In shot: You want to have a "Next Generation Surface Tester"?

→ Well, it can't hurt to hear, what we have to say about this, can it?