Exhibitor Technology Spotlight
Room: Hall 1 - Session EW-TuL

Exhibitor Technology Spotlight Session
Moderator: Dennis Sollon, Kurt J. Lesker

12:40pm **EW-TuL2 The Latest Developments in Surface Analysis from Thermo Fisher Scientific**, ***Tim Nunney***, Thermo Fisher Scientific, UK, *P. Mack, C. Deeks, R.G. White*, Thermo Fisher Scientific

Thermo Scientific offers a wide range of analytical techniques for materials characterisation, which include XPS, Raman, FTIR, EDS, WDS and EBSD. In this presentation we will discuss our latest developments in instrumentation and software to extend our capabilities for surface analysis.

1:00pm **EW-TuL3 EnviroESCA – The Revolution of a Method**, ***Andreas Thissen***, *S. Bahr, T. Kampen, O. Schaff*, SPECS Surface Nano Analysis GmbH, Germany

Since many decades XPS (or ESCA) is the well-accepted standard method for non-destructive chemical analysis of solid surfaces. To fulfill this task existing ESCA tools combine reliable quantitative chemical analysis with comfortable sample handling concepts, integrated into fully automated compact designs. Over the last years it has been possible to develop XPS systems, that can work far beyond the standard conditions of high or ultrahigh vacuum. Near Ambient Pressure (NAP) XPS has become a fastly growing field in research inspiring many scientist to transfer the method to completely new fields of application. Thus, by crossing the pressure gap, new insights in complicated materials systems have become possible using either synchrotron radiation or laboratory X-ray monochromators as excitation sources under NAP condtions. Based on this experience SPECS Surface Nano Analysis GmbH has developed a revolutionary tool to realize the long existing dream in many analytical laboratories: reproducible chemical surface analysis under any environmental condition. EnviroESCA allows for different applications, like extremely fast solid surface analysis of degassing (but also non-degassing) samples, ESCA analysis of liquids or liquid-solid interfaces, chemical analysis of biological samples, materials and device analysis under working conditions (in situ/in operando studies of catalysts, electrochemical devices etc.). Discover the new capabilities of EnviroESCA, a fully automated tool in a new sophisticated and compact design with uncompromising ease-of-use, and explore completely new fields of applications for the established analysis method XPS.

1:20pm **EW-TuL4 Latest Developments in XPS and Related Methods from Kratos Analytical**, ***Chris Blomfield***, *J.D.P. Counsell, S.J. Coultas, S.C. Page,* Kratos Analytical Limited, UK, *C. Moffitt*, Kratos Analytical Limited

The Axis Supra is the latest generation of XPS instrument from Kratos Analytical. In addition to offering enhanced energy resolution and sensitivity for XPS, it has a 15µm small area spectroscopy and 1µm imaging capability. The instrument is designed to offer a high level of flexibility and can be fitted with a range of complimentary surface analysis techniques such as UPS, ISS, AES, along with an additional surface science station and a range of sample treatment capabilities. In addition to offering benchmark level performance, the instrument and ESCApe data system combine to offer a high throughput platform optimised for the multiuser environment of today's surface analysis laboratory. Samples may pre-aligned and analyses predefined so that, when combined with the automated sample transfer capability, high levels of throughput can be achieved with unattended operation. Applications of high resolution imaging, multispectral imaging, gas cluster ion source and GCIS-UPS studies will be presented on a range of new materials to underline the leading capabilities of the Axis Supra.

1:40pm **EW-TuL5 What's New from Physical Electronics**, ***Scott Bryan***, Physical Electronics USA

What's New from Physical Electronics

2:00pm **EW-TuL6 AFM of Thin Films for Nanomechanical, Nanoelectrical, and Electromechanical Characterization**, ***Amir Moshar***, *A. Labuda*, Asylum Research, an Oxford Instruments Company

AFMs now offer characterization beyond just thickness, grain and domain sizes of thin films and coatings. Instrumentation advances enable hassle-free environmental experiments for studying solvent and thermal effects. Nanoelectrical, nanomechanical and electromechanical modes allow quantitative measurements of functional properties. AFMs are also faster, easier-to-use, and allow users a wider variety of such techniques enabling more meaningful, correlative results. In this presentation, Asylum Research will discuss the latest advances in AFM instrumentation, scan modes, and give real-world examples of research being done on the Cypher™ and MFP-3D™ AFMs. We'll also introduce the science behind making quantitative measurements of electromechanical response with interferometric AFM.

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