Press Release

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Oxford Instruments Asylum Research in Conjunction with Materials Today Presents the Webinar: "More Than Just Roughness: AFM Techniques for Thin Film Analysis"

May 9, 2016 (Santa Barbara, CA) Oxford Instruments Asylum Research in conjunction with Materials Today presents the webinar "More Than Just Roughness: AFM Techniques for Thin Film Analysis" on June 1, 2016 at 11:00 am EDT. This informative webinar explores the powerful capabilities of today's atomic force microscopes (AFMs) for characterizing thin films and reviews recent improvements in speed, sensitivity, and ease of use. Discussions include new and improved capabilities for characterizing the electrical, mechanical, and functional response of thin films with examples highlighting a wide range of real-world applications, including their application to memory access devices in the semiconductor industry. Distinguished presenters are Dr. Donna Hurley, founder of Lark Scientific and former NIST project leader, and Dr. Kumar Virwani, Staff Member at IBM Research, Almaden, CA.

"AFM has been used extensively for imaging and analysis at the nanoscale and has played an integral part in advancing thin films and coatings research," said Jason Li, Applications Manager, Asylum Research. "What is so exciting are the numerous measurements beyond basic 3D topography and roughness that are available today, such as quantitative modes for measuring nanoelectrical properties and nanomechanical properties (storage modulus and loss tangent). With state-of-the art instrumentation such as the Asylum Research Cypher AFM, high resolution and fast scanning make it easy to capture dynamic processes for a wide range of materials. This insightful webinar is an excellent resource for scientists in both academia and industry who want to learn more about the latest AFM techniques for thin film characterization."

Registration for the webinar can be found at:
http://www.materialstoday.com/characterization/webinars/afm-techniques-for-thin-film-analysis/

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Figure caption: In this image the 3D surface represents the topography, and the color shows the tip-sample current for a (001) $Bi(Fe_{0.5}Mn_{0.5})O_3$ (BFMO) film deposited on a substrate of (001) $SrTiO_3$ with 0.5% Nb. Acquired in conducting AFM (CAFM) mode, the image reveals that the boundaries between crystalline grains (yellow-white) generally have much higher conductivity than the crystallite interiors (purple). The multiferroic and spin glass properties of BFMO films make them attractive for novel electronic devices. Scan size 1 µm, imaged with MFP-3D AFM; sample courtesy Thin Film Spintronic Structures Group, Dept. of Applied Physics and Optics, University of Barcelona.

About Oxford Instruments Asylum Research

Oxford Instruments Asylum Research is the technology leader in atomic force microscopy for both materials and bioscience research. Asylum Research AFMs are used for a wide variety of nanoscience applications in material science, physics, polymers, chemistry, tribology, biomaterials, and bioscience, including emerging applications in energy storage and generation, low-dimensional materials, and biophysics.

Asylum's MFP-3D family of AFMs includes four different models that span a wide range of performance, applications, and budgets. The new MFP-3D Infinity is the flagship of the family, offering the highest performance, simplest operation, and widest range of capabilities. The MFP-3D Classic, the original MFP-3D offered for mid-range budgets, provides high performance and versatility that exceeds most AFMs. The MFP-3D Origin is the most affordable model, offering the same performance as the MFP-3D Classic with many accessories and an easy upgrade path to advanced capabilities. Finally, the MFP-3D-BIO integrates with an inverted light microscope to support biological and photonic applications.

Cypher is the highest resolution fast scanning AFM and is available in two configurations, the Cypher S and the Cypher ES Environmental AFM. They provide low-drift closed loop imaging for the most accurate images and measurements possible today, >20X faster imaging with small cantilevers, exceptional ease of use, and integrated thermal, acoustic and vibration control – all in a small footprint. Cypher AFMs routinely achieve higher resolution than other AFMs, as demonstrated by single point atomic defects in crystal lattices and imaging of the DNA double helix.

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The Cypher ES adds gas and liquid environmental control, temperature control, and enhanced chemical compatibility to the extraordinary performance of the Cypher S.

In addition to the best AFMs, Asylum Research also offers unmatched customer support that is free for the lifetime of the AFM and industry-leading warranties for the lowest cost of ownership of any AFM. Asylum has sales, applications and service staff in offices in the United States, Germany, United Kingdom, Japan, France, China and Taiwan and global distribution.

About Oxford Instruments plc

Oxford Instruments designs, supplies and supports high-technology tools and systems with a focus on research and industrial applications. Innovation has been the driving force behind Oxford Instruments' growth and success for over 50 years, and its strategy is to effect the successful commercialisation of these ideas by bringing them to market in a timely and customer-focused fashion.

The first technology business to be spun out from Oxford University, Oxford Instruments objective is to be the leading provider of new generation tools and systems for the research and industrial sectors with a focus on nanotechnology. Its key market sectors include nano-fabrication and nano-materials. The company's strategy is to expand the business into the life sciences arena, where nanotechnology and biotechnology intersect.

This involves the combination of core technologies in areas such as low temperature, high magnetic field and ultra high vacuum environments; Nuclear Magnetic Resonance; x-ray, electron, laser and optical based metrology; atomic force microscopy; optical imaging; advanced growth, deposition and etching.

Oxford Instruments aims to pursue responsible development and deeper understanding of our world through science and technology. Its products, expertise, and ideas address global issues such as energy, environment, security and health.

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