

NEW PRODUCTS

Focus on analytical equipment, sensors, and instrumentation

The descriptions of the new products listed in this section are based on information supplied to us by the manufacturers. PHYSICS TODAY can assume no responsibility for their accuracy. For more information about a particular product, visit the website at the end of the product description. For all new products submissions, please send to ptpub@aip.org.

Andreas Mandelis



Software for layer analysis

Bruker's XMethod software can be used to analyze the composition and thickness of single and multiple layers. Analyses are based on data obtained by sample excitation with the company's XTrace microfocus x-ray source for scanning electron microscopes. The software enables the characterization of thin films and multilayer structures with thicknesses ranging from a few nanometers to 40 μm . There is no need to cross-section the sample. Bruker claims that x-ray excitation yields improved limits of detection over those achieved by sample excitation that uses high-energy electrons. It lets users obtain information on material several tens of microns be-

neath the surface. Applications include the analysis of coatings on solar cells and of connector pins and solder bumps on printed circuit boards, lead frames, and chip carriers. **Bruker Nano GmbH**, Am Studio 2D, 12489 Berlin, Germany, www.bruker.com

Flow cell for electrochemistry

By agreement with Lawrence Berkeley National Laboratory and the University of California, Berkeley, Hiden Analytical is commercializing a novel differential electrochemical mass spectrometry (DEMS) cell for use with its HPR-40 DSA membrane inlet mass spectrometer. The DEMS technique characterizes electrocatalytic performance, which has special relevance to fuel-cell chemistry. It allows for fast, *in situ* identification of gaseous and volatile products and intermediates generated during the electrochemical faradaic reactions taking place directly at the electrode-electrolyte interface. The benchtop system provides real-time multispecies analysis, high sensitivity, and detailed characterization as it monitors evolved and adsorbed species across the atomic mass range from 1 amu to 300 amu. **Hiden Analytical Inc**, 37699 Schoolcraft Rd, Livonia, MI 48150, <http://hideninc.com>



Magnetron and power supply packages

The Kurt J. Lesker Company (KJLC) has released its Research Advantage magnetron and power supply packages, or RAPs. They include all the cables and connectors necessary to integrate the RAP into an existing sputtering system and enable users to create a complete magnetron and power supply system. RAPs offer a choice of a 2-, 3-, or 4-inch Torus Mag Keeper sputtering source; each features KJLC's latest design technology, which has quick target capability and UHV-compatible operation. The magnetrons come with a flexible assembly and standard magnets, and the Mag Keeper source can be packaged with a DC or RF power supply. Users who choose a DC supply have the option of adding one of KJLC's Impulse high-power magnetron sputtering power supplies. **Kurt J. Lesker Company**, 1925 Rte 51, Jefferson Hills, PA 15025, www.lesker.com **PT**



Dual-wavelength x-ray diffractometer



Rigaku Oxford Diffraction has introduced a compact, high-flux single-crystal diffractometer for 3D chemical structure analysis. The XtaLAB Synergy-DW features a hybrid photon counting detector and is configured with a fast, efficient, four-circle kappa goniometer compatible with a wide range of detectors. The versatile diffractometer combines the increased flux of a rotating anode source—Rigaku's MicroMax-007 HF-based microfocus rotating anode x-ray generator—with the flexibility of two wavelengths. The target is constructed with copper and molybdenum source materials and is coupled with an auto-switching dual wavelength optic. According to Rigaku, the system offers up to 12 $\times$ higher flux compared with standard sealed tube sources, but maintenance requirements are reduced because only a single generator is used. **Rigaku Americas Corporation**, 9009 New Trails Dr, The Woodlands, TX 77381-5209, www.rigaku.com