

RESOURCES

A summary of new products and services
for materials research...

Noncontact Measurement Probe:

Optimet's Conoprobe 1000 measures up to 700 points/s dynamically while the probe is in motion, allowing precise 3D digital images of any surface to be made. By changing the lens on the probe, users can measure submicron- to meter-size samples, with no other instruments needed. Precision and reliability typically are greater than 1/8000th of the working range. Measurements can be made of narrow and deep holes of diameters less than 1 mm and depth-to-diameter ratios of 25:1. Contact: sales@optimet.com; www.optimet.com.

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Tb-Dy-Fe Magnetostrictive Material:

Gansu Tianxing Rare Earth Functional Material Company produces Tb-Dy-Fe giant magnetostrictive material—also known as Terfenol-D—with “jump effect” and adopted the ISO9001 quality control system. Applications include electronics, robotics, ultrasonic cleaning and machining, medical sonic and ultrasonic tools, and ultrahigh precision machine tools. Contact: hattie@txre.net; www.txre.net.

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Mixed Metal Oxide Nanopowders:

TAL Materials produces mixed-, doped-, or stabilized-metal oxide nanopowders and ultrafine powders using a flame spray pyrolysis method. By controlling rare earth oxide compositions, TAL produces crystalline powders that absorb two low-energy IR photons and immediately emit one higher energy visible photon. The phenomenon is called upconverting and is easily visible. The crystalline powders are water insoluble, practically chemically inert, thermally stable, and nanoscale. Custom formulations are available. Contact: wgarff@talmaterials.com; www.talmaterials.com.

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Low-Frequency Vibration Elimination System:

Halcyonics' MOD-2 Sandwich eliminates low-frequency vibrations in midsize setups. Because SEM users often have difficulty in retrofitting a SEM with a vibration solution, the MOD-2 Sandwich is composed of as many MOD-2 elements as are needed for the weight load –150 kg/element, plus a bottom and top plate casing system. The Sandwich is a full active vibration isolation platform that is 6 in. high. Users lift the SEM and slide the Sandwich platform underneath it. A Halcyonics device also is available for lifting SEMs so they can be raised to the appropriate height without being disconnected. Contact: cr@halcyonics.de; www.halcyonics.de.

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Automatic Temperature Calibration:

Three JOFRA ATC systems from AMETEK Test and Calibration Instruments provide calibration of multiple sensors. The JOFRA ATC-155, ATC-320, and ATC-650 feature a specific dry-block heater that is portable and traceable. The JOFRA ATC-320 and ATC-650 calibrators offer a two-zone heating block with separate controls for each. The design provides optimum temperature calibration of sensors and eliminates the need for insulating sensors under test, allowing calibration of liquid-filled and other mechanical sensors. The JOFRA ATC-155 features a multistage peltier block. Contact: www.ametek.com.

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Handheld IR Videocam:

The ThermoCorder™ system from Indigo Systems allows integration of the Alpha™ IR camera with commercially available Sony camcorders via the Sony Intelligent Accessory Shoe. The result is a 2.6 lb. visible and IR video recorder in one package. The Alpha is powered by the Sony camcorder battery, which operates for more than 3 h on a single battery charge. IR images can be viewed on the LCD or color viewfinders. Real-time imagery can be recorded on DV tape, or single images can be stored on a Sony Memory Stick. Contact: indigo@indigosystems.com; www.indigosystems.com.

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Metallographic Preparation Book:

Free 114-page Metalog Guide™ from Struers provides updated and comprehensive information, graphs, charts, and guidelines for metallographic specimen preparation. Included is an extensive collection of microstructures and their interpretations, plus a catalog of preparation methods. Sections cover systematic and standardized procedures to prepare material groups; the theory and science of modern metallographic specimen preparation; and a troubleshooting section with information on the processes of mechanical preparation, including an expert system for solving problems. Contact: info@struers.com; www.struers.com.

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Sequential X-Ray Spectrometers:

The MagiX PRO system from Philips Analytical offers low detection limits, operates under a wide range of ambient conditions, and incorporates six interchangeable collimator masks. It has a 4 kW x-ray tube, optimized spectrometer geometry, and high-performance channels for selected light element analysis. A high-intensity PX9 crystal enhances its heavy element analysis performance. The system can analyze solids, liquids, beads, and pressed or loose powders. An environmental package can handle small samples and droplets of watery solutions. Contact: analytical.info@philips.com; www.PhilipsAnalytical.com.

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Bioimaging Software System:

Universal Imaging's MetaMorph® 4.5 enables users to do advanced microscope automation, acquire and analyze fluorescent and transmitted light images, and find intracellular ion measurements using single wavelength or ratio imaging dyes. Commands set the camera binning, gain, and auto exposure. Users can control camera shutters during acquisition and set exposure times and acquisition regions. Another function combines intensity, area, and other parameters in one interface. Advanced features include two deconvolution commands to remove haze from image planes and functions for high content screening. Contact: sales@universalimaging.com; www.universalimaging.com.

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Showcase Your New Products

To appear in *MRS Bulletin Resources*, submit new product announcements to:

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For further contact information for these products, check www.mrs.org/publications/bulletin/resources