

## RESOURCES

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

**Radiation Curing of Coatings:**

ASTM's manual on radiation-curing of coatings contains written explanations rather than numerous figures and tables and is intended for users engaged in the radiation-curing of coatings, adhesives, inks, and sealants. A compilation of ASTM standards related to testing of radiation-cured coatings is also available. Contact: [service@astm.org](mailto:service@astm.org); [www.astm.org](http://www.astm.org).  
**Circle No. 61 on Inside Back Cover**

**Deuterium-Labeled Compounds:**

CDN Isotopes' catalog lists ~2000 deuterium-labeled compounds. The company offers *n*-alkanes, gases, nucleic acid bases and nucleosides, polyaromatic hydrocarbons, steroids, amino acids, forensic products, medical research products, pesticides, pollutants, and spin labels. More than 90% of orders to the company are filled from stock. Contact: [sales@cdnisotopes.com](mailto:sales@cdnisotopes.com); [www.cdnisotopes.com](http://www.cdnisotopes.com).  
**Circle No. 63 on Inside Back Cover**

**Commercial Solid-State 460-nm Blue Laser:**

Optical pumping in Coherent's sapphire 460-10 laser allows higher power than that achieved with electrical pumping. The sapphire laser is 90% smaller, consumes 98% less power, and dissipates 98% less heat than a comparable air-cooled argon-ion laser. Contact: [www.coherentinc.com](http://www.coherentinc.com).  
**Circle No. 64 on Inside Back Cover**

**Advanced Metrology System for Monitoring Epitaxial Processes:**

The QCS-7300R from QC Solutions is a process monitoring system for noncontact, nondestructive measurement of epitaxial layers. Wafer mapping speeds are up to 600 pts/min, and the unit is suitable for in-line monitoring of 300-mm and 200-mm product wafers. Contact: [info@qcsolutions.com](mailto:info@qcsolutions.com); [www.qcsolutions.com](http://www.qcsolutions.com).  
**Circle No. 67 on Inside Back Cover**

**CCD Camera with Front-Illuminated Detector:**

Roper Scientific's Photometrics SenSys:3200ME digital imaging system for microscopy uses microlenses bonded directly to the pixels and indium tin oxide technology to boost quantum efficiency to  $\pm 88\%$  at 580 nm. The  $2184 \times 1472$  detection array allows users to collect more data with each exposure. Quantum efficiency extends from the blue-visible region of the spectrum to the near-IR. Contact: [ssternberg@roperscientific.com](mailto:ssternberg@roperscientific.com); [www.roperscientific.com](http://www.roperscientific.com).  
**Circle No. 69 on Inside Back Cover**



▲ **Low-Pressure Monitor:** The ECHOLINE from Precision Sensors provides remote or point-of-use low-pressure monitoring of gas-cabinet exhaust systems during semiconductor manufacturing processes. A maintenance mode feature widens set points to prevent false alarms during ventilation-system balancing and then automatically restores the set points of one of several ECHOLINES during process maintenance. The unit is one-quarter the size of traditional electro-mechanical gas monitors, and an LED display flashes to alert users to an out-of-limit condition. Contact: [scrollins@ueonline.com](mailto:scrollins@ueonline.com); [www.precisionsensors.com](http://www.precisionsensors.com).  
**Circle No. 62 on Inside Back Cover**

**Low-Energy UHV-Compatible Ion Source:**

The LION50 from Oxford Applied Research operates on the principle of electron impact ionization. It produces ion beams with energies from 30 eV to 1 keV with narrow energy spreads. The source is compatible with a variety of reactive gases such as oxygen. Applications include ion spectroscopy, particle detection calibration, surface modification, and gentle substrate cleaning. Contact: [www.oaresearch.com](http://www.oaresearch.com).  
**Circle No. 66 on Inside Back Cover**

**Tungsten Carbide Cobalt Chromium Powder:**

Suzler Metco's Diamalloy 5849 is a tungsten carbide cobalt chromium powder suited for applications in which a combination of wear resistance and corrosion resistance is required. The powder produces dense, hard, and well-bonded coatings with smooth as-sprayed surfaces. The coatings are suitable for use on slush pump piston rods, polished rod liners, hydraulic rods, pump seals, dump valves, and other applications involving cavitation or erosion. Contact: [lisa.behar@sulzer.com](mailto:lisa.behar@sulzer.com); [www.sulzermetco.com](http://www.sulzermetco.com).  
**Circle No. 70 on Inside Back Cover**

**Charged-Plate Monitor:** TREK's Model 158 features a color graphics display to permit viewing of discharge wave forms and offset voltage in the time domain and the ability to store test data and wave forms from hundreds of ionizer tests. The monitor is line or battery operated, and test data are stored on a removable PCMCIA flash memory card. For strict ion balance, the monitor resolves 0.1-V plate voltage. Contact: [Lorna.J.Finch@trekinc.com](mailto:Lorna.J.Finch@trekinc.com); [www.trekinc.com](http://www.trekinc.com).  
**Circle No. 72 on Inside Back Cover**

**Three-Axis Micropositioners:** The XYZ-1000 series from Quater Research & Development provides precise manual positioning of probes, test heads, lasers, and optics in analytical, test, and instrumentation applications. The series provides *x*-, *y*-, and *z*-axis positioning with 1 in. (25 mm) of travel on each axis. The micropositioners may be ordered with screw or micrometer adjustment in 40, 80, or 100 threads per inch. Micrometers are available with either 0.001-in. or 0.01-mm resolution. Contact: [sales@quater-research.com](mailto:sales@quater-research.com); [www.quater-research.com](http://www.quater-research.com).  
**Circle No. 68 on Inside Back Cover**

**Microbeam XRF Metrology Tools:**

Thermo NORAN's MicronX product line uses the noncontact, nondestructive metrology technique of energy-dispersive x-ray fluorescence (EDXRF) to measure the thickness and composition of up to six layers of deposited metals simultaneously, from angstrom to micrometer thickness ranges. The products determine bulk alloy composition for up to 20 elements. They feature mechanical or optical x-ray beam collimation options, gas proportional counter or semiconductor x-ray detector options, and dual encoded stage driver options. Contact: [cmillholland@thermonoran.com](mailto:cmillholland@thermonoran.com); [www.thermonoran.com](http://www.thermonoran.com).  
**Circle No. 71 on Inside Back Cover**

## Showcase Your New Products

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

Mary E. Kaufold; MRS Bulletin  
Materials Research Society  
506 Keystone Drive  
Warrendale, PA 15086  
Tel: 724-779-8312  
Fax: 724-779-4397  
[kaufold@mrs.org](mailto:kaufold@mrs.org)



For further information on these products, access [www.mrs.org/publications/bulletin/resources](http://www.mrs.org/publications/bulletin/resources)