

RESOURCES

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

Upgrades for Modular SLM Spectrofluorometers:

Jobin Yvon offers software and hardware to upgrade modular SLM spectrofluorometers. SPEX® SpectrAcq electronics replaces the original TCM module for higher performance and a more compact unit. DataMax™ includes the GRAMS® data-processing and display package from Thermo Galactic and features photon-counting signal processing; wavelength scanning in excitation, emission, synchronous, and 3D modes; and full control of polarizers and shutters. Contact: fluoescence_service@jyhoriba.com; www.jyhoriba.com.

Circle No. 62 on Inside Back Cover.

UV/Ozone Surface-Processing Equipment:

Optical Associates' photo surface processors use UV light and ozone to remove contaminants from surfaces and increase surface bond energy, resulting in good surface adhesion and uniformity of coatings. The low-temperature process can be applied to uneven geometries as long as the surface can be treated with UV light. It can be used in conjunction with conventional cleaning processes. Contact: cturk@oainet.com; www.oainet.com.

Circle No. 66 on Inside Back Cover.

Multidetector GPC Software:

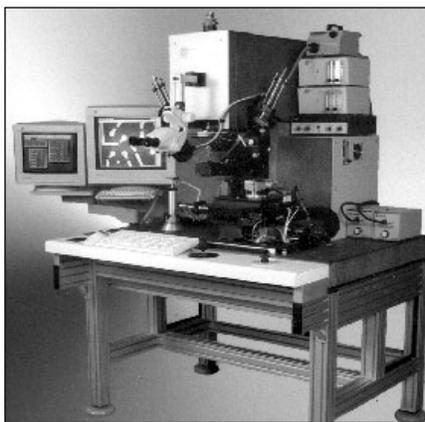
Polymer Laboratories' Cirrus™ software acquires and analyzes data from GPC systems fitted with any combination of refractive-index, light-scattering, and viscosity detectors. The package uses a 24-bit, high-resolution, low-noise data-acquisition system to interface with up to four user-selectable detector outputs. All operating conditions, raw data files, analysis methods, related calibrations, and sample results are stored in Cirrus™ Workbook files for traceability. Contact: PLInfo@polymerlabs.com; www.polymerlabs.com.

Circle No. 61 on Inside Back Cover.

USB Interface for Laser Power/Energy Meter:

Ophir Optronics' USB Interface photodiode or thermal "Smart Head" turns a Windows-based PC or laptop into a multichannel laser power/energy meter. No external power source needed. Each head requires one USB interface box. Installed software makes laser power/energy measurements. Users can attach multiple heads to a PC or laptop and use them simultaneously, and data can be logged from each head simultaneously to a file. Contact: sales@ophiropt.com; www.ophiropt.com.

Circle No. 63 on Inside Back Cover.



Die Bonder: Semiconductor Equipment Corporation's Model 410-XP achieves finishing bond precision of $\pm 1-2 \mu\text{m}$. The system features enhanced optics and mechanical movement with a stable granite-based platform, and offers 750 \times magnification, a range of closed-loop bond load controls, an optional ultrasonic transducer for thermosonic high-bond-load applications involving gold stud bumping, and a viewing system that can move in 0.1- μm increments. Applications include bonding flip chips, VCSELs, edge-emitting laser diodes, and laser bars/arrays. Contact: seclester@aol.com; www.semicorp.com.

Circle No. 60 on Inside Back Cover.

Potentiostat/Galvanostat: The PARSTAT 2263™ from Princeton Applied Research offers hardware capable of $\pm 10\text{-V}$ scan ranges, with 20-V compliance, 200-mA current, nA accuracy and fA resolutions. EIS measurements can be conducted in a range of 10 μHz to 1 MHz. The unit can be operated with an ac/dc converter or with a dc power supply. The interface to the PC or laptop is USB. Contact: info_par@perkinelmer.com; www.princetonappliedresearch.com.

Circle No. 67 on Inside Back Cover.

Thermogravimetric System:

The Thermo Cahn TherMax 300 TGA system, distributed by Thermo Haake, features a corrosive-resistant design with a sample size of 30 mm (diameter) and 50 mm (height), a capacity of 100 g, and a maximum temperature of 1100°C. A motorized assembly facilitates sample access and automatic programmable gas-switching of four reaction gases. The system delivers accurate testing and repeatability of $\pm 3^\circ\text{C}$. Contact: information@thermohaake.com; www.thermohaake.com.

Circle No. 65 on Inside Back Cover.

Capillary Saturation Porometer:

Porous Materials' capillary saturation porometer determines pore volume, diameter, and volume distribution without using mercury and measures liquid permeability. The pressure of a nonreacting gas is used to displace liquid from the pores. The volume of displaced liquid is measured, and the pore diameter is obtained from pressure. Liquid permeability is computed when pressure on the liquid maintained on top of the sample is increased to enable measurement of the volume of liquid flowing out of the sample. Contact: info@pmiapp.com; www.pmiapp.com.

Circle No. 64 on Inside Back Cover.

Nanocluster Source:

The NC200U from Oxford Applied Research produces beams of well-defined nanocrystalline particles using the gas-condensation method. Sputtered material is induced to condense into nanometer-sized particles in a high-pressure, cold clustering zone. The emerging beam consists of nanocrystalline particles with a narrow size distribution. A quadrupole option is available to monitor the beam or reduce the distribution further. Zero-dimensional systems can be investigated without thermal or lithographic processes. Contact: sales@oaresearch.co.uk; www.oaresearch.com.

Circle No. 68 on Inside Back Cover.

Residual Gas Analyzer and Leak Detector:

The Prisma 80 from Pfeiffer Vacuum monitors gases in a vacuum coating system to ensure that correct vacuum conditions exist. It features a 32-bit operating system with TalkStar® software to facilitate setup and configuration. Multiscan windows can simultaneously display wide-ranging scans or focus on key components. The design features integrated total pressure measurement, a high-sensitivity ion source, and two filaments to extend service life. Contact: Stephen.Foster@pfeiffer-vacuum.com; www.pfeiffer-vacuum.com.

Circle No. 69 on Inside Back Cover.

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