



## Workstation

**A**cmé Portable Machines has introduced a new line of powerful server computers for integrators and original-equipment and original-design manufacturers involved in products for test and measurement, military and aerospace uses, field data acquisition, law enforcement, the automotive industry, and telecommunications, as well as end users of multimedia platforms. The portable GMII-102 workstations come with a 2.0- or 3.0-GHz Pentium processor and have eight expansion slots, a hard-disk drive with a minimum capacity of 80 GB, and two additional drive bays that can be configured as a floppy-disk drive, CD-ROM, CD-RW, DVD, DVD-R, or a combination. The units measure  $16 \times 10.75 \times 8.25$  in., and they have sufficient storage capacity to meet most needs for backup storage; multiple segmented networks; large file transfers; field audits; and high-end image, graphics, and video requirements.

Acme Portable Machines, Inc.  
1330 Mountain View Circle  
Azusa, CA 91702

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## Analog Output Boards

CyberResearch's new RCO series of analog output boards makes it easy for programmers to produce accurate, repeatable waveforms. The new boards provide 16-bit resolution combined with a maximum update rate of 100 kHz. The RCO series includes a programmable first-in-first-out buffer that collects 64,000 data points, and it has a short output-settling time—the

pause required between collecting one burst of data and another—of  $10 \mu\text{s}$  to 0.03% of full scale. The RCO series' 16-bit resolution, or 1 part in 65,536, helps reduce unwanted frequencies generated by steps in the output waveform. The boards can transfer data via programmed input-output devices, interrupts, or PCI bus-mastering direct memory access. Cyber-

Research's RCO boards come with two 20-MHz, 16-bit counter-timers.

CyberResearch, Inc.

P.O. Box 9565

New Haven, CT 06535-0565

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## Pulsed-Laser Diodes

Laser Components' new high-power, pulsed-laser diodes (PLDs) ensure excellent beam characteristics, high reliability, and

surement systems. The 905 PLDs come in TO-18, 5.6-mm, or 9-mm housings; as an 8032 Coax; or as a chip on a ceramic mount. The 1,550-nm PLDs, best suited for eye-safe range finding, come as single-emitter or stacked devices packaged into a TO-18 mount. Laser Components also provides custom-designed PLDs and units with other wavelengths.

Laser Components Instrument  
Group, Inc.

10 Upton Drive

Wilmington, MA 01887

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## Faraday Isolator

Del Mar has optimized its new optical isolator, the 5AFI36-800B broadband Faraday Isolator, to work with fem-



tosecond Ti:sapphire lasers. The device isolates the laser from its own reflections. Its magneto-optical rod is cut from glass (MOS-10), polished to a flatness of  $\lambda/10$ , and has a parallelism better than  $10 \text{ arc}\cdot\text{s}$  and a peak isolation of 36 dB. It is antireflection-coated to give a residual reflection of less than 0.2% on each side in the 765- to 835-nm range. The isolator's polarizers are air-spaced Glan prisms made of calcite. Entrance and exit faces of the polarizers are antireflection-coated to provide a residual reflection of less than 0.3% in the 765- to 835-nm range.

Del Mar Ventures  
4119 Twilight Ridge  
San Diego, CA 92130

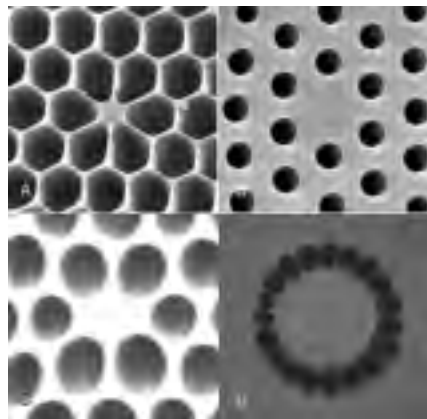
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## Photonic Crystal Fiber

Newport has entered the photo crystal fibers (PCFs) market with its comprehensive line of prepackaged products targeted to laboratory research. Its products cover all PCF types, including endlessly single-mode, hollow-core, polarization-preserving, photonic-bandgap, and highly nonlinear performance fibers. Specific products include bare fibers as short as 1 m, fibers



high temperature stability. Delivering at wavelengths of 905 and 1,550 nm, stacked emitters can reach up to 120 W in peak power at a pulse length of up to 200 ns. Applications include range finding, laser radar, security scanners, and test and mea-



with sealed ends, and connectorized fibers. Newport carries ytterbium-doped PCFs to form the basis of high-performance lasers or optical gain amplifiers. Crystal Fiber A/S fabricates the new PCF line under an exclusive agreement with Newport.

**Newport Corp.**  
1791 Deere Avenue  
Irvine, CA 92606  
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## Signal-Controller Support

Data I/O now provides high-volume programming support on its PS300 automated programming system for Texas Instruments' (TI's) TMS320F2812 digital-signal controller. The PS300 machine, developed in collaboration with TI, accommodates up to 12 four-socket adapters and is designed specifically for Flash-based applications, which makes it ideal for digital-signal processing. As a result, TI's automotive, large-domestic-appliance, and industrial customers have a fast, cost-efficient, high-throughput programming solution for TI's TMS320F2812 controller. The PS300's



unique architecture delivers the lowest programming cost for high-density Flash-based devices through a combination of exceptional programming speed, a reliable handler platform, system scalability, and software-based processing control.

**Data I/O Corp.**  
10525 Willows Road NE  
P.O. Box 97046  
Redmond, WA 98073-9746  
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## Fluorescence Analyzers



Innov-X's new portable X-ray fluorescence analyzers deliver fast, precise identification and analysis of the most challenging metal alloys, including stainless steel; nickel-cobalt superalloys; specialty molybdenum, rhenium, and tungsten alloys; and precious metals. Innov-X's battery-powered, point-and-shoot units feature Smart Beam, an X-ray-tube technology that uses no radioactive isotopes and, thus, eliminates federal regulation, disposal requirements, and travel restrictions. Built-in software enables users to upgrade and modify the analyzers, such as by adding new elements and alloy grades to its memory. Applications include quality control and assurance; recycling of alloys; and many tests on solids, liquids, coatings, and powders.

**Innov-X Systems, Inc.**  
300 Wildwood Avenue  
Woburn, MA 01801  
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## Loadlock Transducer

MKS Instruments has introduced its HPS Series 901 Plus (901P) loadlock transducers for semiconductor-industry use and other applications requiring a wide range of pressure-sensing capability. Designed specifically for the loadlock environment, the 901P is an absolute and differential vacuum gauge with high-

er accuracy, stability, and a faster response time than conventional thermal-conductive gauges. Each transducer functions as three sensors. Hence, the 901P series provides a wide measurement range and saves space. Its technology yields accurate measurements as low as  $10^{-5}$  Torr, and gas-independent absolute pressure measurements from 50 to 1,000 Torr.

**MKS Instruments,**  
**HPS Products**  
5330 Sterling Drive  
Boulder, CO 80301  
Circle No. 187 on Reader Service Card



## CCD Detectors

McPherson now provides windowless, back-illuminated charge-coupled device (CCD) detectors as an option on two of its spectrometers for the direct detection of high-energy vacuum ultraviolet and extreme vacuum ultraviolet spectra. The detectors enable users to rapidly measure and analyze pulsed sources or temporally unstable events. The detector-spectrometer combination creates an instrument useful for industrial development of 13- and 157-nm advanced lithographic tools and basic research in high-energy physics and chemistry. McPherson offers the CCD detector option on its Model 248/310G spectrometer for work in the 1-100-nm range and the Model 234/302 for wavelengths of 50-200 nm. Both units are available with gratings of various groove densities, which allows factory or user configuration for wide-wavelength survey or high-resolution zoom spectroscopy.

**McPherson, Inc.**  
7A Stuart Road  
Chelmsford, MA 01824-4107  
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## Test-Valve Assembly

Swagelok's integrated test-valve assembly allows users to visually observe condensate removal and monitor steam-trap per-

formance, one way a company can reduce expenses related to steam and energy loss, reduced heating capacity, and equipment damage. The valve assembly consists of two stainless steel Swagelok 63 series general-purpose ball valves for isolation and testing and a CF3M Swagelok two-bolt universal mount for easy installation of a steam trap. The valves have quarter-turn handles available in locking, nonlocking, and latch-locking models, and a variety of end connectors. Buyers can choose from three test-valve vent locations: facing toward the steam trap, away from it, or downward.

Swagelok Co.  
29500 Solon Road  
Solon, OH 44139-3492  
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## New Literature

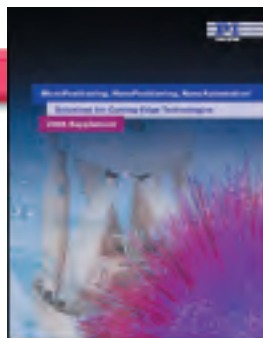
### Materials CD-ROM

Alfa Aesar has released a new CD-ROM version of its 2003/2004 Research Chemicals, Metals, and Materials Catalog, which includes almost all the information contained in the print version plus several additional features. The CD lists the company's complete product line of organic and inorganic chemicals, pure metals, elements, alloys, and other research materials. In addition, it allows users to search for products by drawing the molecular structure of the desired material, and it provides a database of Material Safety Data Sheets for most Alfa Aesar products.

Alfa Aesar  
26 Parkridge Road  
Ward Hill, MA 01835  
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### Nanopositioning Catalog

PI has issued 2004 NanoPositioning, its supplement catalog and reference book on the fundamentals of nanopositioning and micropositioning technology. The 90-page publication presents PI's state-of-the-art products and technologies—such as



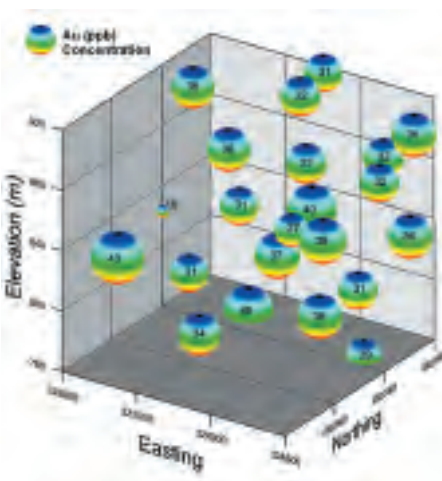
ultrasonic piezoelectric linear motors, 6DOF hexapod robots, scanning stages for atomic microscopy, and piezoelectric ceramics. It also provides dimensions, specifications, and options for all standard products to aid users in selecting the system that best meets their needs.

PI L.P.  
16 Albert Street  
Auburn, MA 01501  
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## New Software

### Grapher 5

Golden Software's newly upgraded version of its Grapher two- and three-dimensional graphing software package streamlines the accessing and editing of all graphs and enables scientists, engineers, and business professionals to perform common tasks that in previous versions required multiple steps. Grapher 5 includes more than 100 new features and enhancements, including four new types of graphs, which

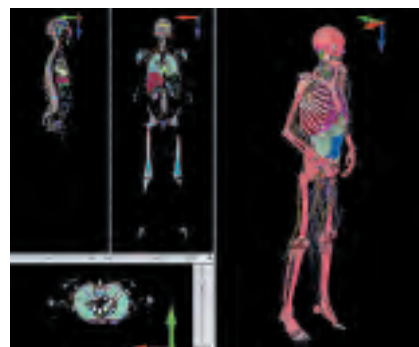


raises the total number of totally customizable graphs to 26 and gives users even more choices of how to most effectively display their data. Two other new features provide the ability to move plot labels using the mouse and to rotate three-dimensional graphs interactively.

Golden Software, Inc.  
809 14th Street  
Golden, CO 80401-1866  
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### Varipose

Remcom's Varipose software enables the repositioning of Male Visual Human mesh, including internal anatomical structures.



The mesh data consist of digital magnetic resonance, computer tomography, and anatomic images derived for the National Library of Medicine from a single male cadaver. Starting with male meshes in 10-, 5-, 3-, 2-, or 1-mm voxel format, Varipose also allows users to reposition body joints, such as the knee, hip, elbow, and thumb, while maintaining internal anatomical structures. The easy-to-use dynamic-modeling technique has significant bioelectromagnetic engineering applications.

Remcom Inc.  
315 South Allen Street, Suite 222  
State College, PA 16801  
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The New Products section is based on information supplied by the manufacturers. The Industrial Physicist can assume no responsibility for its accuracy. To facilitate inquiries, a Reader Service Card is attached between pages 28 and 29. Only a few new product press releases can be selected for each issue. High-quality color art is taken into account in the selection process, as well as newsworthiness and relevance to physicists in industry. Mail releases to New Products, The Industrial Physicist, One Physics Ellipse, College Park, MD 20740, or e-mail ccumming@aip.org.