

**On-line Interactive Superconductivity Information:** Real-time interactive on-line system developed by the U.S. Department of Energy provides access to the latest worldwide information on superconductivity and serves as a forum for researchers to express their opinions, exchange information, and report research progress. Superconductivity Information System (SIS) users can:

- Review an on-line bulletin board of published and prepublished information, including news from DOE and other federal agencies, information from professional societies, news articles, meetings, and current published information on superconductivity research. Comments can be made on-line, and conferences and new publications added to the lists.
- Use an electronic mail function to send private messages to other SIS users.
- Access a database of DOE contract-related work in progress and enter descriptions and status of your own research.
- Access a preprints database that includes abstracts and has full search and retrieval capabilities by researcher name, organization, or area of research.
- Access a multidisciplinary file containing worldwide references to basic and applied scientific and technical literature. The file contains all DOE-sponsored research, including superconductivity.
- Download information to a personal computer or request printed copies.

SIS Access, U.S. Department of Energy, Office of Scientific and Technical Information, P.O. Box 62, Oak Ridge, TN 37831; (615) 576-1222.

**Rare Earth Bicentennial Publication:** Free publication (No. IS-RIC 10) commemorates the 200th anniversary of the discovery of ytterbium, the first rare earth known to science. Titled "1787-1987 Two Hundred Years of Rare Earths," this publication contains a series of 11 invited stories about important highlights of the first 200 years of rare earths. Rare-Earth Information Center, Institute for Physical Research and Technology, Iowa State University, Ames, IA 50011-3020; (515) 294-2272.

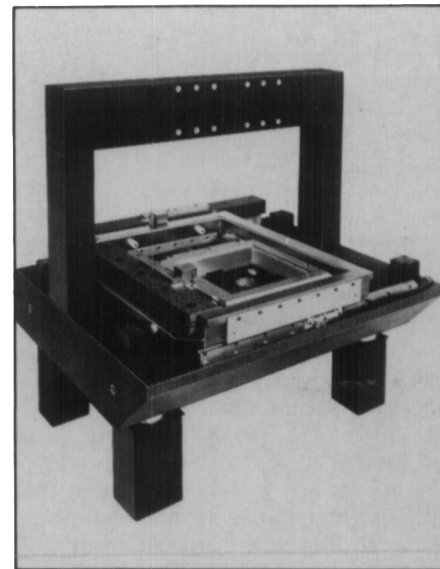
**Light Element X-Ray Detector:** Z-MAX 30 x-ray detector is ideal for light element detection (boron and up) and also provides for maximum solid angle with a 30 mm<sup>2</sup> Si(Li) crystal. The diamond film detector window provides for over four atmospheres of pressure differential. Tracor Northern, 2551 W. Beltline, Middleton, WI 53562; (608) 831-6511.

**X-Y System with Holographic Encoders:** Positioning system combines the latest in air bearing measurement machine design, tandem linear motor drive technology, composite materials for swift settling, and optimized position sensing techniques. The Microglide H250 uses two holographic linear noncontact encoders with a resolution of 0.015  $\mu\text{m}$  per count, offering the highest degree of accuracy available short of using laser interferometer feedback. Submicron position accuracy with constant velocity jitter is less than 0.05  $\mu\text{m}$ . Open frame design allows for a 330 x 330 x 120 mm opening, which can accommodate an additional axis, fixture, or work loading device. Anorad Corporation, 110 Oser Avenue, Hauppauge, NY 11788; (516) 231-1995.

**Journal of Electronic Packaging:** Quarterly journal reports primarily on electrical/electronic packaging for engineers, scientists, and designers. The publication is geared toward those engaged in the design and manufacture of computers and other electronics products or components, electromechanical devices, electrical equipment, and machinery. ASME Order Dept., 22 Law Dr., Box 2300, Fairfield, NJ 07007-2300; (800) THE-ASME; (201) 882-1167.

**Vacuum Instruments and Systems:** 88-page catalog lists equipment for state-of-the-art vacuum instruments and systems and features several new materials deposition systems, including the modular Model 6000/7500. The Model 6000 is useful for MBE, sputtering, evaporation, ion sputtering, and ECR applications using a modular approach. Also featured are sample manipulators and transfer devices. Ultra High Vacuum Instruments Inc., Office Box 12, 1951 Hamburg Turnpike, Buffalo, NY 14218; (716) 833-7534.

**Feed Gas Purification System:** Multi-train system can be used in conjunction with laboratory instrumentation that requires high-purity feed gases, such as gas chromatographs or reactor systems. The AMI-100 removes components such as water, oxygen, metal carbonyls, and hydrocarbons from typical feed gases like argon, helium, hydrogen, oxygen, carbon monoxide, and air. Each feed train contains a primary gas purifier that includes an indicating dessicant and a 5A molecular sieve that removes moisture and hydrocarbons. Altamira Instruments, Inc., 2090 William Pitt Way, Pittsburgh, PA 15238; (412) 826-3080.



**X-Y System with Holographic Encoders**

**Chemicals and Materials for Research:** Free 560-page catalog offers over 4,000 products specifically suited for R&D needs. It contains a comprehensive selection of high-purity materials, precious metals, inorganic compounds, pure elements, fabricated metals, rare earths, platinum labware, analytical standards and fluxes, superconductor materials, and more. New product lines are featured for precious metal catalysts, electronic materials, ICP/DCP single-element and multi-element solution standards, oil-based standards and analytical graphite products. Existing product lines in platinum labware, temperature measurement, and superconductor research materials have been expanded and enhanced. Johnson Matthey/AESAR, 892 Lafayette Road, P.O. Box 1087, Seabrook, NH 03874-1087; (800) 343-1990 or (603) 474-5511.

**High Temperature Superconductive Thin Films:** Available in round, square, and patterned forms, high T superconductive thin films are 10,000 Å thick with typical critical temperature above 87 K. The critical current is 100,000 A/cm<sup>2</sup> on single-crystal strontium titanate substrates. Films can be ordered with complete characterization, including x-ray diffraction and actual T. Both yttrium 1-2-3 and bismuth 2-2-2-3 HTSC thin films are available. Superconductive Components, Inc., 1145 Chesapeake Ave., Columbus, OH 43212; (614) 486-0261. □