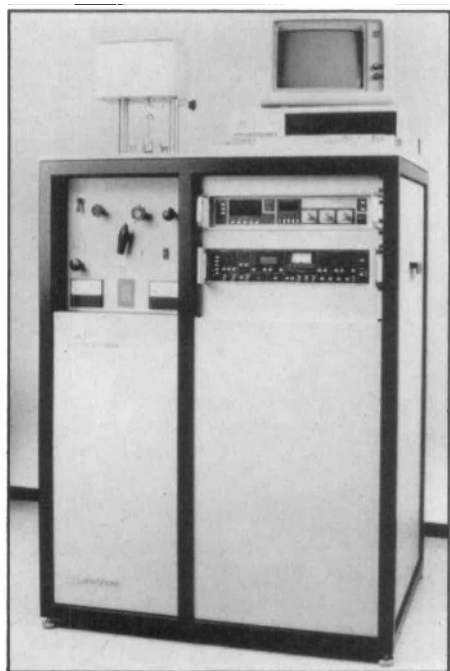


## RESEARCH RESOURCES

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

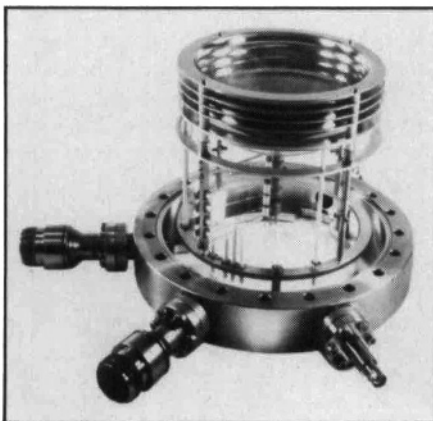


**Automated AC Magnetic Susceptometer**

**Automated AC Magnetic Susceptometer:** Model 7000 AC Susceptometer measures ac magnetic susceptibility of paramagnetic, ferromagnetic, and superconducting materials as a function of temperature, frequency, and field. The system can measure susceptibility in small fields ranging from 0.001 to 10 gauss RMS, with or without a dc bias field. Temperature can be controlled in the range from 4.2 K to 330 K to an accuracy of 0.1 K. Lake Shore Cryotronics, 64 East Walnut Street, Westerville, OH 43081; (614) 891-2243.

**UniSlide Assemblies:** Expanded catalog describes over 400 manual assemblies which provide precise linear and rotary motions. Potential uses are positioning, measuring, and scanning operations in experimental research, prototypes, and OEM automated equipment for assembly of small parts. UniSlides are constructed of 2024-T3 hard alloy, and carriages have four bonded low-friction polymer bearings. Maximum linear travels are 86 inches; maximum loads are 400 lb. Velmex, Inc., P.O. Box 38, East Bloomfield, NY 14443; (716) 657-6151.

**Superconducting Thin Film Service:** One cm<sup>2</sup> samples of one-micron-thick YBCO-coated zirconium substrates, guaranteed to be fully superconducting above



**Miniaturized Reverse View LEED System**

77 K, are now available for purchase at \$2,000. Other sizes and substrates can be custom ordered. Thin film process was developed jointly with University of Rochester's Electrical Engineering Department. CVC Products, Inc., 525 Lee Road, P.O. Box 1886, Rochester, NY 14603; (716) 458-2550.

**High Surface Area Materials:** Study titled *Preparation, Properties, and Use of High Surface Area Materials* examines current nontraditional applications and issues concerning their growth in the electronics, biotechnology, and ceramics industries. The study focuses on new synthesis methods from a molecular perspective and discusses metal oxides, carbides, and nitrides. Sophisticated preparation methods are described in depth and related to properties obtained. Drying and calcining operations, surface alteration, and chemical purity are covered, as well as areas worthy of further research. Price: \$7,000. Catalytica Studies Division, 430 Ferguson Drive, Building 3, Mountain View, CA 94043; (415) 960-3000.

**Superconductivity Proceedings:** Proceedings of the "First Annual Cambridge Conference on Commercial Applications of Superconductivity," January 25-26, 1988, Boston, MA, offers the full text of all presentations, copies of transparencies and slides, and transcripts of the question-and-answer periods. Market analysis of commercial superconductivity is featured which highlights market sizes, growth rates, timing, and companies involved in commercial utilization of superconductivity. Price: \$250. World Tech Press, One Kendall Square, Suite 2200, Cambridge, MA 02139; (617) 661-0510.

**Miniaturized Reverse View LEED System:** Rear view MICROLEED system with miniature electron gun (10 mm diameter) can operate up to 3 KV for AES studies. Controller includes back-lit LCD displays for beam current, filament current, suppressor voltage, focusing voltage, beam energy, and screen voltage. Beam energy is adjustable while viewing LEED pattern via remote control box, and optics are available with 3 or 4 grids for LEED and RFA modes. MICROLEED can be fitted to any 8-inch or 6-inch CF port. Microscience, Inc., 41 Accord Park Drive, Norwell, MA 02061; (617) 871-0308; fax (617) 871-0972.

**Specialty Inorganic Materials:** Brochure on the specialty inorganic materials supplied by EM Industries' sister company, BDH England, describes: (1) fluorotran, infrared glass materials for use in fiber and bulk optics; (2) fused halide salts for use in special technologies; (3) volatile halides for use in CVD processes for II-IV and III-V semiconductors and optical fiber; (4) chalcogenides for uses in various optical and electronic devices; (5) reactive oxides - high T<sub>c</sub> superconductors; and (6) miscellaneous compounds prepared for high purity applications. EM Industries, Inc., Advanced Chemicals Division, 5 Skyline Drive, Hawthorne, NY 10532; (914) 592-4660.

**High Performance Lubricants:** Comprehensive 438-page book, *High Performance Solid and Liquid Lubricants: An Industrial Guide* by E.L. McMurtrey, provides a ready reference to more than 500 high-performance solid and liquid lubricants. Based on work sponsored by the National Aeronautics and Space Administration, it was compiled from government reports, military and federal specifications, and supplier and manufacturer information. The book is divided into two major parts, one covering more than 250 solid lubricants, and another covering more than 250 liquid lubricants. Price: \$54. Noyes Publications, Mill Road at Grand Avenue, Park Ridge, NJ 07656.

**Superconductor Research Assistance:** Capabilities folder explains the analytical systems and services available to researchers through the company's Superconductor Operations Center. The folder also cites capabilities in surface physics instrumentation, deposition systems, and superconductor powders. Perkin-Elmer Corporation, 761 Main Avenue, Norwalk, CT 06859-0205; (203) 762-1000. □