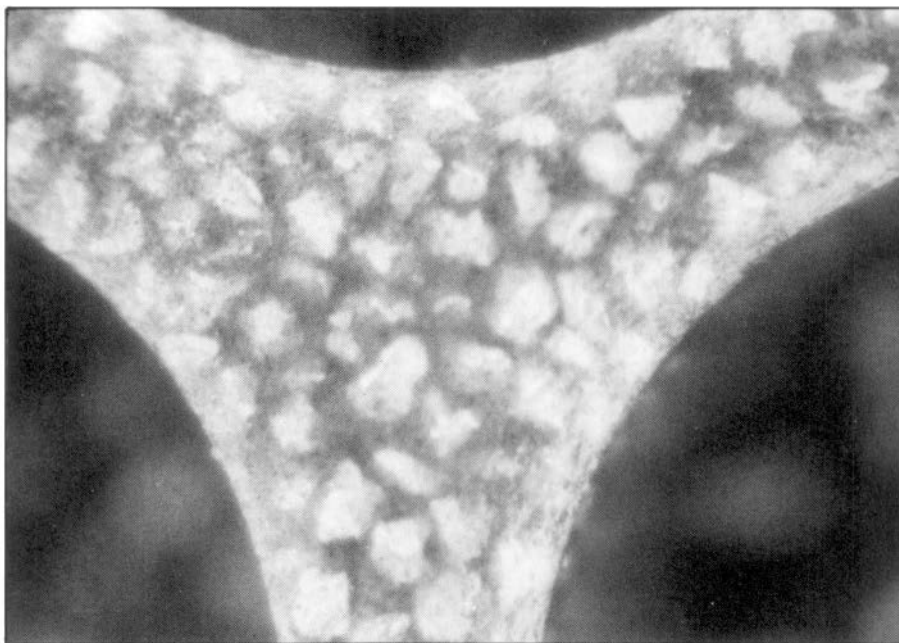


**Abrasive System for Sample Preparation:** Patented abrasive system cuts sample preparation steps in half. Consolidation of diamond into a close-packed network yields a much finer scratch pattern than conventional abrasives and keeps the sample cooler with less thermal damage. Because the system is a fixed abrasive it cuts quicker and flatter than conventional methods. The close-packed abrasive also has a longer life. The system is available in a wide variety of grit sizes from a coarse grind to a medium polish. The medium polish disk gives a surface finish similar to a 3 micron paste and ready for a final polish with 1/8 micron diamond paste or levigated alumina. The system is available in disk diameters up to 16 inches. TBW Industries, Forest Grove Rd., Furlong, PA 18925; (219) 794-8070.

**XTC Thin Film Deposition Controller:** Controller with enhanced display provides closed-loop monitoring and control in single layer deposition processes, and can achieve accuracies of  $\pm 1\%$ . For co-deposition applications, the half-rack XTC is placed side by side in a standard 19" rack with another XTC. All source control data, from presoak to rate and thickness control and source cool-down, are quickly and easily entered into memory. A patented RateWatcher™ feature extends crystal life by automatically adjusting the sensor shutter to hold the deposition rate precisely at a preset level. Leybold Inficon Inc., 6500 Fly Road, East Syracuse, NY 13057; (315) 434-1100.

**Mass and Volume Calculator with a Materials Database:** Designed for making rapid weight estimates or detailed mass calculations, Mass2 software calculates the volume of an object, then displays the weight of that object in any of the material in its database. Auxiliary functions include calculations when mass or volume is known, combined shapes, and a center of gravity calculator function. The database includes  $g/cm^3$ ,  $lb/in^3$ , specific gravity,  $lb/ft^3$  and identifying text for over 700 materials such as the elements, metal alloys, composites, plastics, rocks and minerals, construction materials, woods, common liquids, gases, cryogenics, and ceramics. The calculator, which can perform Metric to English conversions using some unique conversion factors, accepts input in standard decimal, fractional and scientific notation, and also fractions and non-integer exponents. Dempsey's Forge, Software Division, Rt. 2, Box 407, Gladys, VA 24554; (804) 283-4602.



**Abrasive System for Sample Preparation**

**Automated Low Resistance Measurements on Superconducting Materials:** Three new test systems reduce the effects of error sources by incorporating: (1) a dc technique to measure the sample under the condition in which it will be used, minimizing the effects of cable inductance and capacitance, and also susceptibility to noise in the environment; (2) a four-wire measurement technique to minimize the effects of lead resistance; and (3) a bipolar dc current source to minimize the effects of thermal EMFs. The Full Function/ Variable Current Test System uses a nanovoltmeter and programmable current source to provide a maximum resolution of 100 n $\Omega$ . The Multiple Sample Test System, which adds a scanner and scanner cards to test up to 40 samples, can also be configured to perform Hall/Van der Pauw measurements. The Pulsed Current System, a cost effective configuration, substitutes a micro-ohmmeter for a current source/nanovoltmeter. Free demonstration software, application note, and article reprints are available. Keithley Instruments, 28775 Aurora Rd., Cleveland, Ohio 44139; (800) 552-1115 or (216) 248-0400.

**Journal of Aerospace Composites:** New bimonthly technical trade magazine will serve engineers, scientists and managers involved in the design and manufacture of products utilizing composite materials by presenting technical articles written by top composites engineers, and information

prepared by experienced engineering and technology editors. Cardiff Publishing Company, 6300 S. Syracuse Way, Suite 650, Englewood, CO 80111; (303) 220-0600.

**ASTM Publications:** Free 1990 ASTM publications catalog describes 68 volumes of the *Annual Book of ASTM Standards* and several hundred ASTM special technical publications, compilations, data series, manuals, and standard adjuncts. ASTM Customer Service, 1916 Race Street, Philadelphia, PA 19103; (215) 299-5585.

**High-Precision Balances and Scales:** 48-page brochure details the company's micro- and semi-microbalances, analytical and toploading balances, and portable, high-capacity, heavy-duty, explosion-proof and specialty balances, along with attachments and related equipment. Also described is the PLUS Performance Package, a microprocessor-based keypad with a menu of 16 useful programs that expedite common weighing applications. Included are an ID number storage function, weight totals, checkweighing and classification, mass unit conversion, calculations by a factor, weight of residue in percent, percent change, basic statistics, formulation and compounding, fill toward zero, live animal weighing, and textile weight per unit area. Sartorius Instruments, P.O. Box 770, 1430 Waukegan Road, McGaw Park, IL 60085-6787; Telephone (312) 578-4292. □