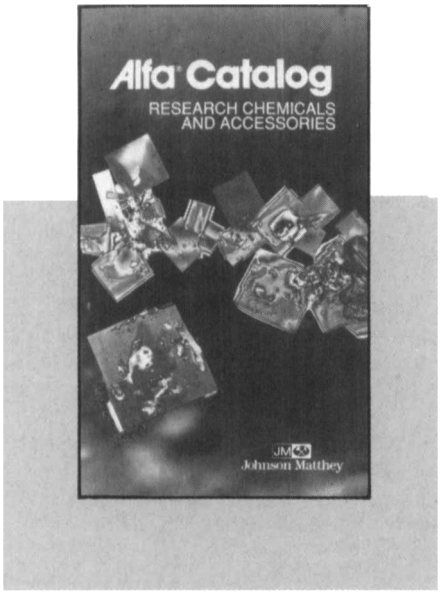
A summary of new products and services for materials research...



Research Chemicals and Accessories

Research Chemicals and Accessories: Free 1,200-page Alfa catalog lists over 7,500 products for a wide variety of research and development applications. Individual sections of the catalog are devoted to inorganic and organic chemicals, pure elements and alloys, and special products and accessories. Products are indexed by functional group, metal-containing compounds, and both metal molecular and molecular formula. New product lines include high-purity oxide ceramics in many shapes and sizes, easy-to-use chemical and pH test strips, heating mantles in various shapes and sizes, an extensive offering of laboratory glassware, platinum labware in standard and customized forms, reference materials featuring books and software, and more. Johnson Matthey Alfa Catalog, P.O. Box 8247, Ward Hill, MA 01835-0747; (800) 343-0660.

Analyzers for Electron Spectroscopy: Four-page color brochure describes the CLASS range of hemispherical analyzers for electron spectroscopy, manufactured by VSW Scientific Instruments of Manchester, England. Designed for the experimentalist and system builder, the modular analyzers are available in 100 and 150 mm sizes with options for IBM AT compatible instrument control and data acquisition, multichannel detection, and variable lens magnification for a large or small-area (less than 200 μm) XPS facility. Described as ideal for standard and mono XPS, AES, SEM, SAM, UPS, ISS. Microscience, Inc., 41 Accord Park Drive, Norwell, MA 02061; (617) 971-0308.

Class 10 Lithography Demo Lab: Recently opened Class 10 demonstration laboratory will enable semiconductor manufacturers to "test run" lithography tools and methods, obtaining full image wafer pattern transfers while they wait. Manufacturers will be able to test a variety of lithography options in a real-time production environment, including linked and mix-and-match methods. Applications engineers will work with customers to process and pattern wafers to customer requirements. The 3,000 ft² lab with 1,000 ft² of Class 10 space includes projection steppers from Ultratech Stepper and GCA, track interface equipment from SSI, Drytek etchers, and full metrology capabilities. Ultratech Stepper, 3230 Scott Blvd., Santa Clara, CA 95054; (408) 727-4930; outside California (800) 222-1213.

Guide to Standards: Guide designed for anyone who needs to know more about standards and the standards development process provides an introduction to voluntary consensus standards for individuals as well as organizations. The chapter on standards developers lists addresses and brief descriptions for a wide range of national and international standards development organizations. Other chapters cover the history of standards, the development of standards, importance and application of standards, problems in using standards, correcting standards problems, involvement in standards, and critical source information. List price: $12.00. ASTM 1916 Race Street, Philadelphia, PA 19103; (215) 299-5400.

Masters Theses in Pure & Applied Science: Volume 32 in this series lists theses published in the United States and Canada for thesis year 1987. Contains 12,483 thesis titles from 22 Canadian and 176 U.S. universities, including areas such as ceramic engineering, chemical engineering, engineering science, materials science and engineering, metallurgy, and mining and metallurgical engineering. Back issues still available. $125.00 U.S. and Canada; $150.00 elsewhere. Plenum Publishing Corp., 233 Spring St., New York, NY 10013-1578; (212) 620-8000.

Electrotechnology in the Federal FY 1991 Budget: Ten-page study describes proposed electrotechnology research and development budgets at the Departments of Energy and Defense, NASA, the National Science Foundation, NIST, and the National Institutes of Health. IEEE U.S. Activities Office, 1828 L Street NW, Suite 1202, WAshington, DC 20036-5104; (202) 785-0017.

FT-IR Sampling Accessories: Informative 28-page handbook describes the Leading Edge product line, the company's highest performance sampling accessories for FT-IR spectroscopy, and contains ordering data keyed to spectrometers from major manufacturers. The handbook also provides information on FT-IR sampling techniques and how they are implemented. Discussed are the theories behind such methods as ATR, diffuse reflectance, external reflectance, specular reflectance, and continuously variable ATR spectroscopy. Extensive tables and illustrations convey technical information at a glance, including a rundown of the properties of ATR crystal materials and the graphic difference between specular and diffuse reflectance. Spectra-Tech Inc., 652 Glenbrook Road, Stamford, CT 06906; (203) 357-7055.

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 +/-1%. For co-deposition applications, the half-rack XTC is placed side by side in a standard 19-inch rack with another XTC. All source control data, from presoak to rate and thickness control to 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.

Metal Molding Process: Materials technology designed for the production of net shape castings permits flexible and simple manufacturing of finished metal shapes and composites. Thixomolding™, combines elements of both injection molding and diecasting in a new one-step single-machine process, eliminating the need for the factory floor handling of molten metal. Applications include magnesium-based alloys in automobiles, consumer items, and computers. Long-range potential is foreseen in aluminum, zinc and copper alloys along with metal matrix composites. Thixomat, Inc., 721 East Huron, Ann Arbor, MI 48104; (313) 995-5550.

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