Research in NDE: New archival journal of the American Society for Nondestructive Testing will publish the results of original research in all areas of nondestructive evaluation (NDE). Peer-reviewed technical articles and survey papers will cover experimental and theoretical investigations dealing with the scientific and engineering bases of NDE, its measurement methodology, and a wide range of applications of materials and structures that relate to the entire life cycle, from manufacture to use and retirement. H.T. Yolken, Editor-in-Chief, National Bureau of Standards, Gaithersburg, MD 20899; (301) 975-5727.

Ames Laboratory Research Report 1987: 120-page biennial report, divided into five sections, spans research activities conducted at Ames Laboratory since 1985. The first section, basic research, discusses quantum chemistry, quarks, excitation transport, submicrosecond thermodynamics, and mathematical approaches. The second section focuses on new techniques and new materials such as an electron whirlpool, ultrasonic instruments for predicting new crack growth models, and measuring stress by ultrasound. The third section, applications for technology transfer, discusses copper composites, lasers, and a laser mass spectrometer. The fourth section on lab activities summarizes Ames' project centers, information networks, patents, and staff honors and awards. The final section contains an extensive 60-page bibliography listing published papers, technical and progress reports, and theses by Ames personnel. Ames Laboratory Office of Information, 201 Spedding Hall, Ames Laboratory, Iowa State University, Ames, IA 50011-3020; (515) 294-1856.

1988 Research Centers Directory: Two-volume set describes over 9,700 research facilities and activities, and is a comprehensive guide to nonprofit and university-related research in the United States and Canada. Entries are listed alphabetically within 17 topical sections which are then grouped into five broad categories. An expanded section focuses on research coordinating offices, university research parks, technology transfer centers, and university-related liaison programs. Also identified and described are university-related computing facilities that support research. Gale Research Company, Book Tower, Detroit, MI 48226-9990; (313) 961-2242.

Ultraclean Stainless Pipe for VLSI Chip Manufacture: NK Clean Z-Pipe of nickel-chromium-molybdenum stainless steel imparts a smooth inner surface to the pipe feeding the gas used in chip making. Low hydrogen gas emission level also makes the pipe suitable for ultrahigh vacuum equipment applications such as space research, cryogenics, and nuclear fusion. Having nonmetallic inclusions, the pipe is available in outside diameters of 6.35-114.3 mm, with wall thicknesses of 1-4.2 mm. Nippon Kokan, c/o Charles E. Butler & Associates, 60 East 42nd Street, New York, NY 10165; (212) 687-2481.

Superconductor Sputtering System: DV-602SC system for deposition of thin film superconductor films permits maximum flexibility of the deposition geometry while maintaining control over the deposition parameters to ensure reproducible results. Features include cryopumped 18-inch-diameter by 12-inch-high S/S chamber, three independent power supplies, a rotating shutter, precision mass flow and pressure controllers, a 900°C rotating substrated fixture, and cold cathode ion source. Denton Vacuum, 2 Pin Oak Avenue, Cherry Hill, NJ 08003; (609) 424-1012.

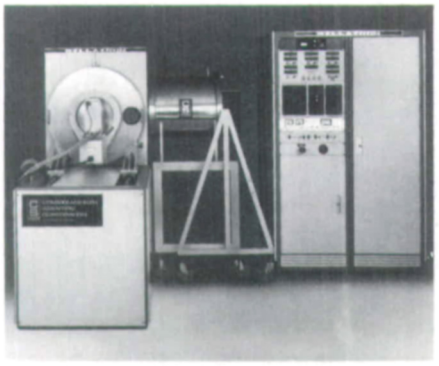
Production Line Rapid Thermal Processor: Fully automatic coldwall Model 4100 is Class 1 compatible and features cassette-to-cassette robotic wafer handling, multi-gas capability for single-cycle processing, and high process parameter control. Designed for manufacturing high-density VLSI and ULSI devices, the 4100 features a smaller footprint than conventional furnaces, true through-the-wall operation with all maintenance performed outside the cleanroom, an advanced ULPA/HEPA filtration system, and disk storage. AG Associates, 1325 Borregas Avenue, Sunnyvale, CA 94089; (408) 745-1790.

Surface Analysis System: 4-page brochure describes MAX-200, a production line instrument designed for high sample throughput. Analytical components, sample handling, vacuum pumping system, automated data system, and flexible multi-technique capabilities in micro area XPS are featured. Leybold Vacuum Products Inc., LAS Division, 5700 Mellon Road, Export, PA 15632; (412) 327-5700, ext. 665.

Superconducting Targets: Sintered, single-phase superconducting targets up to 6 inches in diameter offer advantages such as obtaining as-deposited superconducting films at a substrate temperature of 700°C, use of laser ablation and cathodic arc deposition, and DC magnetron sputtering. Larger targets in multi-piece construction can be supplied, as well as variations in target stoichiometries and lanthanide compositions such as La, Eu, and Er. Targets pressed from unreacted powder mixtures are also available, along with superconducting powder which can support research in alternate deposition techniques. Materials Research Corporation, Orangeburg, NY 10962; (914) 359-4200.

High Energy Ion Implantation Systems: Two models cover an energy range of 100-1,000 keV or 200-2,000 keV using single charged ions. Three types of easily interchangeable ion sources provide a multitude of ion species, making the system suitable for high energy ion implantation and also ion beam analysis techniques including RBS, PIXE, and NRA. A comprehensive range of beamlines and end stations to customize systems are available. High Voltage Engineering Europa B.V., P.O. Box 99, 3800 AB Amersfoort, The Netherlands; 31-33-19741.

UV and VUV Lasers: 24-page book, *Future Prospects and Applications for UV and VUV Lasers*, describes the Engineering Foundation conference held on February 22-27, 1987 and attended by representatives of the laser industry, funding agencies, government laboratories, and academia. The book is divided into five sections: an introduction, conferees' recommendations, an overview of current UV and VUV lasers and their primary applications areas, the laser industry's problems and challenges, and conclusions and recommendations for each application area. Appendices contain a detailed conference agenda and list the names and addresses of conference participants and organizers. Engineering Foundation, 345 East 47th Street, New York, NY 10017.



Ion Beam Milling System: Using a reliable and easily maintained 38 cm ion source, the XV-J computer-controlled system provides large batch capability and precision reproducibility. The 38 cm source offers high current, uniform ion beams for maximum etch rates. The high resolution screen graphically displays real-time data logging of variables, and numerous parameter changes can be done during a run. Commonwealth Scientific Corporation, 500 Pendleton Street, Alexandria, VA 22314; (703) 548-0800.

Ceramic Raw Materials: Comprehensive handbook, *Ceramic Raw Materials* edited by D.J. De Renzo, provides chemical and physical properties data for more than 1,000 products supplied by 181 ceramic raw materials suppliers in the United States and Canada. The book is organized into two parts, and products are arranged alphabetically into 116 categories according to the supplier's product designation number. The first part is an alphabetical listing of 99 raw materials, and the second part contains category listings of additives and special materials. A suppliers' address listing is also included. Noyes Data Corporation, Mill Road, Park Ridge, NJ 07656.

High-Performance Lubricants: hensive 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.

Copper Source for CVD: High-purity copper hexafluoro acetylacetonate (CuHF) is part of the CYPURE CVD source product line of electronic-grade metalorganics. Designed for applications requiring a volatile copper source, the CuHF is a moderate-vapor-pressure solid whose crystals are stable when stored at room temperature under an inert atmosphere. The CuHF is available in a high-integrity, stainless steel CVD source bubbler with electro-polished interior walls and valves. The reusable bubbler also has DOT 3E exemption which allows for refilling and reshipping. Electronic Chemicals Department, American Cyanamid Company, Venture Chemicals Division, One Cyanamid Plaza, Wayne, NJ 07470; (201) 831-3647.

https://doi.org/10.1557/S0883769400065829 Published online by Cambridge University Press