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

Diamond and Diamond-like Films in Soviet Republics: Comprehensive 150-page report covers Soviet diamond and DLC film activities that would interest Western firms and scientists. Topics include Soviet film preparation techniques, film structure and properties, applications, collaborations with Western firms, licensing technology and patents, and market development potential. The report examines the work of 34 Soviet organizations and provides contact information for more than 100 top researchers. Short profiles of the activities of more than 75 key corporations in the global market are included, along with quantitative information about future global markets for diamond and diamond-like film-based products. The report was researched from Moscow and San Francisco by a team that included a PhD in chemistry who has been closely tracking Soviet and international materials science developments.
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Vacuum Pump Repair: Comprehensive service by Kurt J. Lesker Company environmentally detoxifies and repairs all sizes and makes of mechanical and booster pumps. Free pickup and delivery services are available.
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Two-Stage, Slow Pumping Isolation Valve: HPS's VacuComp™ valve slows system evacuation. The valve's two stages consist of a small bypass valve and main isolation valve. The bypass valve creates a small opening for initial pumpdown, slowing system evacuation and reducing contamination induced by particulate turbulence and damage due to sudden pressure change. The two-stage valve is available in a choice of bypass sizes, flanging, and a heat/insulated option.
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Positioning and Scanning Slide Assemblies: Expanded 44-page catalog from Velmex features over 214 motor-driven UniSlide® assemblies which are useful for scanning, feeding, or incremental positioning. Linear or rotary assemblies are available for single- or multi-axis systems. Users select width, length, lead screw pitch, motor type, and control from a broad range. Assemblies come in eight cross section sizes from 1.5 to 9 in. wide and travels from 0.5 to 86 in. Design specifications and prices of the lightweight, precise, and compact assemblies are included. New in the catalog is a series of vertical assemblies with a stable platform base and low-cost programmable step motor driver.
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High-Frequency Hysteresisgraph for Soft Materials

High-Frequency Hysteresisgraph for Soft Materials: Computerized hysteresisgraph from Walker Scientific measures the ac magnetic properties of soft magnetic materials and electrical steels at frequencies from 50 Hz to 1 MHz. The AMH-400 measures the magnetic properties of core materials such as soft ferrites, amorphous materials, and electrical steels. Featuring a frequency measurement bandwidth from 50 Hz to 1 MHz, it can run a hysteresis loop within 30 seconds, automatically calculate the parameters and display the results, with curves, on a high-resolution color monitor. Accurate to ±2% for B or H values and ±5% for core loss, the instrument's parameters include Br, Hc, B_{max}, H_{max}, μ_p, peak secondary voltage, and phase lag between secondary voltage and exciting current. Users can define over 1,000 different setups, set pass/fail limits on all parameters, store up to 1,000 test results, and output for printers or plotters.
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Ceramic Temperature Measurement Sensors: Model 400 ultrasonic thermometer system by Research and Manufacturing Co. measures high temperatures in chemical, metallurgical, and nuclear processes for chemical reactors, coal gasifiers, sintering furnaces, heat treating, casting, diffusing, pressing of metals and ceramics, nuclear reactors, pulp and paper mills, kilns, and other applications with highly corrosive environments. Ceramic sensors eliminate complex material compatibility problems by providing excellent resistance to erosive and chemical attack in reducing and oxidizing atmospheres. The system outlasts thermocouples, particularly at temperatures exceeding 1500°C, and is microprocessor based with RS-232, 4-20 mA, 0-10 V output signals available for data acquisition and closed-loop automatic process control.
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Eastern European and Soviet Semiconductor Manufacturing: First edition of SEMI's 1991 directory contains more than 300 contact names from 128 different companies involved in semiconductor manufacturing in the former Eastern Bloc countries of Bulgaria, Czechoslovakia, Hungary, Poland, Rumania, Yugoslavia, USSR, and East Germany. Company descriptions, addresses, and business categories are included. A separate report evaluating the current level of process technology and device manufacturing capabilities on a country-by-country basis is also available. The report includes details of process technology and products manufactured, an analysis of future development of Eastern European semiconductor device technical capability, and an examination of companies involved in semiconductor manufacturing in the former Eastern Bloc countries.
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Spectrophotometer Cells: Catalog from NSG Precision Cells lists over 300 different types of cells, most available in a choice of optical glass, UV quartz, IR quartz, or ES quartz. The fully illustrated catalog features standard cells and specials which include anaerobic cells, micro cells, water jacketed cells, and dye laser cells. Accessories such as cell washers and mixers are also included.
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Stress Tester/Solids Analyzer: Dynamic stress rheometer and RSA II solids analyzer by Rheometrics predict processability and performance in materials ranging from fluids to solids. The DSR provides fast and accurate creep, creep recovery and compliance, viscosity and elasticity, and dynamic measurements in a small, easy to use, low-cost package. The instrument can test materials ranging from low viscosity fluids to soft solids to melts and may be customized or integrated with other laboratory instruments. Internal controls guarantee real-time measurements free of inertial effects and extend the modulus testing range so that weak systems that break at low strains and stiff materials that deform very little under stress can be tested quickly and easily. The RSA II linear displacement rheometer measures properties of diverse solid materials such as films, foams, fibers, composites, ceramics, and elastomers. Dynamic mechanical testing in modes that include tension, compression, and bending allows measurement of a material's viscoelastic properties. The RSA II will also compensate automatically for changes in thermal conditions.
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IMPORTANT NEWS:

* Letters Section commencing 2nd quarter of 1992
* New Regional Editor for Europe:
  Joop Schoonman, Delft, The Netherlands
* New Regional Editor for Asia:
  Osamu Yamamoto, Tsu, Mie, Japan
* New Editor:
  Colin Vincent, St. Andrews, Scotland, U.K.

SCOPE:

This interdisciplinary journal is devoted to the physics, chemistry and materials science of diffusion, mass transport and reactivity of solids.

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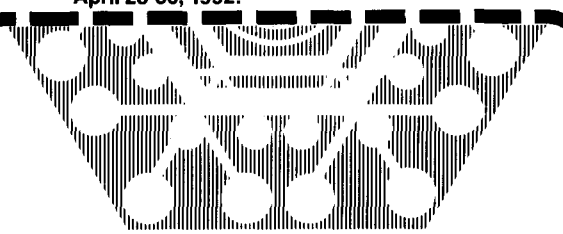
Related technological applications will also be included, provided their characteristics are interpreted in terms of the basic solid state properties. Review papers are welcome.

As of now, please submit your letters for our typeset Letters Section.

Please visit Booth No. 600-602 at the MRS Equipment Exhibit in San Francisco, April 28-30, 1992.



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