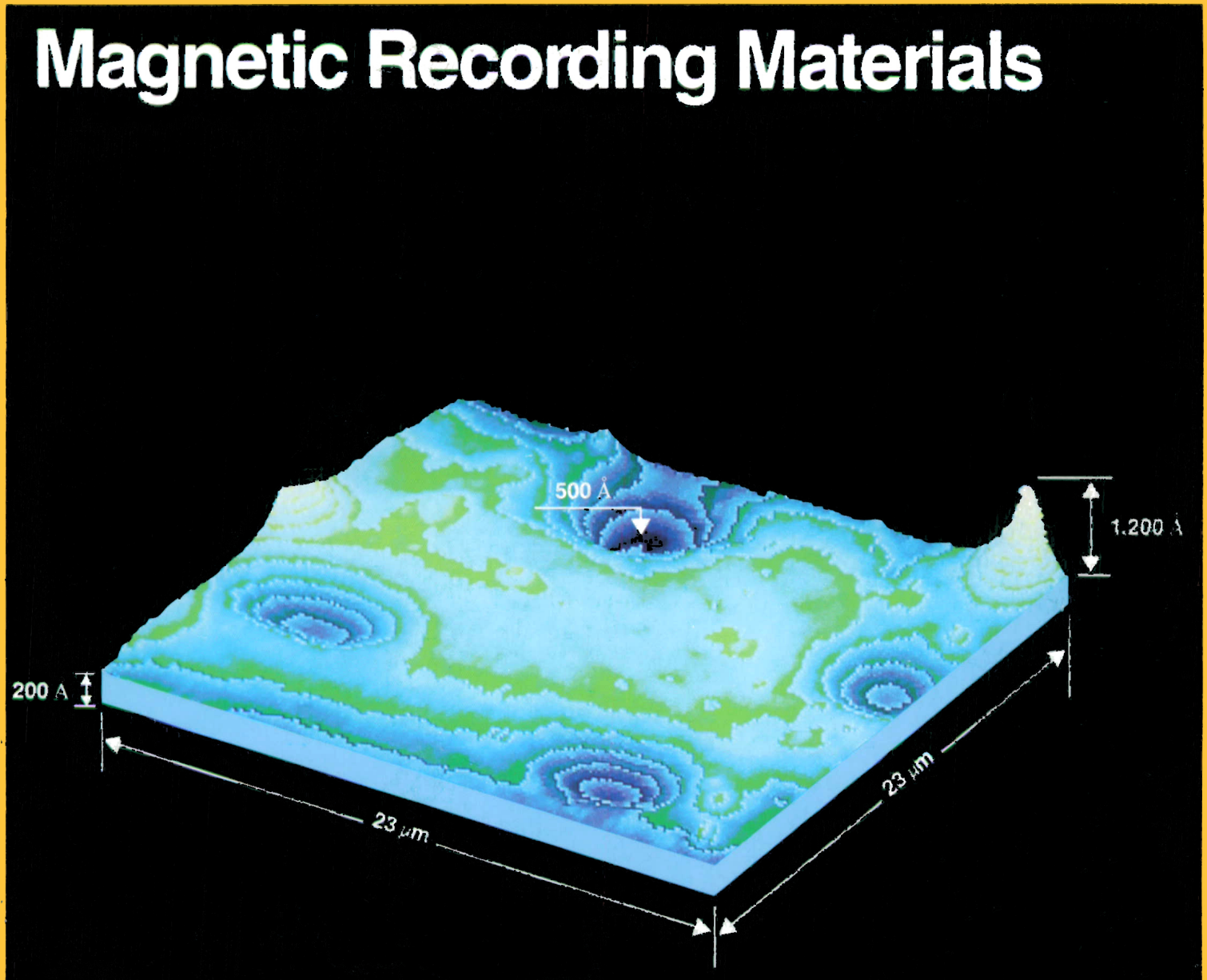
MRS BULLETIN

March 1990

Volume XV, Number 3

Serving the International Materials Research Community

Magnetic Recording Materials



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MRS BULLETIN

March 1990

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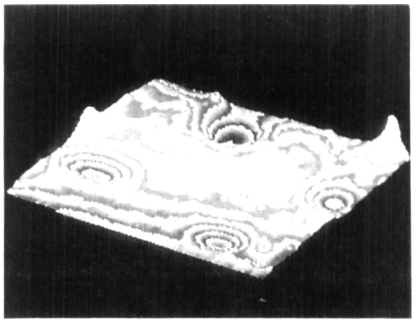
MAGNETIC RECORDING MATERIALS

INTERNATIONAL

MRS NEWS

DEPARTMENTS



ON THE COVER: The cover shows a three-dimensional micrograph obtained by atomic force microscopy (AFM) of the surface of a liquid, perfluoropolyether polymer spread on a substrate patterned with micron-sized holes. The same type of polymer is commonly used to lubricate magnetic storage devices. The color contours in the micrograph highlight the menisci of the liquid in the hole openings of the substrate. From the work of C.M. Mate. For more information, see "Overcoats and Lubrication for Thin Film Disks" by A.M. Homola, C.M. Mate, and G.B. Street on p. 45.

MRS BULLETIN

Materials Research Society • 9800 McKnight Road • Pittsburgh, PA 15237

ABOUT THE MATERIALS RESEARCH SOCIETY

The Materials Research Society (MRS) is a nonprofit scientific association founded in 1973 to promote interdisciplinary goal-oriented basic research on materials of technological importance. Membership in the Society includes more than 9,500 scientists from industrial, government, and university research laboratories in the United States and more than 25 countries.

The Society's interdisciplinary approach to the exchange of technical information is qualitatively different from that provided by single-discipline professional societies because it promotes technical exchange across the various fields of science affecting materials development. MRS sponsors two major international annual meetings encompassing approximately 40 topical symposia, as well as numerous single-topic scientific meetings each year. It recognizes professional and technical excellence, conducts short courses, and fosters technical exchange in various local geographic regions through Section activities and University Chapters.

MRS is an Affiliated Society of the American Institute of Physics and participates in the international arena of materials research through associations with professional organizations such as European MRS.

MRS publishes symposium proceedings, the *MRS BULLETIN, Journal of Materials Research,* and other current scientific developments.

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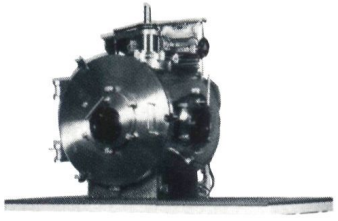
Back volumes of this publication are available in 16mm microfilm, 35mm microfilm, or 105mm microfiche through University Microfilms Inc., 300 North Zeeb Road, Ann Arbor, Michigan 48106.

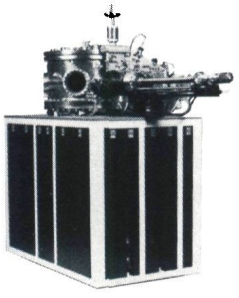
1000 Degree C Heater

The MICRO1000 range of heaters operate up to 1000 degrees C. even in an oxygen environment. Available in a number of configurations to fit any vacuum system. Comes with a range of optional accessories including shutter, cooling shroud and DC and RF biasing. For more information call Microscience, 41 Accord Park Dr., Norwell, MA 02061. Tel. (617) 871-0308.

Small Batch Sputter Production Systems



The Microscience MicroProd sputter system is suitable for prototype and batch production work with small substrates. Features a 24 inch dia. barrel chamber, loading door, carousel sample holder, and a variety of ports and feed throughs for magnetron sputter guns and ion sources. The MicroProd is a CAD design that can be easily adapted for a wide range of uses. Contact Microscience, 41 Accord Park Dr., Norwell, MA 02061. Tel. (617) 871-0308.

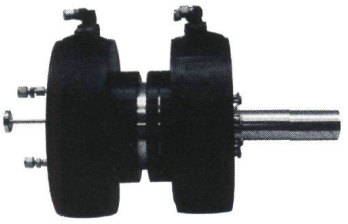


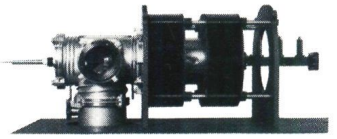
Researcher 101

Microscience introduces the researcher 101. An integrated UHV thin film system for advanced R&D applications. Originally designed for research on HTc films, the 101 incorporates many specialized features including transportable 1000 degree heater substrate carrier, stepper motor controlled, substrate positioning system and optional surface science module. The 101 is offered in HV and UHV configurations and can be fitted with a wide range of tools including planar magnetrons, ion sources and an ECR plasma stream source. From Microscience, 41 Accord Park Dr., Norwell, MA 02061. Tel. (617) 871-0308.

UHV ECR Source

The Microscience 904 ECR source is designed for retrofitting to UHV chambers. The source comes complete with microwave circuitry, magnets and power supplies. Details from Microscience, 41 Accord Park Dr., Norwell, MA 02061. Tel. (617) 871-0308.



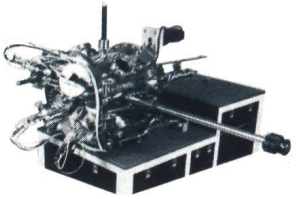


ECR Ion Source with extraction grids

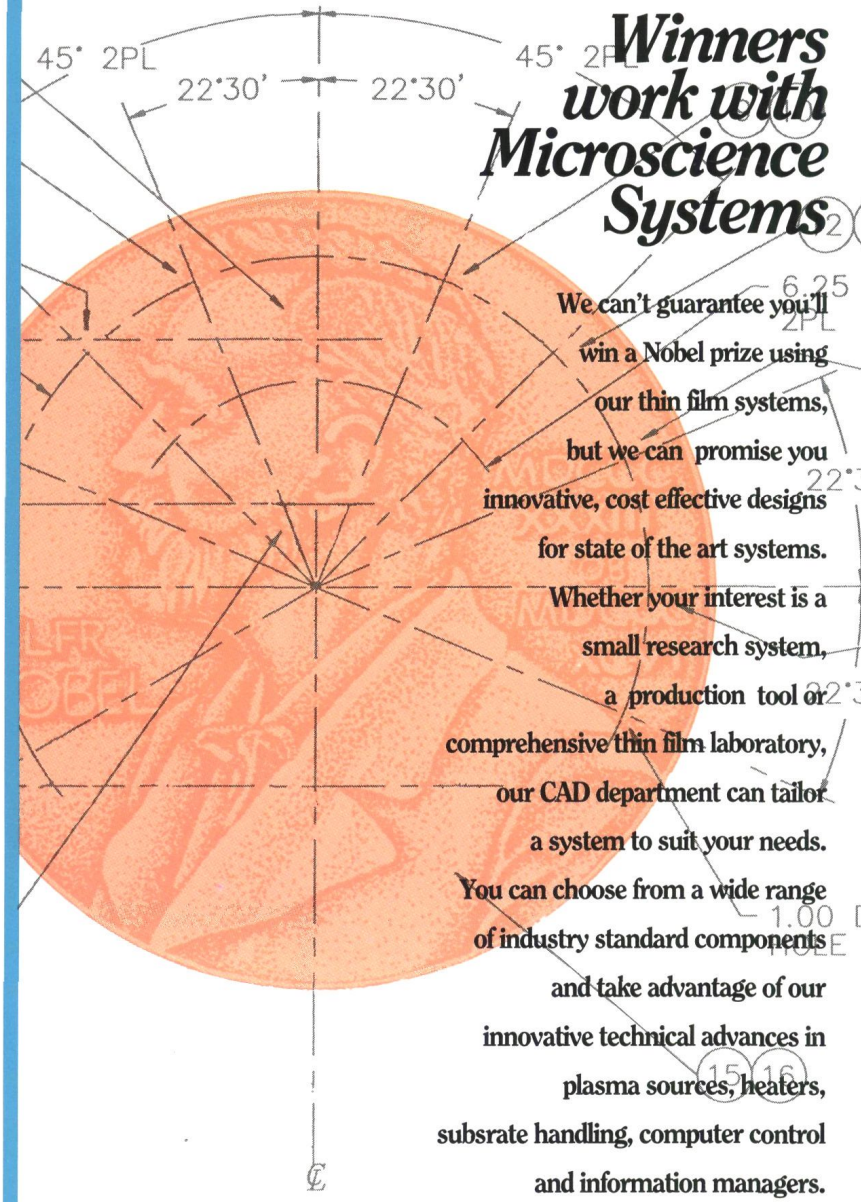
The ECR 908G is a high efficiency ECR plasma stream source fitted with extraction grids for energies in the range 50-5000 eV. The 908G produces beam densities up to 100 mA/cms. Applications include ion beam enhanced deposition, ion etching and RIBE. Contact Microscience, 41 Accord Park Dr., Norwell, MA 02061. Tel. (617) 871-0308.

MBE Sputter System

The Microscience 401 sputtering system is designed for interfacing to MBE systems. Features include a transfer system, load lock, rotating heated biasable sample holder, magnetron cluster and an LN cryoshroud. This is a CAD based design that can be adapted for most MBE systems. Contact Microscience, 41 Accord Park Dr., Norwell, MA 02061. Tel. (617) 871-0308.



Please visit Booth No. 613 at the MRS Show in San Francisco, April 17-19, 1990.



Winners work with Microscience Systems

We can't guarantee you'll win a Nobel prize using our thin film systems, but we can promise you innovative, cost effective designs for state of the art systems. Whether your interest is a small research system, a production tool or comprehensive thin film laboratory, our CAD department can tailor a system to suit your needs. You can choose from a wide range of industry standard components and take advantage of our innovative technical advances in plasma sources, heaters, subsrate handling, computer control and information managers. So, if you want to win in thin films, *give Microscience a call.*

MICROSCIENCE

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