

Calendar

To list an event in the Calendar, contact Julia Phillips, AT&T Bell Laboratories, 600 Mountain Avenue IE-431, Murray Hill, NJ 07974; telephone (201) 582-4428.

MRS indicates the meeting is sponsored by or affiliated with the Materials Research Society.

JANUARY 1987

- 11-17 Conference on Optoelectronics and Laser Applications in Science and Engineering
Los Angeles, CA
SPIE, P.O. Box 10, Bellingham, WA 98227; (206) 676-3290
- 12-16 Optical/Optoelectronic Engineering Update Series
Los Angeles, CA
SPIE, P.O. Box 10, Bellingham, WA 98227-0010; (206) 676-3290
- 27-29 Physics and Chemistry of Semiconductor Interfaces (PCSI 14)
Salt Lake City, UT
R. Ludeke, IBM, P.O. Box 218, Yorktown Heights, NY 10598; (914) 945-2591

FEBRUARY 1987

- 9-11 Seminar on Metal-Organic and Plasma Assisted CVD for Semiconductor Applications
Deerfield Beach, FL
S.P. Wolsky, Ansum Enterprises, Inc., 950 De Soto Rd., Suite 3B, Boca Raton, FL 33432; (305) 391-3544
- 22-27 International Meeting of the Adhesion Society
Williamsburg, VA
L.T. Drzal, Chem. Eng. Dept., Michigan State Univ., East Lansing, MI 48824
- 23-27 Third International Conference on Ultrastructure Processing of Ceramics, Glasses, and Composites
San Diego, CA
J.D. MacKenzie, Univ. of CA, Dept. of Materials Sci. & Eng., Boelter Hall 6531, Hilgard Ave., Los Angeles, CA 90024

- 25-27 Industry-University Advanced Materials Conference
Golden, CO
Advanced Materials Institute, Colorado School of Mines, Golden, CO 80401

MARCH 1987

- 9-11 Third International Seminar on Lithium Battery Technology and Applications
Deerfield Beach, FL
S.P. Wolsky, Ansum Enterprises, Inc., 950 De Soto Rd., Suite 3B, Boca Raton, FL 33432; (305) 391-3544
- 15-20 Second Annual Technical Symposium Southeast on Optics, Electro-optics, and Sensors
Orlando, FL
SPIE, P.O. Box, 10, Bellingham, WA 98227-0010; (206) 676-3290
- 16-20 American Physical Society Meeting
New York, NY
W. W. Havens, 335 E. 45th St., New York, NY 10017
- 23-27 Advances in Semiconductors and Semiconductor Structures
Bay Point, FL
SPIE, P.O. Box, 10, Bellingham, WA 98227-0010; (206) 676-3290
(See related article in this issue.)

APRIL 1987

- 5-10 American Chemical Society General Meeting
Denver, CO
ACS, 1155 16th Street, NW, Washington, DC 20036
- 6-8 **MRS** Oxford Conference on Microscopy of Semiconducting Materials
Oxford, UK
A. G. Cullis, RSRE, St. Andrews Road, Malvern, Worcester WR14 3PS UK; 01-6845-2733 ext. 2509
(See related article in Vol. XI No. 4)

- 6-9 Advanced Materials Technology '87 at 32nd International SAMPE Symposium and Exhibition
Anaheim, CA
M. Smith, Association Manager, P.O. Box 2459, Covina, CA 91722; (818) 331-0616

(See related article in Vol. XI No. 4)

- 7-10 7th General Conference of the EPS Condensed-Matter Division
Pisa, Italy
G. Grosso, Dipartimento di Fisica, Univ. di Pisa, Piazza Torricelli 2, I-56100 Pisa, Italy; 0-50-45223
- 21-25 **MRS** Materials Research Society Spring Meeting
Anaheim, CA
P.C. Smythe, Materials Research Society, 9800 McKnight Road, Suite 327, Pittsburgh, PA 15237
- 26-30 American Ceramic Society Annual Meeting
Pittsburgh, PA
American Ceramic Society, 65 Ceramic Drive, Columbus, OH 43214
- 27-29 DRIP II: International Symposium on Defect Recognition and Image Processing in III-V Compounds
Monterey, CA
Continuing Education in Engineering, University Extension, University of California, 2223 Fulton St., Berkeley, CA 94720; (415) 642-4151
(See related article in this issue.)

- 27-1 Conference on Lasers & Electro-Optics & Int'l Conference on Quantum Electro
Baltimore, MD
Optical Society of America, 1816 Jefferson Pl. NW, Washington, DC 20036; (202) 223-8130

MAY 1987

- 3-6 Fourth International Hazardous Waste Symposium
Atlanta, GA
ASTM, 1916 Race Street, Philadelphia, PA 19103; (215) 299-5400

- 3-7 American Ceramic Society
General Meeting
Atlanta, GA
American Ceramic Society, 65
Ceramic Drive, Columbus, OH
43214
- 11-15 Materials '87
London, UK
J. Butler, Conference Dept. (MT),
The Institute of Metals, 1 Carlton
House Terrace, London
SW1Y 5 DB, England
- 17-22 Electrochemical Society Spring
Meeting
Philadelphia, PA
Electrochemical Society, 10 South
Main Street, Pennington, NJ
08534-2896

JUNE 1987

- 1-2 Short Course on Techniques for
Surface Analysis
Dayton, OH
J.T. Grant, Research Institute,
Univ. of Dayton, Dayton, OH
45469
- 3-5 Ninth Symposium on Applied
Surface Analysis
Dayton, OH
J.T. Grant, Research Institute,
Univ. of Dayton, Dayton, OH
45469
- 8-11 2nd International Conference on
Effects of Modes of Formation on
the Structure of Glass
Nashville, TN
D. L. Kinser, Vanderbilt Univ.,
Dept. of Mechanical and Materials
Engineering, P.O. Box 1689-B,
Nashville, TN 37235
- 14-18 ASME Symposium on Flow of
Thin Fluid Films
Cincinnati, OH
M.J. Braun, Dept. of Mechanical
Engineering, Univ. of Akron,
Akron, OH 44325; (216) 375-7734
- 15-16 International Conference on Hot
Isostatic Pressing
Lulea, Sweden
CENTEK Congress, Lena Karbin,
S-951 87 Lulea, Sweden; 46-920
91 000.
- 17-19 Chemically Modified Surfaces
Fort Collins, CO
Chemically Modified Surfaces,
Mail Stop C41C00, Dow Corning
Corporation, Midland, MI
48686-0994

- 22-26 2nd International Conference on
Structure of Surfaces
Amsterdam, The Netherlands
J.F. van der Veen, FOM Inst. of
Atomic & Molecular Physics,
Kruislaan 407, 1098 SJ
Amsterdam, The Netherlands
20-946711
- 23-25 1987 SAMPE Electronics
Materials and Processes
Conference
Santa Clara, CA
SAMPE, 843 West Glentana, Box
2459, Covina, CA 91722;
(818) 331-0616

AUGUST 1987

- 18-20 First International SAMPE Metals
and Metals Processing
Conference
Cherry Hill, NJ
SAMPE, 843 West Glentana, Box
2459, Covina, CA 91722;
(818) 331-0616
(See related article in Vol. XI No. 5)
- 31-3 9th International Workshop on
Rare-Earth Magnets and
Applications and 5th Int'l Symp.
on Magnetic Anisotropy &
Coercivity
Bad Soden, FRG
Dr. Ranier Poerschke, Deutsche
Physikalische Gesellschaft E. V.,
Hauptstrasse 5, D-5340 Bad
Honnet, FRG

SEPTEMBER 1987

- 2-4 12th International Symposium of
Hosei University on Applications
of Ion Beams in Materials Science
Tokyo, Japan
Y. Yamamoto, Research Center of
Ion Beam Technology, Hosei
Univ. 3-7-2 Kajino-cho, Koganei,
Tokyo 184, Japan
- 22-25 Conference on New Materials
Warwick, UK
IOP, 47 Belgrave Sq., London,
SW1X 8QX, UK; 01-235-6111

OCTOBER 1987

- 18-22 Electrochemical Society Fall
Meeting
Honolulu, HI
Electrochemical Society, 10 S.
Main St., Pennington, NJ
08534-2896
- 19-23 Optical Society of America
Annual Meeting
Rochester, NY
OSA, 1816 Jefferson Pl. NW,
Washington, DC 20036;
(202) 223-8130
- 20-23 Symposium on Applications of
Small Accelerators
Beijing, China
Prof. Zhong-lie Wang, Institute
for Low Energy Nuclear Physics,
Beijing Normal University,
Beijing, China
(See related article in Vol. XI No. 5)

NOVEMBER 1987

- 2-6 Meeting of the Division of Plasma
Physics of the APS
San Diego, CA
W.W. Havens, 335 E. 45th St.,
New York, NY 10017
- 2-6 34th National Vacuum
Symposium of the American
Vacuum Society
Anaheim, CA
N. Hammond, American Vacuum
Society, 335 E. 45th St., New
York, NY 10017;
(212) 661-9404
- 30-4 **MRS** Materials Research
Society Fall Meeting
Boston, MA
P.C. Smythe, Materials Research
Society, 9800 McKnight Rd.,
Suite 327, Pittsburgh, PA 15237;
(412) 367-3003

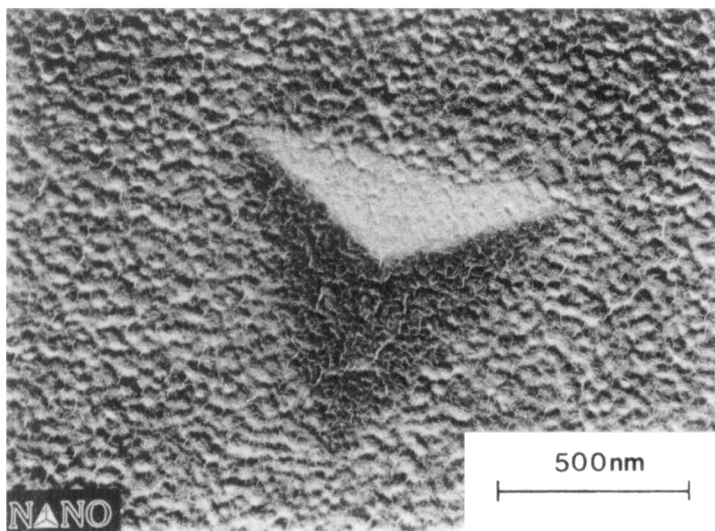
DECEMBER 1987

- 16-18 Solid State Physics Conference
Bristol, UK
IOP, 47 Belgrave Sq., London
SW1X 8QX, UK; 01-235-6111

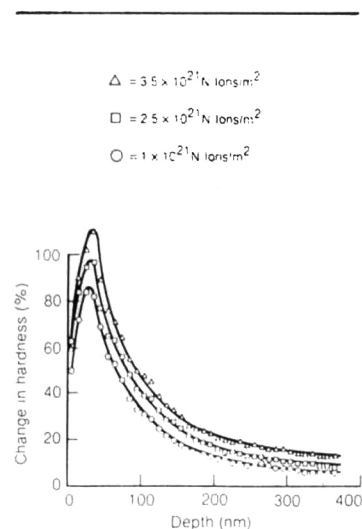
MRS

Introducing NANO INDENTER Mechanical Properties Microprobe

- Strength data from extremely small volumes and thin layers compared to conventional hardness testing.
- Indent depths measured in nm.
- No imaging of indents required.
- Ultra precise two axis manipulator.
- Computer control of probe and data acquisition.
- Software for data averaging, editing and plotting.



TEM image of indent in silicon chip.



Change of hardness vs depth of nitrogen ions implanted in iron.

The Nano Indenter is an important new instrument for the analysis of the mechanical properties of surfaces and thin films on a submicron scale. The instrument comprises a precision diamond microprobe driven by an electromagnetic loading column. The instrument continuously records load and depth as an indentation is made in the sample surface. The sample is mounted on a high precision XY table so that the micromechanical properties may be mapped by stepping the sample to programmed test sites. Precise hardness data can be obtained from indentations as shallow as 50nm on a routine basis.

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Please visit Booth No. 902-903 at the MRS Show.