INDEX OF ADVERTISERS

4pi Analysis, Inc (www.4pi.com) 17
Advanced Microscopy Techniques(www.amtimaging.com) 23
EDAX Inc.(www.edax.com)
EMPIX Imaging (www.empix.com)
Ernest F. Fullam (www.fullam.com) 37
Evex Analytical (www.evex.com) 18
FEI Company (www.feic.com)
E.A. Fischione, Inc (www.fischione.com)
Gatan Inc. (www.gatan.com) 13
Geller MicroAnalytical Lab (www.gellermicro.com)7
IXRF Systems (www.ixrfsystems.com) 6
JEOL USA (www.jeol.com) 40
Materials Analytical Services (MAS) (www.mastest.com)
Media Cybernetics (www.mediacy.com)
Meiji Techno America (www.meijitechno.com)
M.E. Taylor Engineering (www.semsupplies.com)
Micro Star Technologies (www. Microstech.com)
Minitool Micro Precision Products (www.minitoolinc.com)
National Graphic Supply (www.ngscorp.com)
Oxford Instruments (www.oxford-instruments.com)
Princeton Gamma Tech (www.pgt.com) 4
Soft Imaging Systems Corporation (www.soft-imaging.com 15
South Bay Technology, Inc. (www.southbaytech.com)
SPI Supplies (www.2spi.com) 19, 27
ThermoNORAN (www.thermonoran.com)11
XEI Scientific (www.SEMCLEAN.com) 36

SUBSCRIPTION REQUEST/CHANGE

Please use the electronic form on www.microscopy-today.com

-OR- fax or mail this: (Please Print Clearly): Dr. ____ Mr. ____ Ms. ____ New ____ Change ____ Delete

Name: Address:

Phone: FAX:

E-mail:

Please check all that apply:

- _ A User of microscopy equipment/ materials/services
- Supplier of microscopy equipment/ materials/services В
- C Physical/Material Sciences
- D Biological/Biomedical Sciences
- E Earth Sciences
- F Electron Microscopy
- G Confocal Microscopy H SPM/AFM
- I Light Microscopy
- J IR Microscopy
- K Acoustic Microscopy

MICROSCOPY TODAY

The objective of this publication is simply to provide material of interest and value to working microscopists!

The publication is owned by the Microscopy Society of America (MSA) and is produced six times each year. Total free circulation is given below. Thanks to the financial support of our advertisers, the publication is sent at no charge to microscopists in the U.S. However, due to the relatively few, non-MSA member, international readers (and the resulting lack of advertising income) and the very high postage costs, we must charge non-MSA subscribers for postage as follows: Canada, Mexico, Latin and South America: \$80 for one year and \$140 for two years. Other International: \$110 for one year and \$190 for two years.

Individuals requesting subscriptions, or wishing to change/correct their current address, are requested to do so via either our www site: www.microscopytoday.com, or under "Publications of the Society" on the MSA www site, www.msa.microscopy.com, or you may use the form to the left. This completed form may be mailed or faxed.

We greatly appreciate article/material contributions from our readers-"users" as well as manufacturers/suppliers. The only criteria is that the subject matter be of interest to a reasonable number of working microscopists.

MICROSCOPY TODAY

Ron Anderson, Editor ron.anderson@attglobal.net Phil Oshel, Technical Editor peoshel@facstaff.wisc.edu **Dale Anderson, Art Director** dale.anderson@attglobal.net

Regular Mail to: PO Box 499 Wappingers Falls, NY 12590 Courier Mail to: 21 Westview Drive

Poughkeepsie, NY 12603

Telephones: 1-(845)463-4124 • Fax: (845)463-4125

e-Mail:

microtoday@attglobal.net

WWW Page:

www.microscopy-today.com

Total Circulation: 11,150 (6/30/02)

Disclaimer: By Submitting a manuscript to Microscopy Today, the author warrants that the article is original (or that the author has the right to use any material copyrighted by others). The use of trade names, trademarks, etc., does not imply that these names lack protection by relevant laws and regulations. Microscopy Today, the Microscopy Society of America, and any other societies stated, cannot be held responsible for opinions, errors, or for any consequences arising from the use of information contained in Microscopy Today. The appearance of advertising in Microscopy Today does not constitute an endorsement or approval by the Microscopy Society of America of the quality or value of the products advertised or any of the claims, data, conclusions, recommendations, procedures, results or any information found in the advertisements. While the contents of this magazine are believed to be accurate at press time, neither the Microscopy Society of America, the editors, nor the authors can accept legal responsibility for errors or omissions.

Copyright, 2002, The Microscopy Society of America. All rights reserved.

Processing Solutions for Specimen Preparation.



Ion Beam Sputter Deposition and Etching System

- Uniformly thin, continuous, amorphous films
- Multiple target materials without breaking vacuum
- Improved imaging for highest magnification FESEM

he by Cambridge University

Press

Base pressure of 10-7 without LN₂ trapping



- Removes hydrocarbons without damaging specimen <
 - Intuitive front panel controls <
 - Ideal for multi-user environments ◄
 - Large chamber accommodates samples up to 3" tall and 6" diameter





- Eliminates damage caused by FIB milling
- Patented low energy ion source 100eV to 2keV
- High thinning rates even at low energy
- Vacuum load-lock system for quick sample exchange





SOUTH BAY TECHNOLOGY, INC.

1120 Via Callejon | San Clemente, CA 92673 | U.S.A. | 949-492-2600 | Fax: 949-492-1499

Toll Free: 800-728-2233 | email: info@southbaytech.com | www.southbaytech.com

...for extreme science

Introducing the 7400F SEM with 50% higher resolution at low kV.



Conquer the nanoscience frontier with the new 7400F SEM from JEOL, the pioneers in extreme imaging. We've pushed semi inlens technology to give you the clearest possible SEM image of your sample at the nanometer level. Our patent pending SE enhancer, r-filter, and in-lens backscatter detector enhance image quality, reduce charging contrast, and heighten Z-contrast -

increasing resolution at low kV by 50%.

Nanoscience is changing the world and the way you work. If your applications are on the edge, call the imaging experts at JEOL to learn more about the 7400E

Visit us at www.jeol.com/7400f/

See us at M&M, Booth #911.

r c n

R

(978)535-5900 eod@ieol.com