

MICROSCOPY TODAY

This, our fourth newsletter issue, is being sent at no cost to almost 9,500 individuals in the United States - each with an interest in microscopy.

As our interest is clearly to produce a newsletter of value relating to the broad field of microscopy, readers are encouraged to forward their copies of the newsletter to others in their organizations with varying interests in microscopy who may wish a no cost subscription.

INDUSTRY NEWS

✓ On February 28, 1992, Russell L. Steere died of cancer at the age of 74. Dr. Steere was a founder and retired chief of the Agriculture Department's plant virology laboratory in Beltsville, MD, a past president of the Electron Microscopy Society of America and an active member of the Chesapeake Society for Electron Microscopy. An authority in botany, virology and biophysics, much of his research concerned the purification of viruses and sub-cellular materials and new methods for electron microscopic examination of these substances. He was a leader in developing the freeze-fracture technique. Dr. Steere's awards included an achievement certificate from Walter Reed Army Medical Center, the Agriculture Department's Distinguished Service and Superior Service Awards and two awards from the American Phytopathological Society. As many of us know first hand from attending workshops given by Dr. Steere, he was an excellent and enthusiastic teacher. He helped supervise science clubs for high school students. In 1991, Colorado State University named a science laboratory in his honor.

✓ **MICROSCOPE COLLECTORS ASSOCIATION OF AMERICA.** Microscope collecting is a fascinating activity carried on by a small but growing number of individuals. An association of microscope collectors is being formed for the purpose of exchanging information, identifying the interests and needs of collectors, describing existing collections, etc.

Interested persons are invited to contact the Association by sending name, address, and an optional brief description of major interests, needs or offers of instruments for sale, as well as a business size-self addressed stamped envelope to:

Manuel del Cerro, MD
14 Tall Acres Drive
Pittsford, NY 14534

✓ Terry Donovan, recently of Gatan, has started his own company specializing in abrasive cutting equipment - DRB Cutting Technology (412-774-8590). Included are several types of diamond saws for optical and electron microscopy sample preparation.

✓ Researchers at NIST are in the process of designing and building an ultrahigh accuracy planar coordinate measuring machine capable of positioning and measuring to atomic scale accuracies over an area of 2500 mm². The molecular measuring machine, designated "M³", has as a design goal a point-to-point spatial resolution of 0.1 nm of the distance between any two points within a 50mm X 50 mm X 100 μm volume; with a net uncertainty for point-to-point measurements of 1.0 nm. Maximum specimen size will be 50 mm X 50 mm X 12 mm.

The approach is to design the machine such that it can incorporate a probe, based on either a scanning tunneling microscope or an atomic force microscope, into a highly stable core mechanical structure. A spherical core structure, with crossed linear slideways for the probe and specimen carriages, was chosen for its high mechanical stiffness and ease of temperature control.

Additional information relating to "M³" is available from the NIST Project Leader: Dr. E. Clayton Teague, NIST, Building 220, Room A117, Gaithersburg, MD 20899.

✓ The updated *NIST Calibration Services Users Guide 1991 (SP 250)* lists more than 500 calibration services, special test services, and measurement assurance programs (MAPS) available for industry from the National Institute of Standards & Technology. The special test services include NIST services that check, adjust or characterize instruments, devices, and sets of standards. MAPS are quality control programs that calibrate a customer's entire measurement system. Services are listed in seven different areas: dimensional, mechanical (including flow, acoustic and ultrasonic), thermodynamic quantities, optical radiation, ionizing radiation, electromagnetic radiation (including dc, ac, rf and microwave), and time and frequency measurements. Also listed are NIST technical experts who may be contacted for further information on services and measurement problems. The guide may be obtained from the Calibration Program, NIST, Building 411, Room A104, Gaithersburg, MD 20899, Tel.: (301)975-2002.

INDUSTRY NEWS CONTINUED

✓ Phillips Electronics Instruments Company has recently received an order for a CM20 FEG TEM from the National Institute of Health. The instrument, valued at more than \$900,000, will be used by Dr. Alasdair Steven and his staff at the National Institute of Child Health and Disease in cryomicroscopy applications.

✓ Energy Beam Sciences, Inc. announces the acquisition of a product line of equipment used in pathology laboratories from VG Microtech of Uckfield, England.

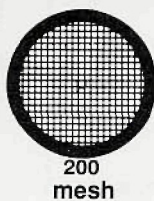
✓ Dr. Bruce C. Schardt, formerly of Purdue University, has joined Digital Instruments, Inc. as Staff Scientist. His major focus will be on the development and refinement of Scanning Probe Technology relating to surface chemistry and physics.

✓ The Buhrke Company, Redwood City, CA, now represents new TEMs, SEMs, vacuum evaporators, ultramicrotomes, metallographic specimen preparation equipment, and ultrasonic cleaners, all manufactured in the Ukraine.

✓ CamScan has recently fulfilled two major contracts to forensic laboratories, one to the F.B.I. Laboratory in Washington, DC and the second to the San Diego Police Department. Both systems will be used for automated gunshot residue analysis as well as general trace evidence analysis.

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MICROSCOPY & MICROANALYSIS IN BOSTON

The 50th Anniversary Meeting of EMSA, to be held jointly with the Microbeam Analysis Society and the Microscopical Society of Canada, is shaping up as the most comprehensive and largest in the Society's history. The meeting will be at Boston's Hynes Convention Center, August 16-21.

The scientific program starts off Sunday with nine short courses and includes some 900 presentations (one-third are posters), about 50% more than the previous largest annual meeting. Among nearly 50 symposia topics are: Scanned Probe Microscopy; Automated EM; High-resolution EM of Biological Membranes; New Instrumentation; Frontiers of Light Microscopy; Microanalysis at the Atomic Level; Microscopy of Neuronal Systems; New Ways of Looking at Cells; The Cell Nucleus Revisited; Superconductors; Optical Microspectroscopic Analysis; Nucleic Acid-Protein Interactions; Analytical EM; 3D Visualization; EM in the Development of Materials; Microscopy of Self-assembled Materials and Biomimetics; Interfaces; and Biological Microanalysis. There will be a week-long computer workshop and software exchange as well as 13 tutorial lectures. All scientific presentations are published as extended two-page abstracts, with high-quality halftones, in a two-volume, hardbound *Proceedings*, included with full registration.

Historical aspects of electron microscopy will be highlighted by the EMSA Presidential Symposium, "Microscopy Then and Now" and the Technologists' Forum Symposium on "The Development of EM Instruments and Techniques: Recollections of the Masters", featuring talks by many pioneers in the field. Other historical features include attendance by EMSA's Charter Members and Past Presidents, a hardbound commemorative history of EM and EMSA by Sterling Newberry, included with all full registrations, and a new oral-history videotape.

The meeting includes the world's largest commercial exhibition of equipment and services related to microscopy and microanalysis. Some 125 firms, most with fully-operating instrumentation and key technical personnel, will be on hand throughout the week. There is no charge for admission to the commercial exhibition.

Social events begin with a Sunday evening Anniversary party on Boston's waterfront, included with all registrations, a Tuesday evening buffet at the Museum of Fine Arts, a Wednesday evening clambake cruise on Boston Harbor, and a Thursday Red Sox game.

Other special projects include a microscopy postage stamp exhibit by Bill Wergin and a photomicrograph exhibit, "Microcosm - Views of Microscopic Forms", curated by Dennis Kunkel, a photographic gallery of EMSA Past Presidents, and a microscopy cartoon display. All registrants will receive a copy of a souvenir poster by David Scharf.

For a complete program, information, and registration materials, contact the Meeting Office, PO. Box EM, Woods Hole, MA 02543; toll-free (800)538-3672, Fax (508)540-5594.

See you in Boston ?