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# Minnesota Microscopy Society

Local affiliate of the *Microscopy Society of America*  
and the *Microbeam Analysis Society*



## Newsletter

October 2001

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### MMS November Meeting

Thursday, November 8, 2001

#### Tour of Medtronic Corporate Research Labs Talk: Chemical Imaging

Medtronic Inc. has a new world headquarters and corporate research facility. The research labs include all of the latest equipment for microscopical, metallurgical, and wet chemical analytical work. This will be the first opportunity for the microscopy community at large to tour these facilities.

**Talk:** Chemical Imaging: An Emerging New Tool for Molecular Microscopy

**Speaker:** Patrick J. Treado, ChemIcon Inc.  
7301 Penn Avenue  
Pittsburgh, PA 15208  
412-241-7335; treado@chemimage.com

#### Schedule of Events:

**Arrive around 5:15 PM**

5:30 - 6:30 PM **Tour of Medtronic's Labs**

6:30 - 7:30 PM **Dinner**

7:30 - 8:30 PM **Business Meeting and Technical Program**

#### Abstract

Raman and near infrared (NIR) chemical imaging have been demonstrated to be a powerful tools for microscale analysis of a wide range of materials, including polymers, pharmaceuticals, semiconductors and biomaterials, to name a few. With Raman chemical imaging systems based on microscopes, materials can be analyzed with molecular specificity, without the use of dyes or stains, at submicron spatial resolution (<250 nm). NIR chemical imaging can be performed through refractive microscopes at micron spatial resolution. The molecular information provided by chemical imaging technology complements elemental imaging performed using SEM-EDS technology. In this presentation, the current state of chemical imaging technology will be assessed, including both hardware and data treatment strategies. Comparisons will be made between molecular and elemental imaging approaches. In addition, specific examples from a diverse array of microscopy studies will be presented.

#### Dinner:

Dinner will be at Medtronic's corporate headquarters. The menu will include an Italian buffet of linguini alfredo, chicken marsala, herb roasted potatoes, fresh steamed vegetables, caesar and tossed salads, and mini Italian pastries. The cost will be \$20.00 for members and \$5.00 for students.

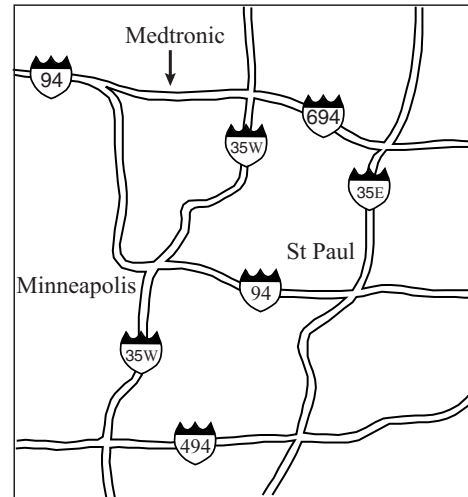
**To make reservations**, contact Mike Coscio at 763-505-4561 or mike.coscio@medtronic.com by **Friday, November 2, 2001**.

**Parking** is available (free) in the ramp just outside the door of the research facility. See page 2 for location map and directions.

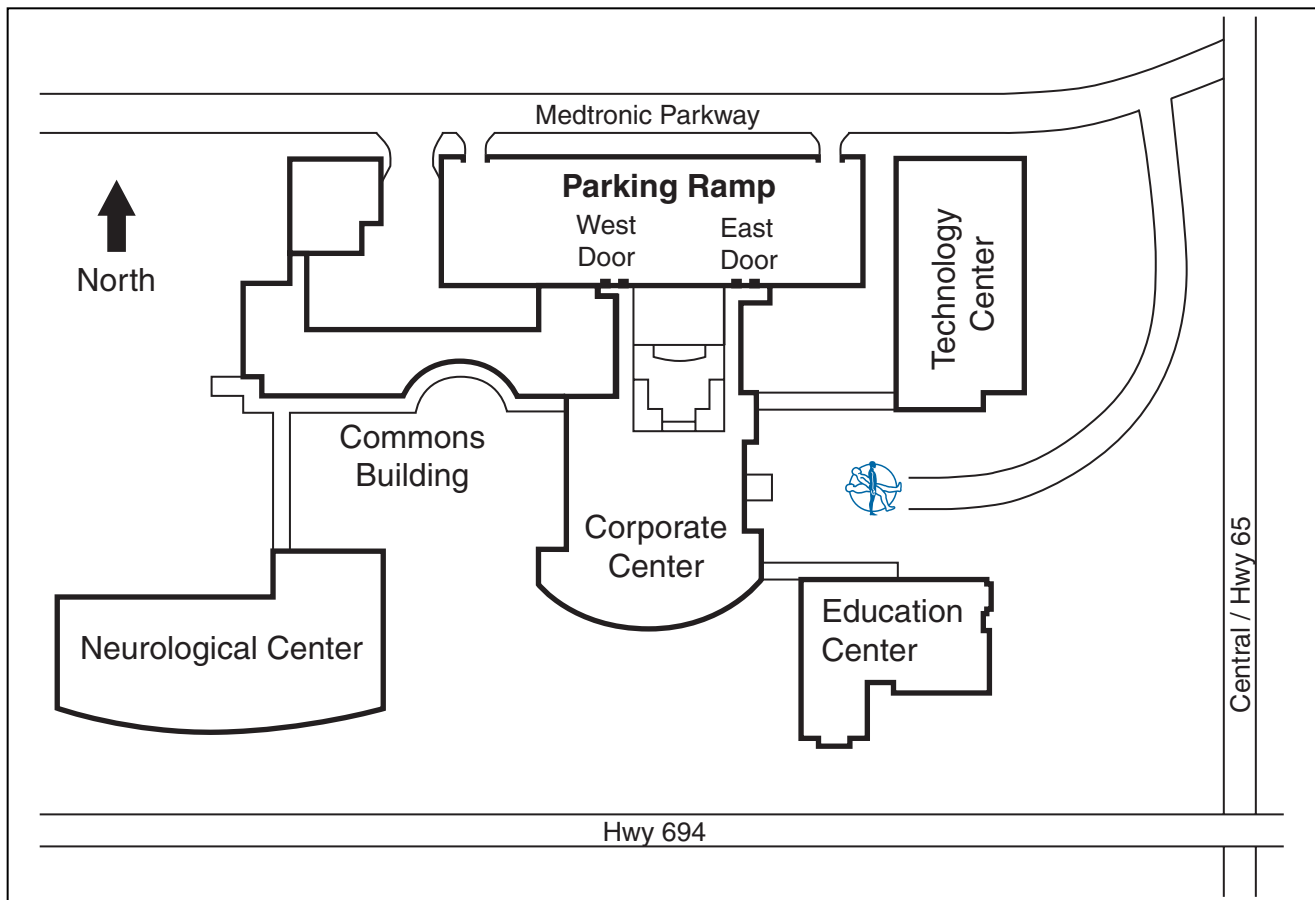
(Continued on page 2)

### Biography

Patrick J. Treado, Ph.D. is Founder and President of ChemIcon Inc., a manufacturer of chemical imaging instruments and software. Dr. Treado is an analytical spectroscopist (B.S., Georgetown University; Ph.D., University of Michigan) and has years of experience in the chemical imaging field. Dr. Treado's research interests involve the development of IR, Raman and fluorescence chemical imaging and their application to materials analysis, clinical diagnostics and process monitoring. Dr. Treado is the recipient of several prestigious awards, including the 1998 Coblenz Award and more recently, an R&D 100 Award for ChemIcon's FALCON Raman Chemical Imaging Microscope.



Location maps for Medtronic's Corporate Headquarters at 710 Medtronic Parkway, Fridley, MN. Parking is available free in the parking ramp shown on the map below. Enter the Corporate Center through the **east door**.



## *Upcoming MMS Meetings - Continued*

### February 7 - Thursday

**Speaker:** Karen Runon  
Minneapolis Police Department  
Forgery Unit

### March 27 - Wednesday

#### MMS Joint Meeting with ASM

**Talk:** Color Metallography

**Speaker:** George F. Vander Voort  
Director of Research and Technology  
for Beuhler Ltd.

**Location:** Sheraton Four Points  
(on 35W, north and east of downtown  
Minneapolis.)

#### New MMS Web Site

The Minnesota Microscopy Society has a new Web site. It is now "[www.MNmicroscopy.org](http://www.MNmicroscopy.org)". The actual physical location of the Web site has not changed. It is still being maintained on one of the computers at the IT Characterization Facility at the University of Minnesota. However, the name will now be easier to remember when surfing the net to look for the latest MMS Newsletter.

### May 3 - Friday

#### MMS Spring Symposium

**Topic:** Nanotechnology

**Location:** Science Museum of Minnesota

Again this year the Minnesota Microscopy Society will be putting on a full day of talks for our Spring Symposium. The focus will be on the dynamic new world of nanotechnology. We plan to have a wide range of speakers. If you know someone you would like to hear, or who would be of interest to others, let us know.

### June Meeting

(formerly the April meeting)

#### Tour of the Mayo Clinic Joint meeting with the Iowa Microscopy Society

#### Suggested Afternoon Program:

- > Tour of the Mayo Clinic, including the public tour and a tour of the microscopy facilities.
- > Talk by Ken Moore, Iowa  
Stem Cell Research and Gene Therapy
- > Social Hour
- > Dinner
- > After dinner speaker

## Sustaining Corporate Members

Sustaining members are the backbone of financial support for the Society. These members make it possible for the Society to support Project Micro and to cover many expenses of the regular meetings and the Spring Symposium. We greatly appreciate the continued support of these individuals and corporations. To become a Sustaining Member, complete and return the MMS membership form at the end of the newsletter.

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John Treadgold	<b>LEO Electron Microscopy Inc.</b>	630-497-8166
Steve Ziegler	<b>Digital Instruments</b>	512-912-1615

If any Sustaining Members are missing from this list, *please* contact either: Diana Kittleson (651-917-5859, dkittleson@pillsbury.com) or Peter McSwiggen (612- 624-7370, mcswi001@umn.edu)

## MMS Patron Members

The Minnesota Microscopy Society would like to express our thanks to our Patron Members. These members provide financial support to the organization above the standard membership fee. This type of continued support makes it possible for MMS to maintain its financial well being. To become a Patron Member, complete and return the MMS membership form at the end of the newsletter.

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**Kevin Cowden**, Medtronic Inc., Brooklyn Center  
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**Chris Frethem**, Cell Biol. & Neuroanatomy, U of M  
**Kathryn Hanna**, College of Biol. Science, U of M  
**Mike Herron**, Medicine, University of Minnesota  
**Dave Lindman**, Minneapolis Police Crime Lab  
**Susan Okerstrom**, Medtronic Inc., Brooklyn Center

**Ev Osten**, 3M Company, St. Paul, MN  
**Ann Palmer**, Entomology, U of M  
**Jeff Payne**, 3M Company, St. Paul, MN  
**Patricia Schachern**, Otolaryngology, U of M  
**Dan Schaub**, Philips Electron Optics, Inc., Oronoco  
**Carolyn Sutherland**, Otolaryngology, U of M  
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**Greg Trettel**, BF Goodrich Aircraft Sensors, MN  
**Rae Vigeant**, Random Microscopy Services, St. Paul

## MMS BOARD and OFFICERS 2001-2002

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**Newsletter Editor:** Peter McSwiggen, University of Minnesota, Dept. of Geology & Geophysics, Minneapolis, MN 55455; (612) 624-7370, mcswi001@umn.edu

**Past-President:** Jean Schlosser, Crane Engineering and Forensic Services, 3905 Annapolis Lane N., Plymouth, MN 55447, (763) 557-9090, Fax (763) 557-0710, tcrane@skypoint.com

Copy Editing: Barbara Meier

**MAS Representative:** Michael Coscio, Medtronic Inc., 710 Medtronic Parkway, Minneapolis, MN 55432-5604 (763) 505-4561; mike.coscio@medtronic.com

**President-Elect:** Mary Swierczek, 3M Center, Bldg. 201-BE-16, St. Paul, MN 55144; (651) 736-5087, Fax (651) 733-0648, mjswierczek@mmm.com

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Jeff Payne, 3M Center, Bldg. 201-1E-16, St. Paul, MN 55144; (651) 733-2352, jjpayne@mmm.com

**Treasurer:** Dwight Erickson, 3M Center, Bldg. 251-1A-03, St. Paul, MN, 55144; (651) 736-2830, Fax (651) 736-7496, usmmm214@ibmmail.com

Sue Okerstrom, Medtronic Inc., 7000 Central Ave. NE., Minneapolis MN 55432; (763) 514-4678, sue.okerstrom@medtronic.com

**Corporate Liaison:** Diana Kittleson, Pillsbury Technology East, 737 Pelham Blvd., St. Paul, MN, (651) 917-5859, dkittleson@pillsbury.com

Paul Baker, Medtronic Inc. 7000 Central Ave. NE., Minneapolis MN 55432; (763) 514-4519, paul.baker@medtronic.com

**Webmaster:** Stuart McKernan, IT Characterization Facility, University of Minnesota, Minneapolis, MN, 55455; (612) 624-6009, FAX (612) 626-7530, stuartm@umn.edu

Ann Palmer  
ann.t.palmer-1@umn.edu

**Your MMS Annual Membership fee is due in September/October!**

All microscopists are urged to support their Society at one of the membership levels offered below. The more dues-paying members we have, the more likely we are to attract sustaining corporate memberships which form the financial backbone of our Society. Often, supervisors will support MMS memberships out of their project budget because they recognize that it is a very inexpensive way to maintain and increase the skills of their microscopists. If you have been a member over the years and recognize the value of MMS to the community of microscopists it serves, consider upgrading your membership this year to the patron or sustaining level. Thank you.

Name \_\_\_\_\_ Dr \_\_\_\_\_ Mr \_\_\_\_\_ Ms \_\_\_\_\_ Phone (\_\_\_\_) \_\_\_\_\_

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Indicate the method by which you would like to receive the Newsletter: mail \_\_\_\_\_ e-mail/web \_\_\_\_\_ both \_\_\_\_\_

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Check here \_\_\_\_\_ if you do NOT want your name and address to appear in the Society directory.

Area of interest: Bioscience \_\_\_\_\_ Materials Science \_\_\_\_\_ SEM \_\_\_\_\_ TEM \_\_\_\_\_ X-ray \_\_\_\_\_

**Membership level:** Basic \$10 \_\_\_\_\_ Patron  $\geq$  \$25 \_\_\_\_\_ Corporate Sustaining \$100 \_\_\_\_\_ Student \$5 \_\_\_\_\_

**Make checks payable to MMS and mail to our treasurer:**

**Dwight Erickson, MMS Treasurer, 3M Center, Bldg. 251-1A-03, Saint Paul, MN 55144-1000.**

**Minnesota Microscopy Society**  
Peter McSwiggen, MMS Editor  
University of Minnesota  
310 Pillsbury Drive, SE,  
Minneapolis, MN 55455

**November 8, 2001:**

**Tour of Medtronic's Corporate  
Research Labs,  
Talk: Chemical Imaging**

Forwarding and Address  
Correction Requested