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# AC-STEM Aberration Corrected Scanning Transmission Electron Microscopy

next generation of imaging tools capable of providing information at the Angstrom scale

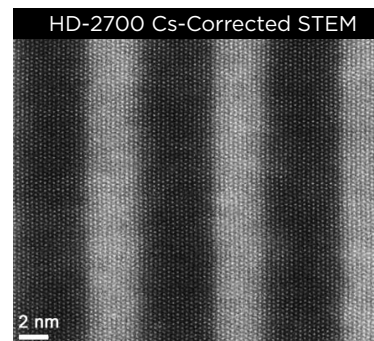
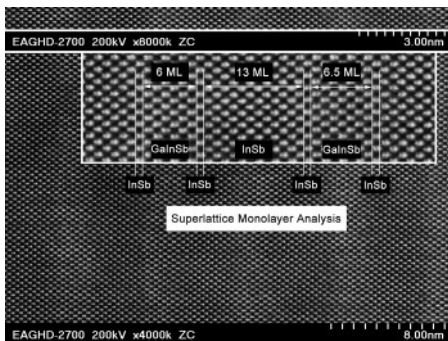
The improvement in resolution and sensitivity that AC-STEM provides is universally applicable for investigations of nanometer scale materials.

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## CONGRATULATIONS TO THE 2014 DIATOME POSTER AWARD WINNERS

DiATOME hosts a poster contest each year during the Microscopy & Microanalysis Annual Meeting where members of the MSA Council select the best poster presentation using Diamond Knives. DiATOME is proud to announce the following award winners for the 2014 meeting in Hartford, Connecticut:

- **1st Place Winner** (All-expense-paid trip for two people for one week in Switzerland): Linda Nikolova, University of Utah  
Poster: "Development of High Pressure Freezing and Correlative Light/Electron Microscopy for Drosophila Larvae"
- **2nd Place Winner** (A finely sculpted Swiss Watch): Patricia S. Connelly, National Institute of Health  
Poster: "Testing the Validity of 'Old Wives Tales' About Fixation of Tissue Cultured Cells"
- **3rd Place Winner** (A finely sculpted Swiss Watch): M. Eltsov, European Molecular Biology Laboratory-Heidelberg, Germany; S. Sosnovski, École des Neurosciences de Paris Île-de-France; A.L. Olins, D.E. Olins, University of New England  
Poster: "ELCS in Ice: Cryo-electron Microscopy of Nuclear Envelope-Limited Chromatin Sheets"

The awards for the best poster presentation using Diamond Knives, as well as the Diamond Knife raffle, will be offered again at the M&M 2015 Meeting in Portland, OR. The Diamond Knife raffle winners were as follows:

- Day 1: Julie Cohen, Weill-Cornell Medical College
- Day 2: Gayle Schneider, University of Rochester
- Day 3: Melainia McClain, Stowers Institute for Medical Research
- Day 4: Vera DesMarais, Albert Einstein College of Medicine of Yeshiva University

A heartfelt Congratulations is extended from DiATOME to the winners.

Stacie Kirsch, Managing Director, Diatome US, 1560 Industry Road, P.O. Box 550, Hatfield, PA 19440. Phone: (215) 412-8390; Fax: (215) 412-8450; E-mail: [sgkck@aol.com](mailto:sgkck@aol.com); <http://www.emsdiasum.com>

# Microscopy Innovation Awards

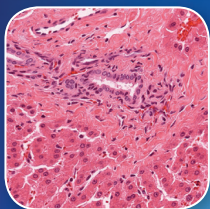
Congratulations to the winners of the  
2014 *Microscopy Today* Innovation Awards:



- Abberior Instruments
- AppFive
- Applied Nanostructures
- Asylum Research, an Oxford Instruments company
- CoolLED
- FEI
- Leica Microsystems
- Max Planck Institute for Biophysical Chemistry
- NanoMEGAS
- Stanford University
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- Yale University

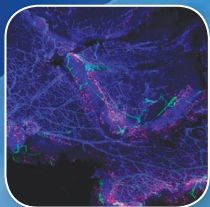
Entry deadline: **March 15, 2015**

Application forms at [www.microscopy-today.com](http://www.microscopy-today.com)

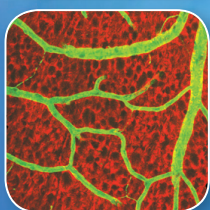


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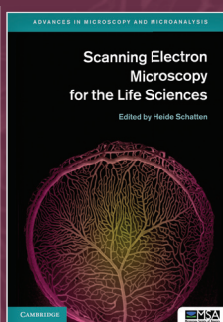
## Scanning Electron Microscopy for the Life Sciences

Heide Schatten

University of Missouri, Columbia

US\$120.00: Hb: 978-0-521-19599-7: 312 pp

Recent developments in scanning electron microscopy (SEM) have resulted in a wealth of new applications for cell and molecular biology, as well as related biological disciplines. It is now possible to analyze macromolecular complexes within their three-dimensional cellular microenvironment in near native states at high resolution, and to identify specific molecules and their structural and molecular interactions. New approaches include cryo-SEM applications and environmental SEM (ESEM), staining techniques and processing applications combining embedding and resin-extraction for imaging with high resolution SEM, and advances in immuno-labeling. With chapters written by experts, this guide gives an overview of SEM and sample processing for SEM, and highlights several advances in cell and molecular biology that greatly benefited from using conventional, cryo, immuno, and high-resolution SEM.



### About the series

The Press currently publishes the Microscopy and Microanalysis (MAM) journal in conjunction with the MSA, which reaches 4,000 microscopists and is affiliated with 12 international microscopy societies. The series would be a natural development from this journal, and will take a broad view of the discipline, covering topics from instrumentation to imaging, methodology and analysis across physical science, materials science, biology and medicine. Books commissioned for the series will range from advanced undergraduate textbooks through to research and practitioner oriented monographs for researchers. The series aims to produce a coherent source of material, encouraging the communication and exchange of ideas across these divergent fields, ensuring that the series appeals to a broad community in the physical and life sciences.

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by Michael Isaacson

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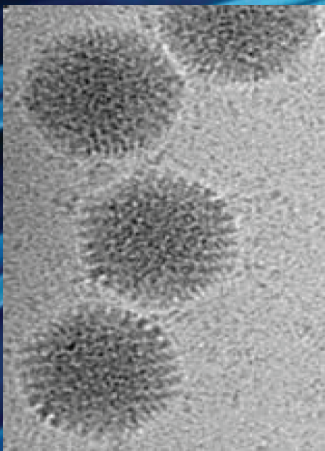
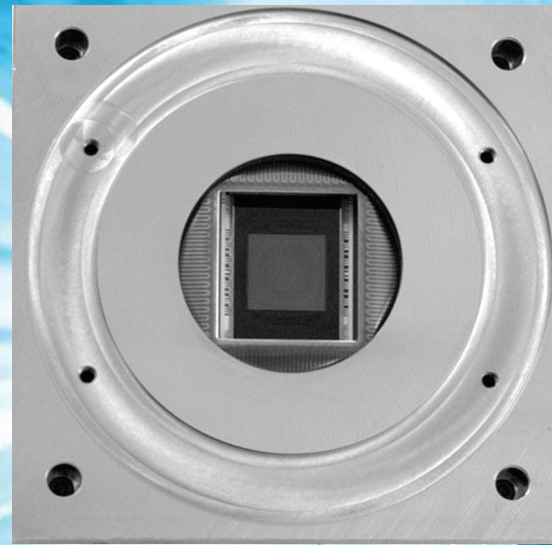


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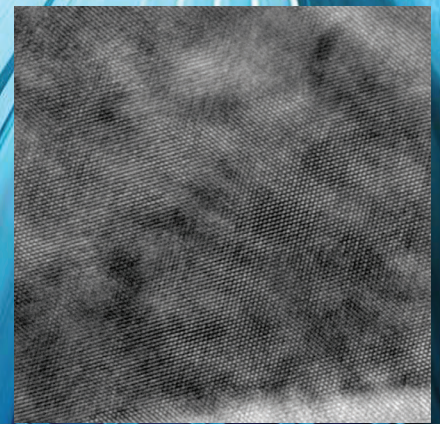
Adenovirus

Dr. Cameron Ackerley  
The Hospital for Sick Children



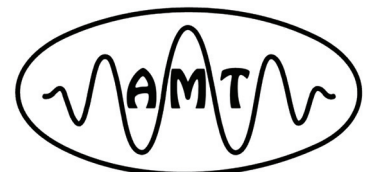
Diffraction

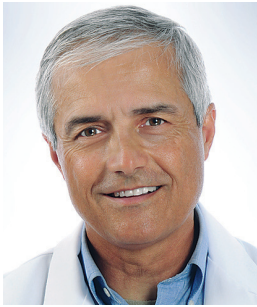
Dr. Pengfei Hu at the Shanghai University



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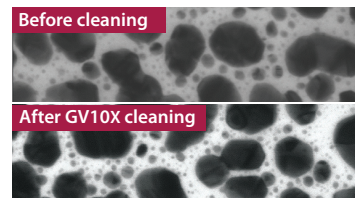
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User	Lost	00	00	00	
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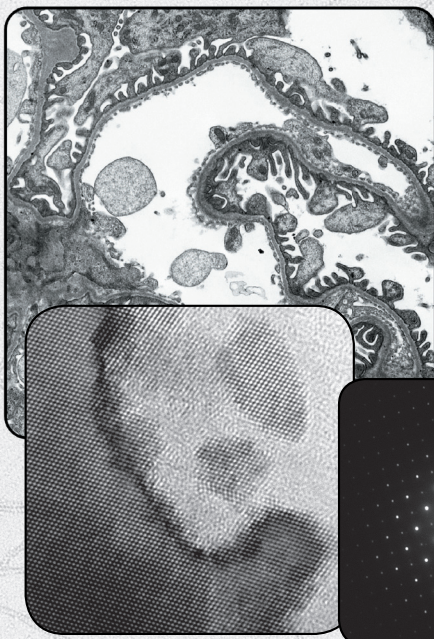


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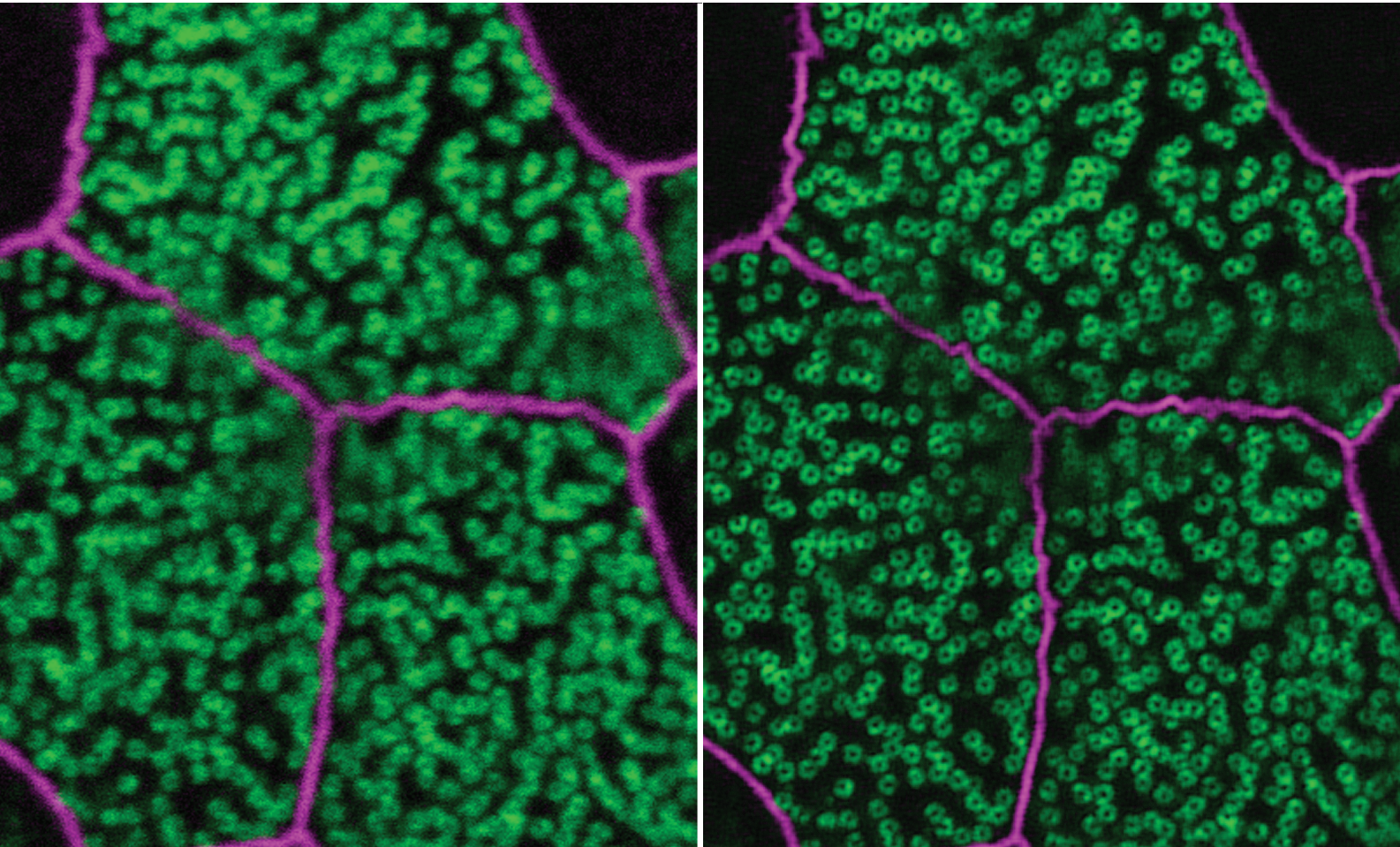
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Sample: Trachea multi-ciliated epithelial cells (Culture)  
Images courtesy of Graduate School of Frontier Biosciences  
and Graduate School of Medicine Osaka University:  
Hatsuho Kanoh, Elisa Herawati, Sachiko Tsukita, Ph.D.

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**TEAM™ Trident: The Complete Materials Characterization System**

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**High resolution EDS data can be collected in a fraction of the time taken using earlier technology.**

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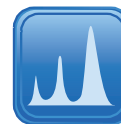
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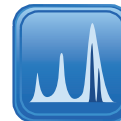
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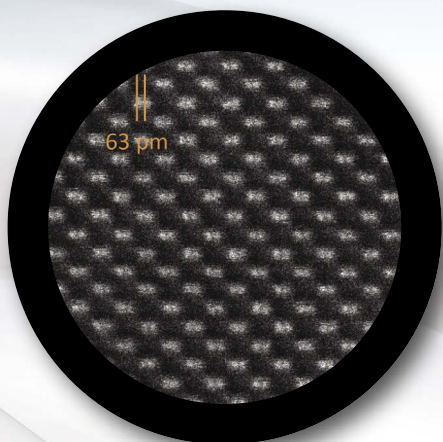
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