

**3rd Annual Washington DC
Focused Ion Beam Users Group Meeting/Workshop**

February 25th & 26th, 2010

**Advanced Measurement Laboratory
National Institute of Standards and Technology, Gaithersburg, MD**

Thursday, February 25th, 2010

8:30 AM **Breakfast & Coffee**

9:00 AM Welcome

Morning

9:10 AM **Stephan Kleindiek**, Kleindiek Nanotechnik
Accelerating sample throughput: The Shuttle Platform for Sample Preparation

9:40 AM **Lynne Gignac**, IBM
Precision, double XTEM sample preparation of site specific Si nanowires

10:00 AM **Tom Zega**, NRL
FIB-SEM as an enabling tool for investigating the chemistry of the early solar system and thermodynamics of ancient stars

10:20 AM **Brian Schuster**, ARL
A Methodology for In-Situ SEM Tension and Compression Testing of FIB Machined Specimens

10:40 AM **Coffee Break**

11:00 AM **Jing Fu**, NIH/NCI
Ion abrasion microscopy of biological cells, promises and challenges

11:20 AM **Michael Marko**, Wadsworth Center
Cryo-FIB preparation for TEM cryo-tomography

11:40 AM **Bin Ming**, NIST
Nano-fabrication, nanometer-scale imaging and metrology with the Orion Scanning Helium Ion Microscope

Lunch

12:00 PM **Lunch**

Poster Session

1:00 PM **Michael Anderson**, NIST
STEM based structural characterization of layered incommensurate nanocomposites
Rocco Cerchiara, Fischione
Sample Preparation of Single and Multi-Phase Materials for Aberration-Corrected TEM/STEM

Bradley Degregorio, NRL

Applications and Advantages of FIB for the Study of Geological and Extraterrestrial Samples

Gavin Murphy, NIH/NCI

Ion Abrasion SEM: New methodological advances and applications to tissue imaging

Doug Wei, Harvard University/Carl Zeiss SMT

3D Imaging of mouse brain using NVision 40 FIB and Amira 3D reconstruction software

Mark Twigg, NRL

Simulation and analysis of electron channeling contrast images (ECCI) recorded using an FEI 600 dual beam FIB equipped with an Oxford Nordlys EBSD detector

John Carpenter, EDAX

Focused Ion Beams for 3D and Surface Preparation in EBSD and EDS

Afternoon

- 2:20 PM **Alex Buxbaum**, FEI
New DualBeam Software for 3D Characterization
- 2:40 PM **Matthew Weschler**, JHT Instruments
HyperFIB! - Why Everyone Will Have One in 5 Years
- 3:00 PM **Cheryl Hartfield**, Omniprobe
Sample repositioning solutions for in situ preparation and analysis
- 3:20 PM **Coffee Break**
- 3:40 PM **Scott Sitzman**, Oxford Instruments
3D EBSD in the FIB-SEM
- 4:00 PM **Jerry Lehman**, Carl Zeiss SMT
3D Reconstruction and Nano Patterning on a Crossbeam Workstation
- 4:20 PM **Mike Marsh**, Visualization Sciences Group
Advanced 3D Visualization and Analysis for FIB data with Avizo
- 4:40 PM Wrap-up of Day 1
- 5:00 PM **Happy Hour** at Dogfish Head (across the street from NIST main gate)

Friday, February 26th, 2010

- 8:30 AM **Breakfast & Coffee**
- 9:00 AM **Lab tours**
Tours will include NIST FIBs, Titan AEM, Helium Ion Microscope, CNST NanoFab Facility
- 10:30 AM **Coffee Break**
- 10:50 AM **Group Discussions**
3D visualization of FIB data sets: Tools & Needs
- 12:00 PM Adjourn

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