

3rd Midwest Imaging and Microanalysis Workshop at Notre Dame

New Trends in In-situ and High Resolution Electron Microscopy for Nanotechnology, Materials and Bio-Sciences

Tuesday, May 17th, and Wednesday, May 18th, 2016

Location: McKenna Hall – **Room 210-214** (lectures) and Stinson-Remick Hall, Room B03 (TEM demo sessions).

Contact for workshop info: Email: Theresa.Bollinger.1@nd.edu, Ph: 1 (574) 631-8251

1st day: May 17th, 2015

8:30 am Registration, Demo sign-up, Poster set-up (McKenna Hall, Upper Atrium).

Session 1. Chair: Sergei Rouvimov (McKenna Hall – Room 210-214)

9:00 - 9:05 am Welcome to Notre Dame, Peter Kilpatrick, Dean of College of Engineering

9:05 - 9:10 am Opening: Bradley Smith, Director, NDIIF

9:10 – 9:40 am “Characterization of Nano-scale Instabilities in Beta Titanium alloys” Robert Williams, Ohio State University

9:40 – 10:10 am “In-situ TEM Study of Materials under Compression”, Kai Sun, University of Michigan

10:10 – 10:40 am “In situ nano-diffraction from liquids using a high-speed direct electron camera”, Pei Zhang & Paul Voyles, University of Wisconsin Madison

10:40 – 11:00 am COFFEE BREAK

Session 2. Chair: Alex Mukasyan (McKenna Hall – Room 210 - 214)

11:00 –11:30 am “Emerging Technologies for Analytical in situ TEM”, Hessam Ghassemi & John Damiano, Protochip

11:30 - 12:00 noon “Using minimal dose to get the maximum information from samples”, Arda Genc, FEI, Inc.

12:00 – 12:30 pm “In-Situ and Operando TEM Investigation of Catalyst Nanoparticles”, Ben Miller, GATAN

12:30 – 1:00 pm “In situ TEM as a powerful tool for material characterization”, Marina Zakhosheva, DENS Solutions, Inc

1:00 -2:30 pm LUNCH and POSTER SESSION (McKenna Hall –Posters – Upper Atrium

Luncheon – CDA)

2:15 pm-2:30 pm Awards and Prizes announcement

Session 3. Chairs: Matt Leevy and Bradley Smith (McKenna Hall – room 200-204)

2:30 pm-2:45 pm NDIIF Award Winner 1 – EM for Bio Application (TBD)

2:45 pm-3:00 pm NDIIF Award Winner 2 – EM for Materials Application (TBD)

3:00 pm-3:30 pm “Characterizing working catalysts with electron and photon probes”, Eric Stach, Brookhaven National Laboratory

3:30 pm- 4:00 pm “Microstructural Evolution in Transition-metal-oxide Cathode Materials for Lithium-Ion Batteries”, Dean Miller, Argonne National Laboratory

4:00 pm- 4:20 pm “Tomography: What you see depends on how deep you go”, Mark Kelsey, Bruker

4:20 pm- 4:40 pm “Utilizing TEM Sputtered Solid-state Sub-nanometer Pore to Detect the Sequence of Amino Acid Quadromers in Protein Molecules”, Zhuxin Dong and Gregory Timp, Notre Dame.

4:40-5:10 pm MWIM and NDIIF Business meeting

6:00 pm DINNER for speakers - The Mark Dine & Tap
1234 Eddy Street, Suite 111, South Bend, IN 46617
Phone: 574-204-2767

2nd Day: May 18th, 2016 In-situ TEM Demo Session (Stinson-Remick Hall, Rooms B03).

9:00 am – 12:00 noon **Demonstration of Heating/Biasing holder**, Marina Zakhosheva, DENS Solutions

12:00-1:00 pm **Lunch/Discussion Female Students in Microscopy: pursuing a career in TEM research**, Mina Asghariheidarlou, NDEMC President, and Marina Zakhosheva, DENS Solutions

1:00 pm – 5:00 pm **Demonstration of Heating/Biasing holder (cont.)**, Marina Zakhosheva, DENS Solutions

Note: A detailed schedule will be provided at the registration.

For additional workshop information and campus map visit: <http://ndiif.nd.edu>

Sponsors: FEI, Gatan, Bruker, Protochip, DENS, NDIIF, ND Energy, ND Nano, EE Department, CBEDepartment, ND Research Office, ND College of Engineering, ND College of Science