Nanoelectrical AFM Characterization

A Bruker Workshop at the University of Utah

with Hands-On Demonstrations of the Bruker Dimension Icon AFM

January 13th, 2016 | University of Utah Surface Analysis Lab, Sorenson Molecular Biotechnology Building (SMBB), Room 2650

Bruker and the **University of Utah Nanofab** invite you to join us for technical presentations and live demonstrations of the Dimension ICON AFM with PeakForce KPFM and PeakForce TUNA. This free event will focus on new nanoelectrical capabilities (PeakForce KPFM™ and PF-TUNA). These technological innovations are revolutionizing how atomic force microscopy is being used in materials research.

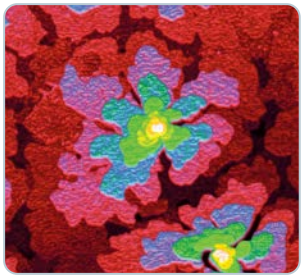
WORKSHOP AGENDA

Wednesday, January 13th (Sorenson, Rm 2650)

10:00 - 10:30 **Continental Breakfast** *Help us plan the right amount of food by registering online.*

10:30 – 11:00 **Introduction to PeakForce Tapping Modes** – Drew J. Griffin, Sales Manager: Rocky Mountains and SoCal Region, Bruker

This revolutionary imaging mode feeds back directly to the peak tip, sample interaction force, resulting in the highest resolution images available for both soft and hard materials with very little tip or sample damage.



11:00 – 12:00 **Nanoelectrical Characterization Techniques using AFM** – Senli Guo, PhD., Sr. Applications Scientist, Bruker

Using AFM to explore the nanomechanical and nanoelectrical properties of materials, specifically conductivity, surface potential, capacitance and resistance on a nanometer scale. We will discuss the following AFM modes and explore applications where these modes can enhance research:

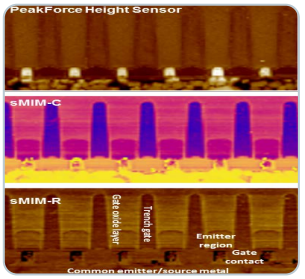
PeakForce TUNA - Highest sensitivity conductivity measurements for all sample types – Using PeakForce Tapping® it is possible to measure conductive pathways on fragile or delicate samples – expanding the capability of conductive AFM (C-AFM).

PeakForce KPFM - Kelvin Probe Force Microscopy to explore the material work function or surface potential.

sMIM - Scanning Microwave Impedance Microscopy to explore the capacitance and resistivity of conductive, resistive and semiconductor materials.

SCM - Scanning Capacitance Microscopy to explore dopant profile of semiconductor materials**.**

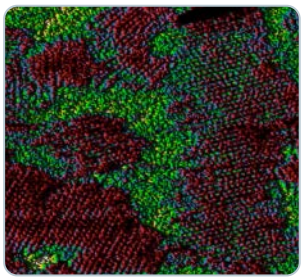
SSRM - Scanning Spreading Resistance Microscopy to explore the 2D carrier concentration of semiconductor materials.



12:00 – 1:00 **Lunch**

1:30 – 5:00 **Hands-on Demonstrations of the Dimension Icon**

Attendee samples will be imaged as time allows. To arrange sample imaging, please contact Drew Griffin at the email below.



COMPLIMENTARY WORKSHOP

REGISTER ONLINE: www.bruker.com/BNS-NA_workshops

SCHEDULE HANDS-ON TIME WITH INSTRUMENT: Drew.Griffin@bruker.com