

Free Bruker Atomic Force Microscopy Workshop

*at the Université de Montréal - Pavillon J.-A. Bombardier, 2900 boul. Édouard Montpetit
 September 18-19, 2012*

Bruker Nano Surfaces Division and Systems for Research is grateful to Dr. Antonella Badia and Mme Patricia Moraille for providing the resources and space to host our free AFM workshop. Space is limited. Registration is on a first-come basis. Sign up early!

September 18, 2012

9:00 Continental Breakfast & Welcome
10:00 – 11:15 Technical Talk (Location: room 1035)**

Atomic Force Microscopy: A Unique Tool for Probing Mechanical Functions for Biological Processes

James Shaw, Ph.D.

Life Sciences Applications Engineer, Bruker

Physical properties including structure such as shape, size, and form and mechanics such as strength, stiffness, and interaction forces play crucial roles in biological functions and processes. Quantification of this information at various length scales is necessary because of the heterogeneous and complex nature of biologics. Atomic force microscopy (AFM) is a unique research tool because of its abilities to perform measurements with both high spatial and force resolution in fluid under physiological conditions. In this talk, Bruker will present the basic theories behind AFM, bio-applications in high-speed AFM, as well as practical guides to quantitative mechanical measurements and analysis of various biological samples ranging from a single membrane protein to a single cell. While the key experiments presented will encompass research in microbiology, pain mediation, and cancer, the methodology has also been employed in other disciplines such as pathogenesis, stem cell differentiation, cell signaling, and more.

10:15 – 12:30 AFM Short Live Demo
12:30 – 13:30 Lunch Break
13:30 – 18:00 AFM Open House (Location: room 3078)**

Join us for a free-flowing open house where you can:

- Get hands-on time with your samples or students on our instruments.



BIOSCOPE
catalyst
— ScanAsyst

*Integrated AFM and Light
 Microscope is Ideal for
 Cell Mechanics Research*

Bruker AFMs for Life Science Research.

- Functional Integration of Optical and Atomic Force Microscopy with MIRO Software.
- Lowest Noise Single Molecule Force Spectroscopy Measurements.
- ScanAsyst Mode for Superior Imaging Performance and Ease of Use.
- PeakForce QNM for Fast, High Resolution Mapping of Quantitative Nanomechanical Properties.
- Environmental Control for Extended Duration Studies.

September 19, 2012

9:00 – 17:00 AFM Open House (Location: room 3078)**

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****NOTE:**

- To ensure that Bruker provides sufficient refreshment for the technical talk and/or instrument time for your sample measurements (~ 2 to 3 hours per session) at the open house, please RVSP to Jeff@SFR.CA
- The open house is free but is first-come-first-serve registration. Walk-in could be available if there is space after pre-registration.
- Please also contact Jeff for AFM sample preparation questions