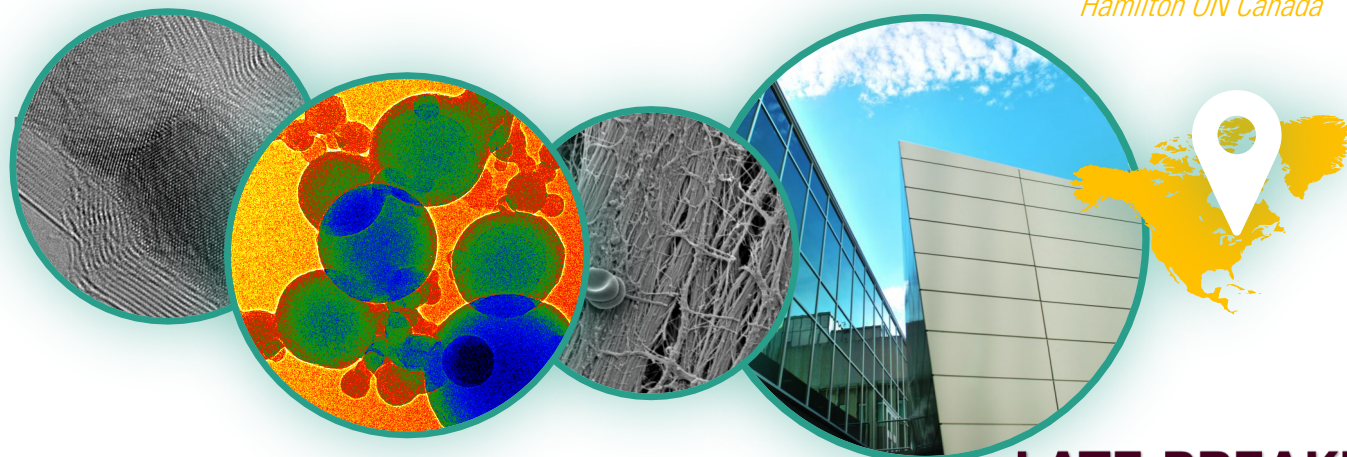


# MICROSCOPY CHARACTERISATION OF ORGANIC INORGANIC INTERFACES

June 27-28, 2023

McMaster University  
Hamilton ON Canada



**LATE-BREAKING  
ABSTRACTS  
MAY 31<sup>st</sup>!**

Bringing together materials and life science microscopy experts to highlight the latest achievements, opportunities and outstanding challenges in probing beam-sensitive and hybrid materials and their interfaces.

## TOPICS INCLUDE:

TEM tomography, 4D-STEM, super resolution, atom probe tomography, liquid phase and in situ EM, cryo-TEM, low-voltage methods, machine learning for image processing, X-ray microscopy, 3D FIB-SEM, ...



REGISTER: <https://ccem.mcmaster.ca/events>

## CONFIRMED SPEAKERS:

David McComb, Ohio State  
Lara Estroff, Cornell  
Paul Voyles, U Wisconsin-Madison  
Deborah F. Kelly, Penn State  
Natalie Reznikov, McGill  
Robert Hovden, U Michigan  
Derk Joester, Northwestern  
Jose Moran-Mirabal, McMaster  
Aurélien Gourrier, CNRS  
Liza DiCecco, McMaster  
Layla Mehdi, U Liverpool  
Sergei Kalinin, U Tennessee  
William Landis, UCSF  
Peter Ercius, LBNL  
Alessandra Carriero, CCNY



## MONDAY JUNE 26<sup>th</sup> – OPTIONAL PRE-CONFERENCE DEMOS

### OPTIONAL WORKSHOPS – CCEM & CALM, ABB Basement

13:00 – Workshop #1: Image Processing Part 1

15:00 **ORS Dragonfly**, Nicolas Piché

13:00 – X-Ray Microscopy Demo

15:00 **CCEM Staff**, Pardis Mohammadpour & Chris Butcher

14:00 – Confocal/CLEM Demo (TBD)

15:00 **CALM Staff**, TBD

15:00 **Break**

15:00 – Workshop #1: Image Processing Part 2

17:00 **ORS Dragonfly**, Nicolas Piché

15:00 – Laser-FIB Demo

16:00 **CCEM Staff**, Travis Casagrande

16:00 – Plasma-FIB and Cross-Beam Demo

17:00 **MSE Faculty**, Tengtang Tang

18:00 **WELCOME RECEPTION**  
The Pheonix





## TUESDAY JUNE 27<sup>th</sup> - PROGRAM

8:30	Registration Opens
MORNING SESSION – MDCL 1110	
9:00	<b>David W. McComb</b> , Ohio State University, USA
9:40	High-speed low-dose 4D STEM of orientation domains in an anisotropic molecular glass <b>Paul Voyles</b> , University of Wisconsin-Madison, USA
10:20	Techno-bite talk: JEOL
10:30	Break
11:00	<b>Layla Medhi</b> , University of Liverpool, UK
11:40	Flash Poster Talk
11:50	Flash Poster Talk
12:00	Flash Poster Talk
12:10	Flash Poster Talk
12:20	LUNCH The Pheonix Crafthouse & Grill
AFTERNOON SESSION - MDCL 1110	
14:00	Correlative Super-Resolution Light-Electron Microscopy Reveals Nanostructure of Cellulose Fibres <b>Jose Moran-Mirabal</b> , McMaster University
14:40	Gradients and Interfaces in Acantharea Spicules <b>Derk Joester</b> , Northwestern University, USA
15:20	Techno-bite talk: Gatan
15:30	Break
16:00	Machine learning and automated experiment in scanning transmission electron microscopy <b>Sergei Kalinin</b> , University of Tennessee, USA (virtual-talk)
16:40	Techno-bite Talk: Protochips
16:50	Advancing the “Real-time Revolution” in Molecular Microscopy <b>Deborah F Kelly</b> , Pennsylvania State University, USA
17:30	RECEPTION & POSTER SESSION
20:00	Alumni Memorial Hall – Great Hall



## WEDNESDAY JUNE 28<sup>th</sup> - PROGRAM

8:30	Registration Opens
<b>MORNING SESSION – MDCL 1110</b>	
9:00	The Role of Mineralization in Biology and the Basis of Collagen-Mineral Interaction <b>William Landis</b> , UCSF, USA
9:40	Biomineralogical Signatures of Pathological Mineralization <b>Lara A. Estroff</b> , Cornell University, USA
10:20	Techno-bite talk:
10:30	<b>Break</b>
11:00	The ultrastructure of bone in 3D: A twist of twists <b>Natalie Reznikov</b> , McGill University, Canada
11:40	Multiscale fracture resistance of Brittle Bone <b>Alessandra Carriero</b> , McGill University, UK
12:20	Techno-bite Talk
12:20	<b>LUNCH</b> The Pheonix Craffhouse & Grill
<b>AFTERNOON SESSION - MDCL 1110</b>	
14:00	TBD <b>Robert Hovden</b> , University of Michigan, USA
14:40	TBD <b>Aurélien Gourrier</b> , CNRS, France
15:20	Techno-bite talk:
15:20	<b>Break</b>
15:50	TBD <b>Peter Ercius</b> , Lawrence Berkeley National Laboratory, USA (virtual-talk)
16:30	Real-Time Resolution of Organic-Inorganic Interface Mineralization Events Revealed Using Liquid Electron Microscopy <b>Liza DiCecco</b> , McMaster University, Canada / Pennsylvania State University, USA
17:10	<b>CONCLUDING REMARKS, STUDENT AWARDS</b>





## CAMPUS MAP:

