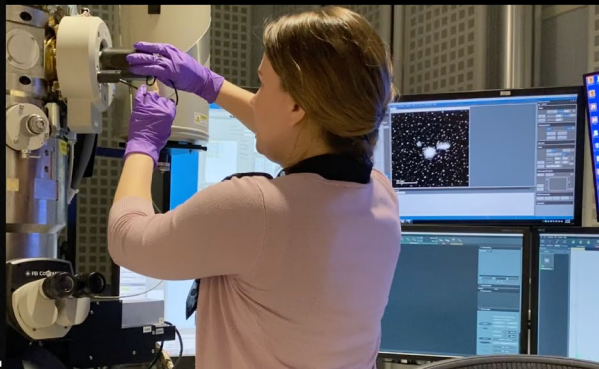
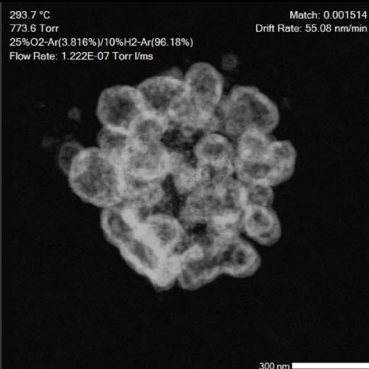


Beyond the Basics: Advanced In-Situ Microscopy Techniques and Applications



Program

May 9 - 10, 2024

McMaster University
CIBC Hall, MUSC 319



Thursday, May 9, 2024

Time	Presenter	Title
9:30		Check-in
10:00		Welcome and Housekeeping
10:15	Yao Yang, Cornell University	Operando Electrochemical Liquid-Cell STEM (EC-STEM) at Dynamic Catalyst Interfaces
11:00	Haimei Zheng, Lawrence Berkeley National Laboratory	Unveiling of nanoscale materials transformations via in-situ liquid phase TEM (online)
11:30	Ahmed Abdellah, CCEM	Impact of Palladium/Palladium Hydride Conversion on Electrochemical CO ₂ Reduction via In-Situ Transmission Electron Microscopy and Diffraction (online)
11:45	Madeline Dressel Dukes, Protochips	Advances in in situ electrochemical measurements within the transmission electron microscope
12:00		Lunch
13:15	Qian Chen, University of Illinois at Urbana-Champaign	Electron Videography and Machine Learning of Soft Matter
13:45	Kholoud Salem, McMaster University	In-Situ Transmission Electron Microscopy to Understand Electrochemical CO ₂ Reduction Processes on Binary Ag-Alloyed Zn Dendrite Catalysts under Operating Conditions
14:00	Adam Hitchcock, McMaster University	In Situ Studies of Copper Catalysts for Electrochemical CO ₂ Reduction by Soft X-ray Spectro-microscopy
14:30		Break
15:00		Tour/Demos (schedule provided individually)
16:30		Reception/Demos/Posters
18:00		Wrap-up

Friday, May 10, 2024

Time	Presenter	Title
9:30	Check-in	
9:50	Welcome and Housekeeping	
10:00	Sarah Haigh, University of Manchester	Probing dynamics of single atoms and nanoparticle catalysts using in situ STEM imaging
10:45	Jennifer McConnell, Protochips	Using a residual gas analyzer to study gas-phase structure-function relationships within the transmission electron microscope
11:00	Kathryn Grandfield, McMaster University	Liquid TEM for applications in biomineralization
11:15	Zahra Teimouri, McMaster University	Studying the reduction pathway of Cu promoted Fe catalyst supported on biomass-based carbon material using in-situ TEM
11:30	Robert Klie, University of Illinois at Chicago	Studying the reduction pathway of Cu promoted Fe catalyst supported on biomass-based carbon material using in-situ TEM
12:00	Lunch	
13:15	Jane Howe, University of Toronto	An in situ STEM-EELS Study of the Lattice Thermal Expansion Effects of Indium Oxide Catalysts
13:45	Bhavesh Kamaliya, McMaster University	FIB induced Self-Organization, Kirigami and Localized Defect Engineering on vdW Materials
14:00	Madeline Dressel Dukes, Protochips	Automated measuring and tracking of electron dose during in situ TEM experiments
14:15	Break	
14:45	Panel Discussion / Q&A: Beyond the Basics: Advanced In-Situ Microscopy Techniques and Applications	
15:30	Closing	