

Transient Phenomena 2023

 Building 8600, Iran Thomas Auditorium
 Nov. 7th-8th, 2023

Day 1, Tuesday, November 7th, 2023

Time	Event	Speaker & Affiliation
8:00 – 9:00 am	Checking in and Breakfast	Building 8600, Visitor Center/ Atrium
	Session chair	Christina Hoffmann
9:00 am	Opening Remarks	Karren More (CNMS/ORNL) and Jon Taylor (NSD/ORNL)
	Introduction to the Center for Nanophase Materials Sciences	Karren More (CNMS/ORNL)
9:30 – 9:55 am	Model Membranes as Platforms for Understanding Biological Memory	John Katsaras (ORNL)
10:00 – 10:25 am	Time resolved SANS studies	Volker Urban (ORNL)
10:30 – 10:55 am	Coffee Break and Group Photo	All
11:00 – 11:25 am	Dynamic studies of electrochemical processes with neutron reflectometry	Mathieu Doucet (ORNL)
11:30 – 11:55 am	Measuring Dynamics in Energy Materials with Time-Resolved Atomic Force Microscopy	<i>Rajiv Giridhargopal (University of Washington)*</i>
12:00 – 1:00 pm	Working Lunch: Poster discussions, “Neutrons for discovery”	Volker Urban (ORNL)
	Session chair	Mathieu Doucet (ORNL)
1:00 – 1:25 pm	The pursuit of nanoscale dynamics to enable neuromorphic paradigms	<i>Peter Maksymovych (ORNL)*</i>
1:30 – 1:55 pm	Exploring and manipulating metastable states in ferroelectrics: tailoring topological defects with reinforcement learning and automated	Rama Vasudevan (ORNL)

ORNL IS MANAGED BY UT-BATTELLE, LLC FOR THE US DEPARTMENT OF ENERGY

	experiments	
2:00 – 2:25 pm	Exploring Dynamic Reaction Mechanisms and Kinetics through in situ STEM	Raymond Unocic (ORNL)
2:30 – 2:55 pm	Simulating ultrafast dynamics of nanomaterials under focused electron/ion beam irradiation	David Lingerfelt (ORNL)
3:00 – 3:30 pm	Break	All
	Session chair	David Lingerfelt (ORNL)
3:30 – 3:55 pm	"Probe Exotic Quantum States"	Alan Tennant (University of Tennessee Knoxville)
4:00 – 4:25 pm	Adding a time dimension to neutron inelastic scattering	Collin Broholm (Johns Hopkins University)
4:30 – 4:55 pm	Ultrafast Electron Microscopy to Measure Sub-Picosecond Carrier Dynamics in Semiconductors	Suhas Kumar (Sandia National Laboratory)
5:00 – 5:10 pm	Summary of the 1 st Day	Christina/Ganesh/Veith
5:10 – 7:00 pm	Working Dinner and Poster Session: Neutrons and Science Posters	All

Day 2, Wednesday, November 8th, 2023

Time	Event	Speakers & Affiliation
8:00 – 9:00 am	Breakfast	Building 8600, Atrium
	Session chair	Panchapakesan Ganesh
9:00 – 9:25 am	An overview of non-equilibrium energy transfer for efficient reactions (NEETER) EERC FacT-EFRC	Zili Wu (ORNL) Valentino Cooper (ORNL)
9:30 – 9:55 am	Non-equilibrium atomic-scale synthesis of novel quantum and energy materials by pulsed laser epitaxy	Ho Nyung Lee (ORNL)
10:00 – 10:25 am	Phase Transitions and Equilibria in SrCoO _x Heterostructures.	Dillon Fong (ANL)
10:30 – 10:55 am	Coffee Break	
11:00 – 11:25 am	Growing against the grain: sub-picosecond snapshots at the nanoscale	Aaron Sternbach (Columbia University)
11:30 – 11:55 am	Thinking outside the sample can: container-less insights into non-equilibrium and transient states under extremes	Dante Quirinale (ORNL)
12:00 – 1:00 pm	Working Lunch: "Probing single atom dynamics in the STEM"	Kevin Roccapriore (ORNL)*
	Session chair	Gabriel Veith
1:00 – 1:25 pm	Understanding Ge ST12 and its Metastability through Measurement of its Phonon Density of States	Garrett Granroth (ORNL)
1:30 – 1:55 pm	Chain Growth Kinetics of Conjugated Polymers on Ferromagnetic Nanoparticles Investigated by SANS	Lilin He (ORNL)
2:00 – 2:25 pm	"Title"	Apurva Mehta (Stanford University)

ORNL IS MANAGED BY UT-BATTELLE, LLC FOR THE US DEPARTMENT OF ENERGY

2:30 – 2:55 pm	Powder diffraction is more powerful than you imagined	Peter Khalifah (Stony Brook University and Brookhaven National Laboratory)
3:00 – 3:15 pm	Coffee Break	
3:15 – 3:45 pm	“Title”	Mali Balasubramanian (ORNL)
3:45 – 5:00 pm	Accelerator Tour	Sarah Cousineau (ORNL)
5:00 – 5:10 pm	Summary of 2 nd day	Christina/Veith/Ganesh



OAK RIDGE
National Laboratory

AGENDA

ORNL IS MANAGED BY UT-BATTELLE, LLC FOR THE US DEPARTMENT OF ENERGY