



NRF User of the Month!
Brandon Bohanon, September 2024

In appreciation for being an exemplary user with outstanding compliance to safety protocols and engagement with NRF staff and users to create a better safety culture.

My work focuses on characterizing the interactions between nano-sized, radiation-induced precipitates and dislocation lines. After performing nano-indentation, I make TEM liftouts from unirradiated and irradiated specimens in deformed and undeformed regions. In the TEM, I look at dislocation structures to understand the pinning behavior of the precipitates.

Congrats to our September User of the Month

The NRF staff has selected Brandon Bohanon as the September user of the month. We would like to thank Brandon for his consistent attention to protocol and safety while working in the facility, his punctual and diligent use of the e-buddy after hours communication system, and willingness to help out with NFMC tours and events.

TEM Talk Here at NRF

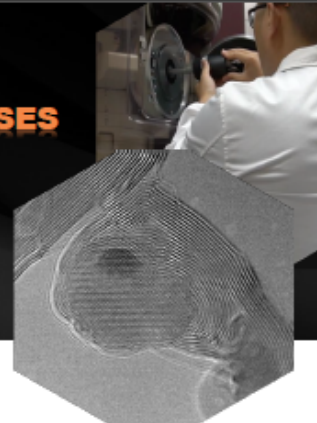
The talk below is scheduled to take place on Thursday November 14th in the NRF conference room (115) at 3pm. Click the image or scan the QR code to register to attend the talk.

PROTOCHIPS

IN SITU TEM: STUDYING DYNAMIC PROCESSES AT THE NANOSCALE

Thursday, November 14th, 2024
3:00 pm to 4:00 pm

In-Person at the Conference Room
University of Florida



Exploring applications of In-Situ TEM.

Join us for a talk on the innovative use of in situ TEM studying dynamic processes at the nanoscale. Discover how this technology enables researchers to fine-tune materials for higher energy capacity, operating lifetimes, and more efficient performance by understanding how environment affects a materials atomic scale foundation.

- **Energy Storage/Analysis:** Visualize nanoscale processes in solid state and liquid electrochemistry applications such as lithium, sodium, calcium, zinc, and other batteries during cycling. Understand degradation, SEI layer formation, and dendrite pathways in real-time to enhance battery safety, efficiency, and lifespan.
- **Materials Science:** Observe the growth of nanoparticles, polymers, colloids, and nanowires at the nanoscale. Track morphological evolution to develop precise mechanistic models and optimize material properties, chemistry and nanoscience.
- **Catalysis, Hydrogen and Fuel Cell:** Study key reactions in electrocatalysis like OER, CO₂RR, and HER at the nanoscale. Recent publications in gas phase studies that enable high pressure and high temperature analysis of catalysts and supports, solar cells and fuel cells. Monitor changes in crystallinity, morphology, particle size, and chemical dispersion to guide future developments.

From sample prep to publication, combining tools for a complete solution for in-situ TEM.

INTRODUCING: TRITON AX
Heating & Cooling Liquid Electrochemical System for TEM

REGISTRATION LINK AND QR CODE:
<https://forms.office.com/r/2QqEqPgFnh>



Virtual PVD Course

The Micro/Nano Fabrication Center (MNFC) of the Princeton Materials Institute (PMI) is excited to offer with Angstrom Engineering a one-day short course on Physical Vapor Deposition, on Tuesday, November 12th, both in-person at Princeton University, as well as remotely. Please see the link below for details and registration.

<https://www.eventbrite.com/e/physical-vapor-deposition-pvd-of-thin-films-tickets-1048204416627>

Upcoming RSC Events:

- [NRF Virtual Open House](#) - Wednesday November 6th
- **NRF closed - AHA Only - Monday November 11**
- [Protochips Seminar](#) - Thursday November 14th - 3pm - NRF 115
- Game Night - NRF 115 - Thursday November 14th at **5pm** [RSVP](#)
- **NRF closed - AHA Only - Thursday Nov 28 and Friday Nov 29.**
- User Advisory Committee Meeting - [ZOOM](#) + **NRF115** - Thursday 12/5 at Noon
- NRF Cleanroom Closure: December 16 - January 1
- Holiday Break - NRF Closed (NO AHA) - December 25 - January 1

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- [Ongoing](#): New publication? Data collected at the RSC? [Click to tell us!](#)
 - Still writing? Check out our new easy acknowledgement [templates](#).
- [Ongoing](#): **Submit Photos for the Annual Nano Day Image Contest: You can submit your image for the 2024 Contest [HERE](#)**

Safety Side Note:

Prepare for your process before it even begins.

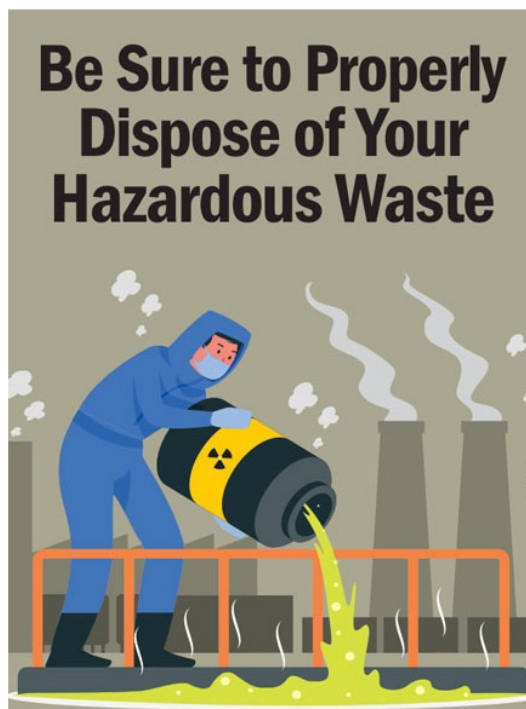
Locate and position hazardous waste containers, ensure there is space for the waste you will generate

Keep waste containers closed until needed

Rinse contaminated glassware and add rinse to waste containers

Clean up workspace when finished

Consult staff if you have questions or concerns. Report safety violations promptly.



ZOMBIES vs. Grad Students

JORGE CHAM © 2015



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