



Issue 66

Stay informed about what's happening in the nanoHUB community by exploring upcoming events and new resources.

Upcoming Events

Modeling of P-N junction devices using various materials for photovoltaic applications under different operating environments

Date and Time

Friday, July 7, 2023 from 1:00 - 1:30 PM EDT

Join us for the upcoming thirty-minute webinar, *Modeling of P-N junction devices using various materials for photovoltaic applications under different operating environments*. During the tutorial, Dr. Sayan Roy will talk about the nanoHUB tool, **ADEPT** (A Device Emulation Program and Tool). This tool is used for modeling and simulating photovoltaic devices using a range of different materials and structural configurations.

Dr. Roy will briefly talk about some other tools and software which can be used to obtain the electronic and optical properties of materials to be used in photovoltaic applications. Specifically, he will talk about Quantum ESPRESSO for calculating electronic and optical properties of materials, and **Stanford Stratified Structure Solver (S4)** for modeling optical features of multi-layer devices.

[Access Resource](#)

Science Gateways 2023 Annual Conference

Call for Participation

Join the Science Gateways Community for their annual Gateways Conference, held Monday, October 30 - Wednesday, November 1, 2023 in Pittsburgh, PA.

SGX3

Gateways 2023 is an opportunity for people working with science gateways to showcase their ability to teach, empower and engage research, and provide technologies to various communities. There will be diverse options for sharing work and networking. The format includes tutorial sessions, presentations, panels, posters, demos, and a BYOP - Bring Your Own Portal.

Submissions of papers and abstracts are currently being accepted. The deadline for presentations, demos, panels, and tutorials is now June 30, 2023, and BYOP and poster submissions are due August 7, 2023. Find out more, including submission timeline and instructions by visiting sciencegateways.org/gateways2023-cfp.

FacultyHack@Gateway2023

The Faculty Hackathon at Science Gateways 2023 gives faculty the opportunity to develop their high performance computing skills and pass them on to their students.

Faculty teams will adapt High-Performance Computing (HPC) tools for use in their courses. They will leave with "ready-to-go" course outlines, supporting data, and identified resources. Each team will be assigned a technical mentor to help with this process. Teams completing all four challenges receive a \$1000 honorarium.

The deadline to apply is September 15, 2023. Learn more and apply here: sciencegateways.org/faculty-hackathon-2023.

New on nanoHUB

Let's Talk Python: How to Explore Any Dataset in Python

If you are interested in becoming a scientist, engineer, or analyst who often works with data, [this workshop](#) is for you! In this resource, UC Berkeley junior, **Trinity Chung**, guides you through how to explore any dataset using Python and the pandas library in nanoHUB. This workshop is aimed at the beginner- so it is a great way to get started.

For more background, view Trinity's [earlier tutorial on Python](#) in nanoHUB.

This tutorial will introduce you to the basics of using Jupyter Notebooks and Python in nanoHUB.

53rd Midwest Theoretical Chemistry Conference

nanoHUB proudly sponsored the 53rd Midwest Theoretical Chemistry Conference (MWTCC) at Purdue University in early June. In these recordings of the nanoHUB session, you will learn how to get started using chemistry resources in nanoHUB, learn some interesting nanoHUB history, and view several simulation tools and resources developed by Prof. George Schatz's group at Northwestern University. You will also learn about innovative ways to build and use new nanoHUB Jupyter Notebook Tools and research workflows from Prof. Mike Reppert at Purdue University. If you are interested in using nanoHUB for chemistry, be sure to check out these talks!

- [Exploring Chemistry Resources in nanoHUB](#) by Amy Joo at nanoHUB
- [A Summary of Chemistry Teaching Tools on nanoHUB Developed at Northwestern University](#) by Prof. George Schatz at Northwestern University
- [nanoHUB Jupyter Notebooks for Research and Education](#) by Prof. Mike Reppert at Purdue University

3D Printed Electronics: A Primer

In [this presentation](#) by Frank Silva of [The Micro Nano Technology Education Center](#), you will learn about additive manufacturing (AM), printed electronics and a new area called AM electronics.



The presentation concludes with information about opportunities for workforce and skill-set development in the area of chip design and manufacturing.

**Do you have a suggestion or nanoHUB success story you'd like to share?
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