

2023 PARADIM REU Diversity connection

Jayson Johnson, a rising sophomore and [Karsh STEM Scholar](#) at Howard University participated in the [2023 PARADIM REU Summer Program](#) at PARADIM's Bulk Crystal Growth Facility at Johns Hopkins University. During the 10-week program Jayson worked hand in hand with JHU graduate student Thomas Whoriskey on a project entitled "*Incorporating machine learning into free energy calculations to aid in the synthesis of rare earth nickelates.*" At the end of the summer, Jayson presented the result of his effort, the online tool [Ternary Oxide Synthesis Predictor with Integrated Reactant Exploration](#).

Jayson has presented on his research at

- The [Leadership Alliance National Symposium](#) July 28-30, 2023, Hartford CT.
- **3rd place** at the [ASME \(The American Society of Mechanical Engineers\)](#) International Mechanical Engineering Congress & Exposition ([IMECE 2023](#)) Oct. 29 – Nov. 2, 2023, New Orleans, LA, as part of the Undergraduate Research and Design Expo Student Poster Competition.
- The [Annual Biomedical Research Conference for Minoritized Scientists](#) (ABRCMS) November 15-18, 2023, Phoenix AZ.

During his REU, Jayson participated in several professional development sessions that focused on science communication and presenting science research and has continued working with the bulk facility to further refine his tool.

Jim Overhiser, PARADIM Director of Education and Outreach

2023 PARADIM REU Participant: Jayson Johnson, Howard University



Karsh STEM Scholar | Vivien Thomas Scholar | Howard University '26 | Mechanical Engineering | Math and Computer Science Double Minor

