NSF Science Nation comes to PARADIM

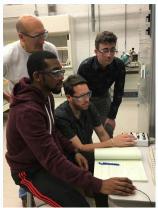
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Julie Nucci & Jim Overhiser, Cornell University









The NSF will feature Josh Goldberger, a PARADIM user, in an upcoming video on quantum materials. On June 12, 2019, the <u>PARADIM</u> Bulk Crystal Growth facility at Johns Hopkins University hosted Kate Tobin, Executive Producer of **NSF** <u>Science Nation</u>. Tobin spent the day filming at the PARADIM facility and interviewing PARADIM PI Darrell Schlom, W. Adam Phelan, the Associate Director of the PARADIM Bulk Crystal Growth facility, and Josh Goldberger.

Goldberger leads the research team at Ohio State University that found the crystal NaSn₂As₂ to be goniopolar—a novel property where the apparent sign of the charge carriers in a single-band system, positive (holes) or negative (electrons), depends on the direction in which the carriers move in the crystal. Using PARADIM, Goldberger and his collaborator have discovered a new material with the world's strongest goniopolar effect.

Goniopolarity may enable future explorations of complex transport phenomena that lead to unprecedented device concepts. This has potential applications for semiconductor technology and thermoelectric applications.

The Science Nation video is scheduled for release in late fall 2019.



