Technical Assistance Request

SunnyVolt, Stanford University
Highly Efficient Flexible TMD Tandem Solar Cells

We at *SunnyVolt* have been mainly relying on Stanford Nano Fabrication Facility (SNF) and Stanford Nano Shared Facilities (SNSF) for our solar cell fabrication and characterization processes. American-Made solar prize helps (partially) cover our SNF and SNSF equipment usage cost, which is approximately $100,000 per year.

In addition, access to standard and custom-built solar cell and material characterization instruments available at national laboratories such as National Renewable Energy Laboratory (NREL) will enable us to systematically characterize the quality and reliability of our in-house grown materials and developed solar cells. Specifically, if possible, we would like to gain access to the following characterization equipment after joining the American-Made network:

- Photoluminescence spectroscopy
- Minority-carrier lifetime spectroscopy
- Reflectance spectroscopy
- Scanning defect mapping
- Accelerated testing (rapid thermal cycling, high-intensity UV illumination)
- Failure analysis for PV reliability
- Indoor light simulator (for internet-of-things and wearable electronics applications)
- Transmission electron microscopy

Mentorship from American-Made network, particularly solar industry entrepreneurs, is another immensely helpful resource for our currently academic-heavy team. We would like to add a new team member in the future with operational solar experience. American-Made network is a great place to find our future co-founder and advisors.