

Project Summary

Optigon is a spinout company from one of MIT's largest solar research groups, the TATA-MIT GridEdge Solar Research Program. Our team is focused on developing characterization tools that accelerate research and enable a fundamental understanding of the mechanisms relevant to efficiency and stability of perovskites. We intend to **utilize novel, high-throughput characterization techniques** to identify correlations between **rapidly measured material properties** and relevant photovoltaic performance metrics. This approach will allow for the development of performance forecasting models that can be used to accurately predict the performance ceiling of perovskite devices after each step of their fabrication process. As a result, we will **shorten the feedback cycle** when developing new perovskite formulations and architectures while also providing **a foundation for in-line manufacturing metrology systems and process control**.

Accelerating perovskites through rapid, predictive, and contactless characterization tools.

Key Milestones & Deliverables

Device Performance:	Demonstrate ability to produce high-quality perovskite devices consisting of a 25 cm² area with PCE >23% and stability of T80 at 85/85 for >5,000 hours
Infrastructure:	Build a rapid optical characterization tool with a controlled atmosphere and automated storage and measurement system

