**[Technical Research Proposal Title]**

*This document is intended to serve as a template only for the technical research proposal portion of the PARADIM proposal submission package. To access the PARADIM project proposal sheet, instructions on Principal Investigator (PI) curriculum vitae submission, and other helpful proposal writing tips please visit* [***http://paradim.org/project\_proposals***](http://paradim.org/project_proposals)*. The technical research proposal should be limited to THREE pages (includes graphics), plus references. It should conform to standard NSF font/margin requirements. (1” margins, 11-point Times New Roman). Please remove all instructional text (leave the bold headings) before submitting the technical research proposal. The final submitted technical research proposal should be written in light of the PARADIM proposal review criteria. Namely, it should specifically address the bold headings below.*

 *V2. LCR 9/20/2018*

**Scientific Opportunity, Approach, and Significance**:

Provide a synopsis on the importance of the research. Please provide details of the experimental/computational plan as well as any anticipated issues with the materials system and how you expect to address them.

**Your expertise in scientific domain of proposed research (Expertise in equipment and software operation will be supplied by PARADIM staff as necessary); Also, results of your prior PARADIM related work (if any)**:

Provide results of preliminary investigations including but not limited to materials synthesis, structural and compositional characterization, physical properties measurements, etc performed at your home institution and PARADIM facilities.

**Appropriateness for PARADIM Facilities**:

Explain why you need access to a particular PARADIM facility (e.g., Bulk Crystal Growth Facility) and the **specific equipment required** for investigations (e.g., **High Pressure Floating Zone Furnace), and an experimental plan that addresses how the specified facility and equipment will aid in overcoming the problem areas from previous investigations. In detailing an experimental plan,** PIs **may** request specific amounts of time for equipment, but these requests may be modified by the Director of User Facilities, based on the proposal reviews and input from the PARADIM scientists. **You are encouraged to discuss your ideas with PARDIM staff to determine the most appropriate experimental resources and to estimate time requirements.**

**Alignment of the Science with PARADIM’s Technical Focus (Materials for the next generation of electronics)**:

State how the focus of your research and what you wish to accomplish with the aid of the facilities at PARADIM aligns with PARADIM’s focus of next generation electronic materials.

**Methods and Metrics for Assessing Material Quality and Implementation of Materials-by-Design methodology**:

Successful proposals will take significant advantage of PARADIM by implementing a closed loop **Materials-by-Design** process involving theory, growth, and characterization. Explain how you intend to use theory and simulation in conjunction with the experimental results obtained from PARADIM experimental facilities to design new materials for subsequent investigations.

**References**: