



# NASA Glenn Faculty Fellowship Program

## Glenn Research Center

**Office/Division Name:** LMCo

**Branch Name:** Ceramic and Polymer Composites Branch

**Research/Engineering Area / Topic:** Materials Science and Engineering

### **Description of Research/Engineering Work to Be Performed**

Design and prototype a battery thermal management system

### **Brief background and NASA mission/program support**

High energy and power density batteries combined with long cycle life, is an enabling technology. However, this battery type is inherently temperature-sensitive and generate heat during the operating cycle, affecting their efficiency and longevity. For more electric aircraft effective thermal management systems to ensure batteries operate within safe temperature threshold is critical.

### **Objective(s) of project**

Development and optimization of hybrid heat dissipation system for lithium-ion battery packs

### **Specific Faculty Fellow Assignment**

Design, model, and prototype an advance battery thermal management system

### **Expected Outcome(s)**

Device capable of reducing thermal runaway in battery packs

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