

# SUBMIT AN ABSTRACT BY JULY 1 FOR THE FOLLOWING TMS2023 SYMPOSIUM:

### **MATERIALS PROCESSING**

## **Materials Research in Reduced Gravity**

The absence of gravitational effects such as thermal and solutal buoyancy enables investigation of a large range of different phenomena in materials science. These reduced-gravity experiments can isolate phenomena otherwise obscured in ground-based experiments, leading to new discoveries that can improve materials and processes here on Earth. Long-term experiments in microgravity have a long history—from the early days of spaceflight to current experiments onboard the International Space Station. Other platforms for reduced gravity experiments include drop tubes and towers that provide seconds of reduced gravity, aircraft (parabolic flights) that provide tens of seconds, and sounding rockets that provide hundreds of seconds.

Abstracts are solicited in all areas of materials research employing reduced gravity, including crystal growth, containerless processing, materials processing and properties, and experimental facilities for materials research. This symposium continues the series Experimental Methods in Microgravity Materials Research and Materials Research in Reduced Gravity, which have been recurrently held at the TMS Annual Meeting since the 1980s.

#### **ORGANIZERS**

Wilhelmus Sillekens, European Space Agency Michael Sansoucie, NASA Marshall Space Flight Center Robert Hyers, University of Massachusetts Douglas Matson, Tufts University

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