



SUBMIT AN ABSTRACT FOR THE FOLLOWING SYMPOSIUM

MATERIALS SYNTHESIS AND PROCESSING

Materials Research in Reduced Gravity

The absence of gravitational effects such as thermal and solutal buoyancy enables the 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, as well as in-space. Long-duration 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 and suborbital flights that provide several minutes. For this symposium, abstracts are solicited in all areas of materials research employing reduced gravity, including crystal growth, containerless processing, materials processing and properties, materials science related to space exploration (in-situ resource utilization, in-space additive manufacturing), and experimental facilities for materials research. The 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.

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