

THE WORLD COMES HERE.
TMS 2025
154th Annual Meeting & Exhibition



March 23–27, 2025
MGM Grand Las Vegas
Hotel & Casino
Las Vegas, Nevada, USA
#TMSAnnualMeeting



SUBMIT AN ABSTRACT FOR THE FOLLOWING TMS2025 SYMPOSIUM:

LIGHT METALS

Advances in Titanium Technology

Titanium and titanium-based alloys have indisputably contributed to many technological advancements of the modern society owing to their unique structural properties combined with a low density and in-vivo biocompatibility. Today these alloy systems are commercially used in myriad applications ranging from the hot-sections of an aero-engine to structural applications at cryogenic temperatures, ballistic shield components at room temperatures, orthopedic implants, etc. Large tonnage commercial usage of titanium and its alloy systems for such a diverse range of sensitive and safety-critical engineering applications is rooted in the detailed understanding of the underlying structure-property-processing relationships based on extensive research spanning over the last fifty years.

To deliberate upon some of these issues, the signature symposium hosted yearly by the Titanium Committee aims to serve as a forum for titanium experts and researchers from all over the world. It has been a well-received international platform for scientists, engineers, and technologists from industry, academia, and research laboratories to exchange ideas and share the latest progress on the state-of-the-art in processing-microstructure-property co-relation within titanium and titanium-based alloys. The symposium covers all aspects of physical and mechanical metallurgy of titanium and titanium alloys including novel processing techniques, recent product development, new alloy design approaches, microstructure exploration, and performance evaluation.

The topics of choice include, but are not limited to:

- Titanium and titanium alloys, including near alpha alloys, alpha+beta alloys, metastable beta alloys, intermetallic alloys, titanium aluminides, and titanium matrix composites.
- Alloy design approaches to novel commercial applications.
- Processing of titanium and titanium alloys using advanced techniques.
- Additive manufacturing of titanium-based alloys and their structure-property relationships
- Phase transformations and microstructural evolution in titanium and titanium alloys.
- Dynamic mechanical behavior and performance of titanium and titanium alloys.
- Deformation mechanisms within Titanium based alloys at various temperatures and loading conditions.
- Translating novel processing routes for titanium-based alloys from laboratory-scale to commercial scale.

ORGANIZERS

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SYMPOSIUM SPONSORS

TMS Structural Materials Division, TMS Titanium Committee

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QUESTIONS?

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