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TMS 2026

155th Annual Meeting & Exhibition

March 15–19, 2026
San Diego Convention Center
and Hilton San Diego Bayfront
San Diego, California, USA
#TMSAnnualMeeting

SUBMIT AN ABSTRACT FOR THE FOLLOWING SYMPOSIUM

MATERIALS DEGRADATION AND DEGRADATION BY DESIGN

Refractory Metals 2026 – A Memorial to Todd Leonhardt

The refractory metals (W, Re, Ta, Mo, and Nb) are defined by their extremely high melting temperatures, greater than 2500°C. In pure form, these elements have a variety of unique properties that allow their use in extreme environments and also require demanding purification and fabrication processes. The number of projects and publications in these metals and their alloy systems has increased with the growing number of ultra-high temperature applications. This symposium will focus on fundamental properties of refractory metals and alloys, design and development of alloys, nonadditive fabrication techniques, novel test methods for refractory metal performance, and the effects of environment on refractory metals.

Topics for this symposium may include:

- Design, development, and testing of RHEA, RCCA, or RMPEA materials.
- Fundamental studies of refractory metal or alloy deformation, microstructure evolution, or oxidation.
- Nonadditive manufacturing fabrication of refractory metals and alloys.
- Coatings or surface reactions for refractory metal protection and testing studies on same.
- Of particular interest are presentations involving rhenium or interactions with our late friend, Todd Leonhardt, to whom this symposium is dedicated.

We encourage both experimental and theoretical work from academic, government, and industrial sectors to promote a diverse group of presentations from professionals and students.

SPONSORED BY:
TMS Structural Materials Division; TMS Refractory Metals & Materials Committee

ORGANIZED BY:

- **Matthew Osborne,** Global Advanced Metals
- **Gianna Valentino,** University of Maryland
- **Paul Rottmann,** University of Kentucky

www.tms.org/TMS2026

QUESTIONS?

Contact programming@tms.org