

THE WORLD COMES HERE.
TMS 2023
152nd Annual Meeting & Exhibition

MARCH 19–23, 2023
SAN DIEGO CONVENTION CENTER &
HILTON SAN DIEGO BAYFRONT
SAN DIEGO, CALIFORNIA, USA
#TMSANNUALMEETING



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

ADVANCED MATERIALS

High Performance Steels

Steels are one of the most pervasive structural alloy classes in modern society. The profound technological importance of steels motivates collaborative and multidisciplinary research between industry, academia, and national laboratories to continuously improve the fundamental understanding of steel behavior. While developing steels with better properties, we are also challenged to make these new high-performance steels more sustainable.

The High-Performance Steels Symposium focuses on novel developments in steel design and new insights into processing-microstructure-property relationships. Improved understanding of these relationships calls for approaches that incorporate:

- Conventional mechanical tests (tensile, charpy, bending, etc.) and microstructure analyses methods (SEM, EBSD, XRD)
- Advanced characterization techniques (HRTEM, APT, and in-situ SEM/TEM/Synchrotron/neutron diffraction)
- Physics-based or data-driven modeling of steel microstructures/properties (e.g., ab initio methods, computational thermodynamics, discrete dislocation dynamics, crystal plasticity) in the spirit of integrated computational materials engineering (ICME)
- Computational design of novel steel microstructures and their experimental validation

This symposium welcomes contributions in all of these directions and especially those that integrate these different techniques and approaches to create a venue to discuss the future of high-performance and sustainable steel design.

ORGANIZERS

Jonah Klemm-Toole, Colorado School of Mines
Ana Luiza Araujo, CBMM North America Inc.
C. Tasan, Massachusetts Institute of Technology
Richard Fonda, Naval Research Laboratory
Amit Behera, QuesTek Innovations LLC
Benjamin Adam, Oregon State University

SYMPOSIUM SPONSORS

TMS Structural Materials Division
TMS Steels Committee

www.tms.org/TMS2023

QUESTIONS?
Contact programming@tms.org