

THE WORLD COMES HERE.
TMS2025
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:

MATERIALS SYNTHESIS AND PROCESSING

Sustainability of High Temperature Alloys

The Symposium is aimed at high temperature alloys, those based on Ni, Co and Fe, that are used for components in aerospace propulsion, power generation, chemical processing, and oil and gas applications. It is proposed that the following topics areas are discussed, based on the 6 R's: Rethink, Refuse, Reduce, Re-use, Repair, Recycle. Rethink: substitute with other alloys or materials, and Refuse: conscious efforts to minimise or avoid using critical elements, e.g., Ru, Re, Co, Ta etc, in alloy development and materials selection. Reduce: strategies for reducing consumption or input weight, e.g., use of different material processes, and extending component service-life via improved understanding of material and component behaviour. Re-use: cleaning and re-conditioning technologies for components, and inspection of components in-situ or during shop visits and Recycle: use of revert for raw material supply. Repair: restoring components after deterioration in-service.

ORGANIZERS

Mark Hardy, Rolls-Royce Plc; **Caspar Schwalbe**, MTU Aero Engines AG; **Jeremy Rame**, Naarea; **Benjamin Adam**, Oregon State University; **Jonah Klemm-Toole**, Colorado School of Mines; **Martin Detrois**, National Energy Technology Laboratory; **Katerina Christofidou**, University of Sheffield

SYMPOSIUM SPONSORS

TMS Structural Materials Division, TMS High Temperature Alloys Committee

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QUESTIONS?

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