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**TMS2024**  
153<sup>rd</sup> Annual Meeting & Exhibition

MARCH 3–7, 2024  
HYATT REGENCY ORLANDO  
ORLANDO, FLORIDA, USA  
#TMSAnnualMeeting



**SUBMIT AN ABSTRACT FOR THE FOLLOWING TMS2024 SYMPOSIUM:**

**MATERIALS SYNTHESIS AND PROCESSING**

**Towards a Future of Sustainable Production and Processing of Metals and Alloys**

The primary production of metals and alloys and their downstream processing are significant sources of anthropogenic CO<sub>2</sub> emissions. With projected growth in demand for metals and alloys in the future, there is a dire need now to develop fundamental science-based approaches to decarbonize metal production and processing.

This symposium will bring together worldwide researchers working on the basic science questions related to transitioning from the widely used carbon-based high-temperature reduction of metal ores to lower-temperature solid phase reduction processes using alternate reductants such as Hydrogen, which can eliminate up to 10% of global CO<sub>2</sub> emissions. This symposium will also feature experimental and computational research efforts to develop deformation-based solid phase processing approaches to achieve unique microstructures with superior structural and functional properties in metals and alloys.

**ORGANIZERS**

**Arun Devaraj**, Pacific Northwest National Laboratory, United Kingdom

**Dierk Raabe**, Max-Planck Institute, Germany

**Suhas Eswarappa Prameela**, Massachusetts Institute of Technology, USA

**Leora E. Dresselhaus-Marais**, Stanford University, USA

**Petrus C. Pistorius**, Carnegie Mellon University, USA

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Contact [programming@tms.org](mailto:programming@tms.org)