

**TMS 2018**  
147<sup>th</sup> Annual Meeting & Exhibition



**MARCH 11 – 15, 2018**  
**PHOENIX, ARIZONA**

**SUBMIT AN ABSTRACT TO:**

## CHARACTERIZATION

# ADVANCED CHARACTERIZATION TECHNIQUES FOR QUANTIFYING AND MODELING DEFORMATION

This symposium will provide a venue for presentations regarding the use of advanced characterization techniques in all classes of materials to quantify and model deformation mechanisms.

Advances in characterization technology have greatly improved our ability to quantify deformation mechanisms such as dislocations, twinning, and stress-induced phase transformations, and the microstructural changes accompanying deformation such as texture evolution, grain morphology changes, and localized strain. A variety of relatively new techniques are being applied to both structural and functional materials. These techniques, in combination with modeling, are improving our understanding of deformation and failure during material processing/forming and under normal or extreme conditions in service. In situ techniques are also providing enhanced understanding of individual mechanism interactions and direct validation of plasticity models.

This gathering provides a place to talk about new advances in current techniques or in technique development as they apply to deformation. Areas of interest include:

- Dislocations, deformation twins, and stress-induced phase transformations
- All advanced X-Ray-based techniques
- All advanced electron-based techniques including HR-(S)TEM, EBSD, HR-EBSD, PED, and in situ TEM
- All structural and functional materials systems
- Advances in material modeling through the use of advanced characterization techniques
- Industrial applications
- Technique development

## ORGANIZERS

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## SYMPOSIUM SPONSORS

TMS Materials Processing & Manufacturing Division; TMS Structural Materials Division

TMS Advanced Characterization, Testing, and Simulation Committee; TMS Shaping and Forming Committee

**ABSTRACT DEADLINE IS JULY 1, 2017. SUBMIT ONLINE AT [www.programmaster.org/TMS2018](http://www.programmaster.org/TMS2018).**

**QUESTIONS? CONTACT [programming@tms.org](mailto:programming@tms.org)**