## COMPUTATIONAL THERMODYNAMICS AND KINETICS

The ability to compute thermodynamic and kinetic properties and their effect on material response is rapidly transforming the field of materials science and engineering. Since 2001, this ongoing TMS symposium has highlighted advances in the tools and applications of computational thermodynamics and kinetics, from the atomic to macroscale, and including applications to materials design, synthesis, processing, and service. This year, we continue to welcome submissions relating to novel developments and applications of computational thermodynamics and kinetics methods, as well as the use of established computational thermodynamics and kinetics methods, to explore new phenomenon and materials. This symposium will cover topics that provide new insights into the properties of materials, expand our understanding of materials design, processing, and optimization, or guide the discovery of fundamentally new materials.

Topics of choice for this year include:

- Advancements in computational techniques in thermodynamics and kinetics of defects, phase transformations, and microstructural evolution
- Multiscale modeling and experimental validation of thermodynamics and kinetics, particularly associated with environmentally assisted fracture, i.e., corrosion, oxidation, grain boundary segregation and embrittlement
- Computational modeling and experimental validation of processes driven by interfaces and grain boundaries.

## **ORGANIZERS**

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## **PROCEEDINGS PLANS**

Papers from this symposium will be a part of the *TMS2017 Supplemental Proceedings* volume. Manuscripts for accepted abstracts are due September 1.

## **SYMPOSIUM SPONSORS**

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