SUBMIT AN ABSTRACT BY JULY 1

FEBRUARY 27-MARCH 3, 2022
ANAHEIM CONVENTION CENTER & ANAHEIM MARRIOTT
ANAHEIM, CALIFORNIA, USA
#TMSAnnualMeeting

SUBMIT AN ABSTRACT FOR THE FOLLOWING TMS2022 SYMPOSIUM:

MATERIALS DESIGN

Microstructural Templates Consisting of Isostructural Ordered Precipitate / Disordered Matrix Combinations: Microstructural Evolution and Properties

The microstructural templates based on a homogeneous distribution of ordered precipitates (for example L12, DO22, or B2) within a solid solution face-centered cubic (FCC) or body-centered cubic (BCC) matrix, are two of the most prevalent templates used in designing multiple alloy systems. Such systems include nickel-base and cobalt-base superalloys, austenitic and ferritic steels, aluminum-base alloys, and more recently high entropy alloys, or complex concentrated alloys. The ordered precipitates in these alloys can be potent strengtheners, both at ambient and at elevated temperatures.

This symposium brings together the various communities working on isostructural ordered/disordered precipitate/matrix alloy systems. Areas of interest include:

- The mechanism of precipitation of the ordered phase within the FCC or BCC solid solution matrix
- Distribution of the alloying elements between matrix and precipitate
- Other related phase transformations
- The influence of these on the overall microstructural evolution and mechanical properties of these alloys

Both experimental and computational work on these topics are welcome.

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