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February 23-27, 2020 · San Diego, California, USA

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Advanced Materials

Advanced High Strength Steels IV

Advanced high-strength steels (AHSS) are particularly important to the automotive industry due to the recent demand of light weighting for fuel efficiency, while maintaining or improving passenger safety. Collaborative research efforts amongst industry, academia and national laboratories have been essential to develop and further understand the behavior of these AHSS alloys. This symposium focuses on the latest developments in high-strength low alloy (HSLA), dual-phase (DP), transformation-induced plasticity (TRIP), complex phase (CP), martensitic, twinning-induced plasticity (TWIP), quenched & partitioned (Q&P), medium manganese, TRIP-assisted bainitic ferrite (TBF), press-hardened steel (PHS) and low density steels.

This symposium invites contributions on the understanding of processing-microstructure-property relationships of AHSS. Application of advanced characterization techniques to AHSS, with a particular focus on the nanoscale, is welcome. Furthermore, this symposium encourages advanced modelling and simulation of AHSS to further our understanding the performance of these materials via ab initio methods, computational thermodynamics, and constitutive laws, for example, as well as integrated computational materials engineering (ICME).

ORGANIZERS

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Abstract Deadline is July 1, 2019. Submit online at www.programmaster.org/TMS2020.

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