**Progress Report on a Free NIST/TRC Resource for Thermophysical Property Data of Metal Systems**

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The electronic availability of thermophysical property data in a well-structured machine-readable format is one of the cornerstones of a robust Integrated Computational Materials Engineering (ICME) system. Such systems promise substantially faster development and deployment of advanced materials at a fraction of the cost we face today. Equally important for a collection of well characterized experimental thermophysical property data are their provenance and a clear statement regarding their quality quantified in statements of uncertainty. The Thermodynamics Research Center (TRC) within NIST has, for the last four years, actively engaged in addressing this challenge for the thermophysical property data for metals and alloys that are needed to feed those ICME algorithms. This talk covers the progress in the continuous development of the free, publicly available NIST/TRC online resource (http://trc.nist.gov/metals_data) for metals and alloy data. It will include the progress made in structuring the relevant information from open literature into well-vetted datasets that can now be accessed and used via the Web through a human-oriented or computer-oriented (API) interface. An update on the efforts for a data communication standard in this field, an IUPAC project with the title "THERMOML-2017 Revision of a XML Based IUPAC Standard for Thermodynamic Property Data" will also be discussed.

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