







an Open Access Journal by MDPI

# **Applications of Statistical Thermodynamics**

Guest Editor:

### **Dr. Nobumitsu Shohoji** Independent Researcher, 1649-038 Lisboa, Portugal

Deadline for manuscript submissions:

closed (18 March 2020)

## Message from the Guest Editor

Statistical thermodynamics span the bridge between the visible macroscopic world and the invisible atomistic world to evaluate values of atomistic interaction parameters with unambiguous physical significance from measured values of state parameters, such as temperature, pressure and chemical composition under equilibrium state. Unlike conventional thermodynamics, in which entropy, enthalpy, and free energy are defined mathematically in terms of state parameters and thus applicable universally to any system, even without knowing exactly the nature of compound under consideration, statistical thermodynamic analysis must be started from unambiguous a priori modeling of compounds under consideration. When an unrealistic model is chosen at the onset of the statistical thermodynamic approach, the evaluated parameters are without valid physical significance. The Guest Editor wishes this Special Issue will attract the attention of authors who have been working on entropy and enthalpy aspects of materials science, as well as physicists and chemists using statistical thermodynamics as an analysis tool.







IMPACT FACTOR 2.7





an Open Access Journal by MDPI

### **Editor-in-Chief**

#### Prof. Dr. Kevin H. Knuth

Department of Physics, University at Albany, 1400 Washington Avenue, Albany, NY 12222, USA

## **Message from the Editor-in-Chief**

The concept of entropy is traditionally a quantity in physics that has to do with temperature. However, it is now clear that entropy is deeply related to information theory and the process of inference. As such, entropic techniques have found broad application in the sciences.

Entropy is an online open access journal providing an advanced forum for the development and/or application of entropic and information-theoretic studies in a wide variety of applications. Entropy is inviting innovative and insightful contributions. Please consider Entropy as an exceptional home for your manuscript.

#### **Author Benefits**

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), Inspec, PubMed, PMC, Astrophysics Data System, and other databases.

**Journal Rank:** JCR - Q2 (*Physics, Multidisciplinary*) / CiteScore - Q1 (*Mathematical Physics*)

#### **Contact Us**