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150th Anniversary of Gibbs Publication of Geometrical Thermodynamics

Guest Editors:

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Prof. Dr. Leslie Woodcock

Deadline for manuscript
submissions:

closed (31 December 2023)

Message from the Guest Editors

With this Special Issue, we celebrate 150 years of Gibbs free energy and geometric approach to thermodynamics. Thermodynamics received the modern nice form in the works of Josiah Willard Gibbs. In his first paper, “*A method of geometrical representation of the thermodynamic properties of substances by means of surfaces*” (1873), Gibbs developed geometric approach to thermodynamics, defined thermodynamic equilibrium as a critical point of $G=U-TS+PV$ ($\delta G=0$) and stable equilibrium as a minimizer of G (in modern notations). He revealed deep geometric nature and beauty of thermodynamic laws. It is well-known that J.C. Maxwell was so impressed by the Gibbs methods that he made a sculptur model of thermodynamics properties of water.



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Special Issue



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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.

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