Special Issue

Energy, Entropy, and Information in Nano- and Quantum-Electronics

Message from the Guest Editor

The fields of stochastic and quantum thermodynamics generalize the theory of thermodynamics to a regime where fluctuations and measurements play a fundamental role. Powerful results have been established in these fields, including fluctuation theorems and thermodynamic uncertainty relations. Furthermore, the connection between information and entropy becomes particularly relevant on the nanoscale. This has resulted in a number of insights based on realizations of established thought experiments, such as Maxwell's demon and Szilard's engine. Due to their high degree of control, small electronic systems provide ideal candidates to investigate thermodynamics on the nanoscale. In particular, all ingredients required to investigate heat and energy transport, as well as the thermodynamics of information, are available. This Special Issue aims at providing a focus on modern developments in these highly exciting topics related to energy, entropy, and information in nano- and quantum-electronics.

Guest Editor

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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.

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.

Editor-in-Chief

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