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Statistical Thermodynamics: From First Principles Computations to Macroscopic Properties of Matter

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Message from the Guest Editor

Statistical thermodynamics is the bridge from the microscopic to the macroscopic worlds. Together with its conceptual framework, it provides the tools for the computation of all the thermodynamic properties of matter in whatever state, temperature, and pressure, as averages of properties evaluated from first principles at the atomic and molecular level, or at the scale of a unit cell of a crystal. The focus of this Special Issue is on

- (i) applications to specific problems;
- (ii) development of models for effective computations;
- (iii) their possible implementations in computer programs.



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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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