Special Issue

Thermodynamics of Interfaces

Message from the Guest Editors

The topic explores the thermodynamic processes occurring at the boundaries between different phases or within confined environments. Interfaces play a pivotal role in numerous scientific and industrial fields, including materials science, nanotechnology, biology, and environmental science. Understanding the thermodynamics at these interfaces is essential for advancing technologies related to drug delivery, energy storage, and environmental remediation. This Special Issue aims to highlight recent advances in the study of interfacial thermodynamics, encompassing both theoretical and experimental perspectives. Topics of interest include, but are not limited to, interfacial tension and adsorption phenomena, surface and surface-mediated phase transitions, molecular self-assembly at interfaces, and the thermodynamics of confined systems. We seek contributions that provide insights into the behavior near interfaces in complex systems, including biomolecular interfaces, soft matter, and engineered materials. Researchers are invited to submit papers that present innovative theoretical models, experimental techniques, and applications relevant to interfacial phenomena.

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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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Editor-in-Chief

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