



International Journal of Molecular  
Sciences

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an Open Access Journal by MDPI

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CiteScore: 9.0

Indexed in PubMed

Impact Factor: 4.9

Special Issue Reprint

## Macroscopic and Microscopic Thermodynamics

**Edited by: José Urieta and Ana M. Mainar**

This Reprint presents the second edition of “Macroscopic and Microscopic Thermodynamics: From Fundamentals to Present Applications”. It compiles twelve contributions—including an editorial, original research articles, and reviews—focused on the study of thermodynamic phenomena across different scales and disciplines. This Reprint highlights advances in phase equilibria, excess thermodynamic functions, surface and interfacial behavior, solubility in eutectic solvents, ionic liquid-based separation systems, and molecular simulations of phase transitions. It also explores biophysical perspectives through protein thermophysical properties, protein–ligand interactions, and the thermodynamics of non-equilibrium biological systems.

The scope of this Reprint is deliberately broad, combining fundamental thermodynamic principles with applied studies relevant to physics, chemistry, materials science, and life sciences. It provides both theoretical insights and experimental data, offering a comprehensive overview of how thermodynamics continues to inspire and guide scientific progress. Researchers and professionals in molecular sciences, physical chemistry, and biophysics will find in this Reprint a valuable reference for understanding the current challenges and methodologies in the field.

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