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Applied Thermodynamics: Modern Developments

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Deadline for manuscript submissions:
closed (20 September 2022)

Message from the Guest Editors

Classical works in thermodynamics have found extensive practical applications in often controlled, predominantly single-process transformations, as well as laboratory experiments that provide insights into system behaviors. Engineering thermodynamics forms the basis on which combustion engines, power plants and heating/cooling systems operate. The advent of modern irreversible thermodynamics launched a new era in which thermodynamics has become the most widely used science field for characterizing diverse multi-scale inter-disciplinary systems, including biological, nuclear, chemical, electrical, mechanical and thermal systems. This Special Issue solicits original research and review articles, as well as short communications in the area of applied thermodynamics. Topics of interest include, but are not limited to:

Aging/degradation/remaining useful life (RUL) modeling;
Thermodynamics of tribology;
Power generation;
System optimization;
Characterization of materials and material configurations;
Energy systems (storage, transfer and losses);
Dissipative mechanisms;
Nuclear thermodynamics.