

## EDITORIAL

The editorial of *Thermal Engineering* of this issue continues the discussion on scientific research needs in vital areas in which thermal engineering has important participation. The main goal is to motivate the readers, within their specialties, to identify possible subjects for their future research.

The word "energy" has a historical origin that goes back to ancient Greek philosophy. Derived from the Greek word "*energeia*", which described the ability of a being or system to perform work or activity, the notion of energy was later incorporated into Latin as "energy" which was also used to describe the vital force that animates living beings. With the development of physics and engineering in the 19th century, the concept of energy was refined and acquired a more concise scientific meaning, linked to the ability to produce changes, or perform work in a physical system. Energy is recognized as the corner stone of several fields of knowledge, considered a key concept for science, technology and economics. Energy is fundamental not only in the description and analysis of natural phenomena, but also in discussions related to energy resources, efficiency, sustainability and their impact in the global economy. Understanding and mastering the principles of energy generation is essential for the understanding of natural processes, as the conception of strategies to advance the development of technologies and nations. Therefore, energy plays a decisive role in modern society, with significant implications in social and environmental sciences and in the quest for sustainable development. An economic study combined with thermodynamics principles is called thermoeconomic analysis. When taken into consideration, thermoeconomic analysis brings a new perspective for the decision making process when a current of new manufacturing process, product development, new energy generation strategies and its technologic applications are under scrutiny. Several well-known technology applications, from the thermodynamic point of view, have been seen with different lenses when they are studied considering thermoeconomic principles. Such analysis does not weaken previous conclusions but promotes development. It does not only enhance the technology itself but also promotes scientific growth, since more scientific investigation must be performed to make a process not only highly efficient but also economically viable.

The mission of *Thermal Engineering* is to document the scientific progress in areas related to thermal engineering (e.g., energy, oil and renewable fuels). We are confident that we will continue to receive articles' submissions that contribute to the progress of science.

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