

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 current global scenario presents a significant increase in energy demand for HVAC-R (heating, ventilation, air conditioning and refrigeration) systems. When considering how expensive energy generation can be to most countries and the greater scarcity of natural resources for energy generation, it is necessary to seek viable alternatives with lower energy consumption to the currently used models, without any efficiency loss. Absorption refrigeration and waste incineration systems, for example, can be research lines to be explored, making possible to reduce electrical energy consumption and reduce the environmental impacts of usual compression refrigeration systems. In this context, the exergoeconomic analysis is an essential thermal engineering concept to be applied in refrigeration systems. It comprises principles of heat transfer, fluid mechanics, second law of thermodynamics, optimization and cost analysis. The importance of forestry waste as a sustainable source to mitigate the environmental impacts resulting from the use of fossil fuels has grown recently due to the potential for energy generation from organic solid waste. Furthermore, the abundance of pruned green waste, often improperly discarded, is an underestimated option to improve energy sustainability and reduce greenhouse gas emissions. In addition, it reduces the need of physical space for landfill to dispose waste that eventually will contaminate the soil of surrounding areas. The use of these residues for energy generation reduces the need of natural resources exploitation, promoting sustainable development. Like the absorption refrigeration systems, exergoeconomic analysis applied to the use of forestry waste as a source of energy in power plant for generation electric power, is extremely relevant and crucial for sustainable development/energy generation of a country.

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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