
Editorial

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Sustainable energy systems provide energy services to the present generation while ensuring that similar levels of energy services can be provided for future generations. Appropriate management of energy and other resources is one of the important ways to achieve sustainable future. Selected papers, originally presented in the International Conference on Thermal Energy and Environment (INCOTEE 2011) held at Kalasalingam University during 24–26 March 2011, are presented in this special issue to address some of the issues associated with sustainable development. The special issue focused on work related to energy management and possible various energy resources. In this first part of the special issue, five papers are presented. Paper entitled ‘Performance evaluation of locality-based compact solar refrigeration system’ by Achuthan and Rathnasamy, focuses on the performance of a compact solar refrigeration system attached with micro spray nozzles in the evaporator chamber. Paper entitled ‘Automation of energy management system in Rourkela steel plant: a case study’ by Panigrahy, Panda and Patnaik presents a case study of a steel plant in India for achieving better energy efficiency through automation. Gogoi and Baruah have discussed performance of a single cylinder four stroke diesel engine with bio-fuel blends in their paper entitled

'Performance and energy analyses of a diesel engine fuelled with Koroch seed oil methyl ester and its diesel fuel blends'. Effects of injection timing for a bio-fuelled engine are reported by Kannan and Marappan in their paper entitled 'Effects of injection timing on the performance and emissions of a diesel engine fuelled with diethyl ether blended thevetia peruviana biodiesel'. Finally, the exergy analysis of a combined cycle power plant is presented in the paper 'Exergy analysis of gas turbine – solid oxide fuel cell based combined cycle power plant' by Sreeramulu, Gupta and Srinivas.

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