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Power Conversion Systems for Concentrating Solar Thermal and Waste Heat Recovery Applications at High Temperatures

Guest Editor:

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Deadline for manuscript submissions:
closed (31 December 2020)

Message from the Guest Editor

The field of thermal power generation at very high temperatures has suddenly become very important and exciting, due to the number of applications demanding solutions for efficient power conversion at temperatures well above 600 ºC. Suddenly, new horizons have opened and new research goals are being set. A new cycle, the supercritical CO2 cycle, has been put forward and is potentially applicable over applications ranging from carbon-captured coal-fired power to gas-cooled nuclear reactors, concentrating solar thermal power, and as a replacement for steam in combined cycle gas turbine applications. The common motivation in all these areas is the aspiration to convert heat to electricity at ever higher temperatures and consequently at higher efficiencies.

The quest for high-temperature thermal power generation has driven research and development in a number of areas that convert high-temperature heat to electricity in an effective and reliable way.

The purpose of this Special Issue is to present the current level of development and future challenges in this area, specifically in very-high temperature (VHT) power generation.

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Message from the Editor-in-Chief

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