Special Issue

Development and Challenges of Renewable Energy Technologies for Desalination

Message from the Guest Editors

The scope of desalination technologies encompasses mature and emerging methods, such as reverse osmosis (RO), forward osmosis (FO), membrane distillation (MD), thermal distillation, humidification-dehumidification (H-DH), etc. The water-energy nexus section covers combined water and power production systems, blue energy (e.g., pressure retarded osmosis (PRO), reverse electrodialysis (RED), capacitive mixing (CapMix), thermo-osmotic energy conversion (TOEC)), and other integrated approaches. This Special Issue includes articles on diverse topics, including the modelling and optimisation of renewable energy-driven desalination systems, techno-economic analysis, novel materials and technologies, energy storage for desalination, and environmental impacts. This Special Issue welcomes contributions that delve into various aspects, including but not limited to: Solar desalination (including photovoltaic, thermal and solar hybrid); Wind-powered desalination; Wave-powered offshore desalination; Bioenergy-driven desalination; Hybrid renewable energy systems for desalination; Water-energy nexus.

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