Special Issue

Entropy and Thermodynamics in Desalination Systems

Message from the Guest Editor

Desalination systems consume a large amount of energy to separate pure water from the dissolved matters. Whatever the separation method used to desalinate water, there is a large amount of entropy generation due to the irreversiblities processes in each process. Reducing the entropy generation will decrease the energy consumed in the desalination process. Energy and exergy analyses as well as entropy generation minimization are vital thermodynamic tools in the design and analysis of desalination systems. This Special Issue specifically emphasizes research that addresses the entropy generation and thermodynamic analysis of desalination systems, by presenting analyses of novel desalination processes, improved performance, new desalination systems, and water production techniques such as water from thin air and desalination by freezing. Other disciplines are also welcome such as salinity gradient energy, energy recovery devices in desalination systems, optimization, and entropy generation minimization.

Guest Editor

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Message from the Editor-in-Chief

The concept of entropy is traditionally a quantity in physics that has to do with temperature. However, it is now clear that entropy is deeply related to information theory and the process of inference. As such, entropic techniques have found broad application in the sciences.
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