



Entropy and Thermodynamics in Desalination Systems II

Guest Editors:

Dr. Mostafa H. Elsharqawy

School of Engineering, College of Engineering and Physical Sciences, University of Guelph, Guelph, ON N1G 2W1, Canada

Prof. Dr. Mohamed Antar

Mechanical Engineering Department, King Fahd University of Petroleum and Minerals (KFUPM), Dhahran 31261, Saudi Arabia

Deadline for manuscript submissions:

closed (15 August 2021)

Message from the Guest Editors

Dear Colleagues,

Desalination systems consume large amounts of energy to separate pure water from dissolved matter. Whatever the separation method used to desalinate water, there is a large amount of entropy generation due to irreversibility in each process. Reducing 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 entropy generation and the thermodynamic analysis of desalination systems, by presenting an analysis of novel desalination processes, improved performance, new techniques, such as fog harvesting, 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.

Prof. Mostafa H. Elsharqawy

Prof. Dr. Mohamed Antar

Guest Editors





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Kevin H. Knuth

Department of Physics, University
at Albany, 1400 Washington
Avenue, Albany, NY 12222, USA

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.

Entropy is an online open access journal providing an advanced forum for the development and/or application of entropic and information-theoretic studies in a wide variety of applications. *Entropy* is inviting innovative and insightful contributions. Please consider *Entropy* as an exceptional home for your manuscript.

Author Benefits

Open Access: free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

High Visibility: indexed within [Scopus](#), [SCIE \(Web of Science\)](#), [Inspec](#), [PubMed](#), [PMC](#), [Astrophysics Data System](#), and [other databases](#).

Journal Rank: JCR - Q2 (*Physics, Multidisciplinary*) / CiteScore - Q1 (Mathematical Physics)

Contact Us

Entropy Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/entropy
entropy@mdpi.com
[X@Entropy_MDPI](https://twitter.com/Entropy_MDPI)