

Special Issue

Sustainable and Cost-Effective Wastewater Treatment for Sustainable Energy

Message from the Guest Editor

Wastewater contains various nutrients and organic compounds that can be recovered and converted into energy products. The recovery and reuse of resources from wastewater is an essential part of a circular economy and sustainable development. Various wastewater treatment technologies, such as anaerobic digestion (AD), microalgae, and microbial fuel cells (MFCs), have been studied to clean and recycle water and also convert the impurities in wastewater into energy products. AD is an effective technology for converting organic compounds in wastewater into biogas, which can be upgraded to renewable natural gas. The cultivation of microalgae using wastewater can remove the fertilized nutrients in the wastewater and, at the same time, allow algal biomass to be obtained for the production of biofuels. MFCs can directly convert chemical energy stored in organic compounds in wastewater into electricity via redox reactions under mild conditions. These wastewater treatment technologies provide promising methods for the development of a sustainable water system and sustainable energy production in a circular economy.

Guest Editor

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Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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