

Special Issue

Modeling and Utilization of Solar Energy and Biomass for Sustainable Development

Message from the Guest Editors

The reality of extreme events clearly demonstrates the need for a reduction in the emission of greenhouse gases (GHGs). These emissions derive mainly from the use of fossil fuels for transportation, use in industrial heat processes, and electricity production. Renewable energies can and already contribute decisively to the reduction in the use of fossil fuels in these three processes. Regarding the generation of PV electricity, it has been estimated that in 2050, 100% or a very high fraction of electricity production will become carbon-free. Regarding transportation and industry sectors, there are still many scientific, technical, and economic challenges to overcome so that renewable energies can contribute significantly to the decarbonization process. A possible roadmap for the decarbonization of these sectors consists of the implementation of electric efficiency, industrial electrification, use of low-carbon fuels, and CO₂ sequestration. Within this context, we invite the submission of high-quality and innovative articles, focusing on the topics above, or related to similar topics.

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