

Special Issue

Industry 4.0 Technologies to Support the Energy Transition

Message from the Guest Editors

The global imperative to tackle climate change has propelled the energy sector into an era of transformation, in which traditional paradigms are being remodelled by the convergence of Industry 4.0 technologies and sustainable practices. Energy efficiency measures, driven by IoT sensors, AI algorithms and data analysis, can optimize the use of resources and minimize waste throughout the energy value chain. Electrification is emerging as a cornerstone of the transition, with smart grids and decentralized energy systems that enable the integration of renewable sources such as solar and wind being developed. Through interdisciplinary research and innovative applications, this Special Issue aims to elucidate the transformative potential of Industry 4.0 in accelerating the shift towards a sustainable future, promoting resilience and mitigating climate risks.

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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