



Industry 4.0: Smart Green Applications

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Message from the Guest Editors

The objective of this Special Issue is to promote the usage of IT in the physical flow of materials in manufacturing value chains in order to have a clear understanding of how energy and resources are consumed at each stage, ranging from the production of raw materials and manufacturing to logistics and reverse logistics, and how to minimize the product's carbon footprint. This Special Issue aims to shift the traditional objective of Industry 4.0 from a cost-related problem to an environmental problem.

- Reducing energy consumption through data collection and analysis
- Usage of green energy in industrial processes
- Reducing used materials through production process design and resource optimization
- Circular economy: design, implementation, and current issues of reverse supply chains
- Development of sustainable products
- Improvements in product design to reduce returns and failures
- Usage of agent-based modelling and simulation (ABMS) technologies to test and visualize the impacts of green technologies applied in supply chains
- Industrial system resiliency for sustainability





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Message from the Editor-in-Chief

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