Special Issue

Application of Life Cycle Assessment (LCA) in Environmental Sustainability

Message from the Guest Editor

Life Cycle Assessment (LCA) has become a crucial methodological framework for evaluating the environmental performance of technologies, processes, and systems across all stages of their life cycle. In the energy and industrial sectors, which are some of the major contributors to global environmental impacts, LCA provides essential insights to guide sustainable innovation and reduce resource consumption, emissions, and waste. This Special Issue invites original research, case studies, and methodological contributions that demonstrate the application of LCA in supporting the transition of energy production systems (including renewables, fossil fuels, and hybrid solutions) and industrial operations (such as manufacturing, materials processing, and infrastructure) towards the sustainable development goals. Studies addressing comparative assessments, sector-specific benchmarks, eco-design strategies, and the integration of LCA into policy or industrial decision making are particularly welcome. The objective is to highlight the role of LCA in advancing cleaner technologies, improving industrial efficiency, and fostering sustainability-driven transformation across critical sectors.

Guest Editor

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Message from the Editor-in-Chief

Clean Technologies (ISSN 2571-8797) is an international, open access journal of novel scientific research on technology development aimed at reducing the environmental impact of human activities. *Clean Technologies* publishes reviews, regular research papers, communications and short notes which show a significant advance in the development of sustainable technology that reduces energy consumption, environmental pollution and/or the use of water and nonrenewable resources. Our aim is to encourage scientists to publish their experimental and theoretical research in detail as open access, serving a trustable base of advance for the scientific community.

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