



# Environmental Sustainability and Industries

## Technologies for Solid Waste, Wastewater, and Air Treatment

Book • 2022

Edited by:

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## About the book

### Description

*Environmental Sustainability and Industries* identifies and discusses critical areas related to environmentally conscious industrial development of products and services that may support more sustainable and equitable societies.


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### Key Features

Offers compiled information on the environmental sustainability for industry

Provides principles and advanced trends and approaches for environmental sustainability for the industrial sector

Discusses established and emerging technologies and processes for sustainable approaches for industry

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## Details

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# Design of sustainable and environmental friendly processes for industries

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## 20.1 Introduction

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Uncontrolled urbanization and industrialization led to rapid degradation of the environment by causing various problems such as high air and noise pollution, the decline in water quality, insecurity of land, disposal of waste, alterations in climate, and global warming (Uttara et al., 2012). Several anthropogenic activities including harvesting or land clearance, milling, and mining generate toxic gases by extracting natural resources, which further leads to enhancement in the level of greenhouse gases and produces waste products that are ultimately disposed of in the environment. The transformation of materials into products needs resources including water, materials, energy, and manufacturing systems, all of these contribute to the impact of the product on the environment. By evaluating the possible effects of the procedure and/or product on the environment and then finding methods to reduce these adversarial impacts through ecodesigns, one can generate useful and effective models without harming the environment (Ellison et al., 2016; Haghjou et al., 2013). For this purpose, we should be more focused on the generation of environment-friendly products as the use, production, and even disposal of these products does not cause any damage to the environment (Tjarnemo & Sodahl, 2015; Wu & Chen, 2014). The objectives of environment-friendly products are to reduce environmental pollution, sustainable usage of natural assets, without any chemical substances, easy waste treatment, and disposal, conservation of energy and resources (Lian et al., 2016).