

Preface

This special edition presents research contributions addressing modern challenges in manufacturing, biofuel synthesis, and environmental protection, and highlighting the role of advanced technologies and materials in promoting sustainability, efficiency, and innovations.

The first chapter, Additive Manufacturing, explores recent developments in 3D printing technologies, including process optimisation and performance evaluation. The contributions emphasise additive manufacturing's ability to produce complex geometries, reduce material waste, and enable effective industrial solutions.

The second chapter, Biodiesel, focused on fuel synthesis technologies from biological resources. Topics mainly focus on the analysis of the applications of various additives to improve biodiesel performance as a viable alternative to conventional fossil fuels in the transition toward sustainable energy systems.

The third chapter, Materials and Technologies for Pollutants Removal and Water Treatment and Storage, addresses environmental challenges related to water quality and water resource management. Contributions examine advanced materials, such as adsorbents, membranes, and catalysts, as well as innovative treatment and storage technologies to improve water quality.

This edition is intended to serve as a valuable information resource for researchers and engineers seeking innovative approaches to modern engineering and environmental challenges.