

Preface

This special edition presents a multidisciplinary overview of recent research and technological advancements in applied biotechnologies, energy storage systems, thermal engineering, fluid mechanics, mechanical design, and intelligent engineering solutions in mechatronics.

Chapter 1: Biomass Processing focuses on the technologies and methods used to convert biomass into valuable products.

Chapter 2: Energy Storage, Batteries, and Power Systems explores the system-level approaches to energy storage and power management. Topics include battery elements, the battery management system, and the energy management system for the hybrid solar system.

Chapter 3: Thermal Engineering and Fluid Mechanics presents studies on heat transfer, fluid flow, and thermodynamic processes in engineering systems.

Chapter 4: Equipment Design addresses principles and innovations in the design and optimisation of mechanical and industrial equipment.

Chapter 5: Mechatronics explores the integration of mechanical actuators, electronic elements and control methods for the development of advanced robotic manufacturing and smart engineering applications.

This edition is designed as a valuable resource for researchers, engineers, and students whose activity is related to the mentioned technical and technological spheres.