

# Preface

This special edition presents a multidisciplinary perspective on emerging technologies and engineering solutions and demonstrates how advanced materials, processing technologies, and sustainable engineering practices are converging to meet global industrial and societal challenges.

The edition opens with 3D Printing, highlighting additive manufacturing technologies that enable rapid prototyping, complex geometry of details, material optimisation, and customised production across engineering and biomedical applications. Articles explore novel printable materials and the dimensional accuracy of the finished product.

Technology for Food Security examines solutions to enhance agricultural productivity and improve the effectiveness of traditional food processing, both of which are significant under changing environmental conditions.

Corrosion, Surface Treatment and Thermal Management addresses lifecycle extension through protective coatings for corrosion protection, surface modification techniques by water-repellent coatings for leather surface protection, and the investigation of lithium-ion battery thermal management performance.

Wastewater Treatment, Water Cleaning and Waste Recycling focuses on water environmental remediation technologies, advanced filtration and adsorption systems for wastewater treatment, and strategies of waste valorisation.

The presented research results provide an integrated view of how modern engineering disciplines contribute to sustainable development, environmental stewardship, and technological progress. This special edition aims to serve researchers, practitioners, and decision-makers seeking comprehensive and forward-thinking engineering solutions.