

# Preface

This special edition features articles based on current research results and technological advances in vital areas of materials science and engineering, with a focus on composite materials, environmental recovery technologies, construction materials, and related topics.

Chapter 1: Composite Materials presents studies on the design, processing, and performance analysis of composite materials. The contributions emphasise innovative fabrication methods and multifunctional properties that expand the use of composites in engineering solutions.

Chapter 2: Water Treatment focuses on the materials, technologies, and processes developed to improve water quality and address environmental challenges. Topics include adsorption materials and the reverse osmosis process, aimed at achieving sustainable and effective water purification.

Chapter 3: Particle System Mechanics presents the analysis and modelling of the behaviour of particulate multicomponent materials, utilising information technologies to provide insights essential for materials processing, environmental engineering, and manufacturing technologies.

Chapter 4: Building Materials discusses advances in materials used in construction, with emphasis on durability, sustainability, and performance optimisation. Studies encompass new building materials, eco-efficient approaches, and modern technologies that are shaping the future of the built environment.

This special edition is designed as a valuable resource for researchers, engineers, and students seeking to deepen their understanding of materials science and its practical applications.