

Preface

Materials science is a foundation of technological innovations that drive progress across diverse industries. This special edition presents a series of research results exploring the development, characterisation analysis, and application methods of materials critical to modern technology, including the construction sphere.

Chapter 1, "Materials for Membrane Production", analyses the advanced polymer materials and techniques used to fabricate membranes with exceptional performance in filtration processes.

The second chapter evaluates the mechanical and thermal characteristics of steels and alloys and explores innovative processing technologies.

The last third chapter, "Building Materials", examines the development and application of materials tailored for construction, focusing on both traditional and modern innovative decisions. By addressing factors such as strength, sustainability, and environmental impact, this chapter provides a wide overview of the trends shaping the future of construction materials, from eco-friendly bio-based composites to highly efficient concrete elements.

This special edition offers a series of engineering explorations in materials science and materials processing technologies and could serve as a valuable resource for researchers, engineers, and practitioners, inspiring innovation and collaboration in tackling the technical and technological challenges of the future.