

# Preface

This special edition presents recent research results and engineering solutions in two interconnected fields: membrane technology, heat and mass transfer in engineering systems, highlighting innovative approaches and technologies, and in the area of materials for optoelectronics and energy storage which also drive scientific and industrial progress.

Chapter 1, Membranes and Membrane Technologies, explores the development and application of membranes and related technological processes, emphasizing their role in separation, purification, and energy-related applications.

Chapter 2, Heat and Mass Transfer and Thermoelectric Conversion, examines numerical simulation of applied aspects of heat and mass transfer mechanisms in engineering systems and the effect of mass flow rates of the liquid petroleum gas on the power of the thermoelectric generator.

Chapter 3, Materials for Optoelectronics and Energy Storage Devices, contains articles on the design and optimisation of materials that enhance the performance of optoelectronic systems and energy storage solutions, key to advancing sustainable technologies.

This special edition provides a comprehensive perspective on emerging materials and related technologies, fostering innovation and future research.