

# Preface

The development of technology and the synthesis of new materials have transformed our approaches to solving many engineering problems. Focusing on research results in diverse fields of materials science and engineering, the presented special edition gives readers an idea of advanced materials and transformative technologies shaping the modern world.

Chapter 1 introduces some engineering advances in 3D printing and details of its applications in sensor engineering, biomedicine, etc.

Chapter 2 delves into the synthesis and characteristics analysis of biofuels, highlighting their role in fostering sustainable energy solutions.

Chapter 3 focuses on materials for construction purposes, emphasizing the importance of material selection for hydrothermal, energy-saving and moisture-transferring properties of infrastructure.

Chapter 4 is dedicated to the mechanics of construction structures, providing insights into engineering solutions that ensure structural safety and stability.

Finally, Chapter 5 addresses solar desalination, a critical technology for sustainable water management in arid regions.

This special edition will be interesting to many specialists whose professional activities contribute to the sustainable development of the designated areas of engineering.