

Preface

The demand for advanced materials constantly grows, unlocking new technological capabilities that drive industrial progress. This special edition comprehensively looks at the research results in four pivotal areas where materials research is shaping the future.

Chapter 1 delves into the sphere of composite materials, exploring their unique properties and production techniques, that make them indispensable in fields ranging from aerospace to construction.

Chapter 2 focuses on the materials for battery electrolytes, highlighting innovations whose application increases batteries' performance and efficiency.

The next chapter investigates materials engineered for specific applications, from optoelectronics to sensors, emphasizing their role in improving device functionality.

Finally, the latest chapter, addresses the rapid advances in additive production processes, showcasing how these technologies are revolutionizing modern manufacturing with unprecedented flexibility and resource efficiency.

This special edition aims to provide researchers, engineers, and students with valuable insights into cutting-edge engineering and technological solutions, encouraging further exploration and innovations.