

Preface

This special edition offers readers research results in some key areas of material science topics: composite materials, thin films, functional materials and special coatings. These materials form the backbone of numerous modern technologies, playing a vital role in industries ranging from aerospace and electronics to energy and healthcare. The edition aims to provide researchers and engineers with a comprehensive understanding of properties of these advanced materials and the current methods of their applications.

Chapter 1, "Composites", discusses the principles, properties, and applications of some composite materials. Modern composites offer superior mechanical performance, lightness of finished structures, and durability. This chapter covers polymer composites reinforced by natural materials.

Chapter 2: Thin Films, explores the deposition techniques, structural analysis, characterisation, and functional properties of thin films for applications in microelectronics and optic engineering.

Chapter 3, "Functional Materials and Special Coatings", presents an overview of materials engineered for specific functionalities and high-performance protective coatings. The chapter highlights research results on various properties of these materials and coatings.

We hope that this collection will serve as a valuable resource and inspire further innovations in the field of advanced materials and technologies.