Preface

This special edition contains articles based on research results and developments in materials science, focusing on polymers and composites, magnetic materials, analysis of corrosion resistance, protective coatings, and surface treatment. The solutions and ideas presented here represent a convergence of theoretical insights and practical applications and offer a comprehensive approach to research and design.

The first chapter is dedicated to the synthesis, analysis of properties, and applications of some polymer and composite materials with a focus on their adaptability, strength-to-weight ratio, and environmental impact.

The second chapter, "Magnetic Materials", explores the properties of m-type hexaferrites and the effect of temperature on the magnetic characteristics of neodymium magnets.

The third chapter, "Corrosion, Protective Coatings, and Surface Treatment", addresses the actual challenge of materials corrosive degradation. This section presents cutting-edge research on corrosion mechanisms, advanced coating technologies, and surface treatments that extend material lifespans while reducing maintenance costs.

This special edition is an important resource for researchers, practitioners, and students interested in understanding and leveraging the latest advancements in materials science and engineering.