

# Preface

The edition presents a series of research results in materials science and technologies of materials synthesis and processing.

The first two chapters are devoted to the research of properties and technologies of processing structural materials: steel, alloys, polymeric and composite materials. Studying microstructure and mechanical properties of structural metals, analysis of technologies of deep drawing, spot welding and electrical discharge machining, researching biodegradable polymer synthesis and properties of the composites, etc., are described in these chapters.

Results of preparation of ruthenium hollow spheres as catalysts for selective hydrogenation of benzene to cyclohexane, analysis of high-temperature physical and chemical properties of a molten salt system of aluminium electrolysis and reviewing some environmental remediation technologies are presented in the next two parts of the book.

The last chapter presents research results on materials and technologies in construction.

This edition will be helpful to engineers and researchers in materials processing, chemical synthesis, environmental engineering and construction.