

## Preface

This special collection of articles is dedicated to the latest research results on materials science, chemical and biochemical technologies of materials synthesis and materials for modern construction.

Hydroxyapatite and other biomaterials for bone defect treatment, coated magnetite nanoparticles for hyperthermia therapy and analysis of the application of compensation filter for obtaining the best radiographic image of the human hand bones in the posteroanterior projection are the topics of the first chapter focused on investigating properties of materials used in biomedical practice.

The next three chapters present the results of research in applied biotechnologies used in biodiesel production and the food industry, and also the special features of nanomaterials for fuel cells and electronics.

The last two chapters contain articles that reflect achievements in the development methods of diffusion-bonded dissimilar metal joints and the creation of protective coatings by thermal spraying. Here are also analysed technologies of synthesis and preparation of various high-performance materials for construction.

The presented special edition will be useful to specialists in biotechnologies, machinery, biomedicine, chemical production, electrochemistry, electronics and construction.