MATERIALS, TECHNOLOGIES AND WASTE TREATMENT

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Preface

This special edition presents cutting-edge research results and insights across areas: materials and processing technologies, waste treatment, and materials and technologies in construction.

The first chapter explores the latest advancements in the mechanics of materials and materials processing techniques. From the modelling of innovative metal extrusion technology to the analysis of materials' mechanical properties, the articles in this chapter investigate how modern technological solutions are pushing the boundaries of manufacturing performance and efficiency.

The second chapter addresses one of the most urgent environmental challenges today - the management and recycling of waste. The articles in this chapter examine novel technologies for using industrial and household waste in particular in the production of building materials, focusing on how sustainable engineering solutions can transform waste into valuable resources, showcasing strategies to reduce the ecological impact of waste and promote circular economies.

The latest third chapter to some extent is a logical continuation of the previous chapter and delves into the development of materials and technologies designed to enhance the safety, and durability of infrastructural objects. This chapter covers innovations that are shaping the future of construction, offering modern practical solutions.

This publication provides a comprehensive overview of technological development, highlighting the critical role that advanced materials and technologies play in addressing global challenges. This special edition will be an invaluable resource for researchers and engineers whose activity is related to machine building, construction and ecological safety.

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