

Preface

The special publication is devoted to the current issues in materials science and investigations of industrial materials synthesis and processing technologies.

In this issue, solutions in the field of computational materials science and digital manufacturing occupy a special place.

Modelling of friction stir welding, hot rolling, convention welding, numerical investigation of materials properties using computational materials science methods, and the modelling of the technological equipment allow the creation of a digital twin of the technological process and the transition to digital manufacturing.

The tribology research, creation of biotechnology for the production of epoxidised rubber seed oil via lipase-catalyzed epoxidation, bioceramics synthesis and analysis of biocompatible coating on the magnesium alloy which can be used in biomedicine, a study of wastewater treatment processes features and investigation on building materials are also subjects of scientific and engineering research presented in this edition.

This special publication will interest materials science, manufacturing technologies, machinery, biomedical engineering, and construction specialists.