

# Preface

Presented to your attention, this special edition contains articles that reflect the latest research achievements and engineering solutions in materials science, technologies of additive manufacturing, thermal engineering and medical signal and image processing.

The first and second parts are devoted to studying the properties of special composites and crack initiation and propagation of high-strength steel analysis, and investigation of some technologies of additive manufacturing.

The solar water heating system, the gas turbine's closed cooling water system and the phase change material for cooling of reefer container are the objects of engineering investigations in the third chapter.

The last chapter is dedicated to developing new and analysed existing medical image and signal processing methods. This direction in biomedical engineering has rapidly grown in recent years and occupies an important place in medical diagnostics.

This edition will be helpful to researchers and engineers whose professional activity is related to materials science, machinery and biomedical engineering.