

# Preface

The results of research and real engineering developments in the field of modern engineering materials are presented to readers in this issue.

Modern high-tech production is not complete without the use of special and highly functional materials. Phase change materials, shape memory materials, ceramics, energy storage materials, etc. significantly expand the functionality of finished products and equipment and increase the efficiency of their use.

All of the above can be fully attributed to materials that are widely used in the production of sensors, actuators and photovoltaic devices, without which the development of mechatronics, measuring technology and photovoltaics is impossible.

The study of the specifics of technologies for the processing of structural materials, the determination of optimal technological parameters and the selection of materials that meet technological requirements are today the basis for engineering preparation for production. In this edition, the reader will find some engineering solutions in this area.

Modern building materials using production waste and natural components, as well as wastewater treatment technologies based on photodegradation and photocatalytic treatment are important links in the sustainable development of modern technogenic society. Research results related to these technologies are also included in the publication.

This book will be helpful to specialists in materials science from many production branches.