

Preface

This special issue includes articles that reflect the latest results of scientific and engineering research in high-performance structural metals, means of structural materials corrosion protection, strength of materials and heat and mass transfer phenomena.

The crystallisation processes, estimation of the lattice parameter and lattice distortion, and mechanical and thermophysical properties of some high-entropy and amorphous alloys are analysed in the first chapter.

The effectivity of corrosion inhibitors for pipes of furnace cooling in metallurgical production and applying inhibitors for various structural materials in various industrial conditions and properties of silica-based metal anti-corrosion coatings are investigated in the second chapter.

The third part of the special issue is devoted to practical issues of the strength of materials and their defect identification and analysis.

The last chapter is dedicated to the computational investigation of heat and mass transfer processes in various engineering systems with different external and internal conditions.

The presented special edition will be useful to engineers in mechanical engineering and researchers in materials science.