

## Preface

The special edition is devoted to modern engineering solutions and research results in biomaterials, laser applications and design in mechanical engineering.

The sonication treatment of hydroxyapatite structure from limestone, characterisation of bio-based hydrogel, etc. are described in the first chapter.

The second part is devoted to the review of applications of various laser technologies in machinery and quantum computing.

The last part contains articles related to the practice of engineering design. Design and analyses of the knee joint for the smart transfemoral prosthetic and piston extruder for 3D printing from biocomposite, thermo-structural response prediction of ultra-high-temperature ceramic composite control surface for hypersonic cruise vehicle, analysis performance of bolt joining, etc. are presented here.

This special collection will be interesting to many engineers and researchers from materials science and machinery.