

# Preface

This special edition includes articles on research results in materials science and technologies of friction stir welding.

Dielectric and electrical properties of functional ceramics and structural refinement of piezoceramics, analysis of properties of polymer inorganic composites for electromagnetic radiation absorption using potassium titanate and studying metal oxide applications for sensors and as an admixture to the water coolant in the heat exchanger, analysis of the relation the readiness of coal coke to its electrical resistance and studying properties of the smart bioactive humic-polymeric hydrogel are the topics of the first two chapters in this edition.

Friction stir welding technologies is the topic of the last chapter. The performance of conventional friction stir welding technology and technology of friction stir welding in the liquid environment, submerged friction stir welding, friction stir spot welding and mechanical properties of welding joints are investigated here.

This collection will be helpful to engineers-technologists of machinery enterprises and specialists in materials engineering.