

## Preface

This Collection of scientific papers is prepared as the event of the National Contact Point “Secure, Clean and Efficient Energy” under the support of the Ministry of Education and Science of Ukraine. This issue is dedicated to the 120-th anniversary of the Dnipro University of Technology (former National Mining University, Dnipro, Ukraine). The aim of the event was to bring together experts in order to exchange ideas and make new connections to extend and develop partnerships between the researchers from all the world.

Topics of the volume includes: advanced experience of thermochemical conversion of solids; structural changes of the substances including metallurgical production; gas hydrate formations; dynamics and strength of physical structures; physical state of metals in thermoplastic transformations; technology of controlled rolling, composite materials.

We received more than 60 articles, which were peer reviewed by the International Scientific Committee or reviewers and they were also cross checked for similarities, for good scientific practice in publishing. Only 20 articles are accepted for publication in the Solid State Phenomena periodical. The authors of accepted papers are from Ukraine, Poland, Peru, Indonesia, Iraq, India, Jordan.

We believe the volume will be essential reading for those in the related areas and will provide an inspiration for future studies and achievement.

The editors acknowledge the contribution of the organization staff, members of program committees, authors, and expert referees who spared their valuable time. We would like to express the warmest thanks to the participants and sponsors of this issue for their support. We express our gratitude to Pavlo Saik, Vasyl Lozynskyi & Daria Pilova for providing extra help in current volume preparation.