

Preface

The volume contains selected peer-reviewed papers presented at the AMS-Workshop “Advances in Materials Sciences-2020”, which took place in the framework of the III International Conference on Advanced Technologies in Aerospace, Mechanical and Automation Engineering - MIST: Aerospace-III-2020 on November 20-21, 2020 (Krasnoyarsk, Russian Federation).

The main topics cover urgent researches and recent results in polymer and metal composites; dispersed materials; metallurgy and metal science, heat treatment of metals and alloys; corrosion and metal protection; tests, diagnostics and quality control of materials; structural and technological strength and performance of materials; materials science problems of the utilization of equipment, machinery, structures and metal waste.

The Conference was jointly organised by the International and Russian Union of Scientific and Engineering Associations (Moscow, Russia), Krasnoyarsk Regional Union of Scientific and Engineering Associations, and Krasnoyarsk Science and Technology City Hall.

The main partner organisations in preparing and organising the Workshop in Krasnoyarsk as well as of the previous scientific events were JSC “Central Construction Bureau “Geophysics”, JSC “ISS-Reshetnev Company”, Siberian Federal University, Reshetnev University, Krasnoyarsk Scientific Centre of the Siberian Branch of the Russian Academy of Sciences.

The Program Committee and Editorial Board included prominent professors and scientists from the Russian and International Union of Scientific and Engineering Associations, Russian Academy of Sciences, University of Maribor (Slovenia), Chinese-Ukrainian University (China), Ruhr University in Bochum (Germany), Siberian Federal University (Russia), Reshetnev Siberian State University of Science and Technology (Russia), Voronezh State Technical University (Russia) as well as specialists from Russian and foreign leading industrial enterprises.

This was the 3rd Conference which attracted even more participants with very urgent reports. All the participants evaluated the results of the Conference as highly important for the sustainability of modern society industrial development.

More than 250 participants submitted about 100 papers to the Organizing Committee of the AMS Workshop. All the papers were subjected to rigorous peer-review by conference committee members and international reviewers. The papers were selected based on their quality and relevance to the Conference and Workshop directions.

We chose the Materials Science Forum to provide all contributors with the opportunity to publish their papers in an international, peer-reviewed journal. This is understood and appreciated by all the participants, and therefore this volume provides an excellent overview of the main topics of our AMS Workshop.

The volume will be useful for a wide range of scientists and specialists of research institutes, design organizations, industrial enterprises, and educational institutions interested in materials science.

*Prof. Dr. Igor Kovalev,
The Chief Editor of AMS Workshop*