

## Foreword to the Issue

It is my pleasure to present the first issue of the journal *Advanced Materials & Technologies* in 2018.

In recent years, *materials and deep processing of raw materials* has become a new priority direction in Russia, and *additive technologies* (prototyping, 3D-printing) have been dominant in the technological research. According to specialists, additive technologies increase labor productivity by 30 times, increase the material utilization factor to 98 %, and reduce the construction weight by 50 %. They also reduce the duration of the production cycle from design to product to a minimum, considerably reduce operational and capital costs, and enhance the environmental safety of all technological processes.

The following groups of materials are developed worldwide – intellectual materials, metamaterials, nanocrystalline and amorphous metals, polymeric and polymatrix composites, durable ceramics, memory alloys, laminates, etc., which along with additive technologies are a key direction for technological breakthrough and successful implementation of other priorities for the modernization of virtually all sectors of the economy (fuel and energy, petrochemical complexes, engineering, aircraft building, space and nuclear technologies, construction industry, consumer goods, etc.).

In this regard, the journal *Advanced Materials & Technologies* is interested in publishing original articles, reviews and reports on the development and creation of structural and functional materials with a fundamentally improved set of properties, efficient and resource-saving technologies for their processing.

Let me remind our readers that the main purpose of the journal is to inform scientists and specialists about advanced developments and trends in the field of modern materials science both in Russia and abroad. All publications are in English, and the journal is indexed in Chemical Abstract; Russian Index of Scientific Citation; Google Scholar (Google Academy). This provides domestic scientists with additional opportunities for more effective sharing of knowledge and experience with the international scientific community. The journal is intended for a wide range of scientists, undergraduates and graduate students of higher education institutions, specialists of research institutes, design organizations and high technology industrial enterprises.

I look forward to continuing close cooperation with the Merzhanov Institute of Structural Macrocineitics and Material Sciences of RAS (Chernogolovka) within the Research & Education Center (REC) TSTU-ISMAN “Solid State Technology”, National Research Center “All-Russian Research Institute of Aviation Materials (Moscow) within the framework of NanoTechCenter Ltd. (Tambov), OJSC Roshimzashchita Corporation within the framework of REC TSTU-JSC Roshimzaschita New Chemical Technology (Tambov), National Research Technological University Moscow Institute of Steels and Alloys (Moscow), the Institute for Metals Superplasticity Problems, Russian Academy of Sciences (Ufa), etc.

I am happy to welcome the new members of the Editorial Board – Mikhail L. Kheifetz, Doctor of Technical Sciences, Professor, Deputy Academician of the National Academy of Sciences of Belarus, Minsk, Belarus; Vostanik Z. Marukhyan, a full member of the Engineering Academy of Armenia, Professor, Rector of the National Polytechnic University of Armenia, Erevan, Armenia; Roman B. Morgunov, Doctor of Physics and Mathematics, Professor, Leading Researcher of the Institute of Problems of the Chemical Physics of RAS, Chernogolovka and Stephane Mangin, Professor Physics of Matter and Materials Department, Institute Jean Lamour, University of Lorraine, France, and we look forward to their active participation in the journal work.

By the Resolution of the Presidium of the Higher Attestation Commission of the Ministry of Education and Science of the Russian Federation, AM&T journal has been included in the list of leading peer-reviewed scientific journals and publications to publish main scientific results of dissertations for candidate and doctorate degrees.



**M.N. Krasnyansky**  
 Chairman of the Editorial Board,  
 TSTU Rector, RAS Professor