



Journal: **Reviews on Advanced Materials and Technologies**

Special Issue: **Advanced Structural Materials**

Submission Deadline: 31 October 2021

Editor-in-Chief [A. E. Romanov](#)

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Dear Colleagues,

Research and development in the field of advanced structural materials (ASMs) has remained one of the hottest topics in materials science, solid state physics, chemistry and mechanics of materials during more than a century. In the recent years, researchers have looked for the most effective routes of preparing ASMs, which would be suitable for the conditions of mass industrial production, as well as new areas of their potential application. Cooperative efforts made by different means including experiments, computer simulations and theoretical modelling have allowed to imagine the big variety of deformation and fracture processes which are responsible for the mechanical behaviour of ASMs on different temporal and spatial scales. Thanks to these results, new types of ASMs have been produced, characterized and tested in applications, such as, for example, bimodal and nanotwinned materials, ultrafine-grained materials with specially designed grain boundaries, various types of micro-nano- and nano-nanocomposites, including those with graphene fillers, etc. There is no doubt that novel types of ASMs are developing at the moment and/or will appear in the nearest future.

To see and estimate the state of the art in the field of **Advanced Structural Materials**, we invite you, as participants of the 63rd International Conference “Advanced Problems of Strength” and the 10th International School “Physical Materials Science” (13 – 17 September 2021, Togliatti, Russia), to present your articles devoted to different aspects of deformation behaviour of ASMs to the Special Issue of the open-access journal **Reviews on Advanced Materials and Technologies**. Special Issue is scheduled for publication in 2021.

Prof. Alexey E. Romanov

Prof. Mikhail Yu. Gutkin

Keywords:

- Structural materials
- Plastic deformation
- Fracture
- Strength



«Reviews on Advanced Materials and Technologies» journal provides an international medium for the publication of reviews and topical issues presenting the new frontiers in the area of theoretical and experimental studies of advanced materials and technologies.

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- Photonics: new materials and technologies
- Nanomaterials: synthesis, characterization, properties and application
- Mechanics and physics of strength and plasticity of advanced functional and structural materials
- Materials science and technology of low-dimensional solid and soft structures
- Advanced materials and technologies in medicine and biology

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Audience:

- Physicists
- Materials Scientists
- Mechanicians
- Engineers specializing in Optics, Electronics, Mechanics, and Metallurgy
- Biomedicine researchers
- Chemists

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