

# Preface



Fourth Asian School-Conference on Physics and Technology of Nanostructured Materials (ASCO-Nanomat 2018) has been held under the auspices of the Institute of Automation and Control Processes of Far Eastern Branch of Russian Academy of Sciences and Far Eastern Federal University, in Vladivostok on September 23-28, 2018. ASCO-NANOMAT 2018 was intended as a forum for senior and young scientists and technologists from Asian and European universities, academic institutes and industrial enterprises where they can present their

latest findings and develop new synergies in the field of Physics and Technology of Nanostructured Materials and related subjects.

Vladivostok is a Russian city in Far Eastern region, geographically close to Asian countries: China, Japan, Korea, India, Taiwan, Australia and others. Therefore, the first aim of this School-Conference is to stimulate multidisciplinary contacts and cooperation between scientists from Asia and Europe. Russia here acts as a bridge connecting two parts of the World. The second aim is to give to young scientists the opportunity to deliver their presentations on the international conference and encourage them by the award for the best oral or poster report. The third aim of this forum is to select new unpublished results of young scientists and publish them in the special issue of Solid State Phenomena (SSP).

All the aims have been achieved. The School-Conference was successful. 15 invited, 40 oral and 81 poster reports have been presented by the participants, including noted professors, young scientists and post graduate students from 15 Asian and European countries. The ASCO-Nanomat 2018 was a multidisciplinary school-conference, which has been held for the fourth time, and had eight scientific sections:

- Physics of nanostructures and interfaces, self-organization processes
- 4th group material's alloy based on Si, Ge, Sn и Pb: formation, structure and properties
- Physics of semiconducting nanostructures and heterostructures, including silicide, germanide and stannide heterostructures: experiment, calculations and technology
- Formation and properties of ferromagnetic and ferroelectric materials, a spintronics
- Optical materials and photonic crystals
- Nanostructured coverages, nanocomposites, functional hybrid materials: formation, structure and properties
- Biomaterials and sensors on their base
- Photonic and electronic devices: integrated circuits, solar cells, nanophotonics, biophotonics

The Award Committee has chosen 3 oral and 6 poster young scientist reports to be awarded by the honorary diploma. The Publishing Committee has selected 66 unpublished articles, which were recommended for publication in the SSP book as selected Proceedings. The one presented here is named "Physics and Technology of Nanostructured Materials V"

We, the Organizing Committee, are very pleased to publish selected articles of “ASCO-NANOMAT 2018” for scientists, researchers and students with interest in the physics and technology of nanostructured materials.

We would like to take this opportunity to thank all authors, Invited lectors and the Organizing Committee members for their contributions to the conference.

Professor Nikolay G. Galkin,  
Chairman of ASCO-Nanomat 2018,  
Editor of SSP book and Proceedings of  
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