

# Preface

Third Asian School-Conference on Physics and Technology of Nanostructured Materials (ASCO-Nanomat 2015) has been held under the auspices of the Far Eastern Federal University and Institute of Automation and Control Processes of Far Eastern Branch of Russian Academy of Sciences, in Vladivostok on August 19-26, 2015. ASCO-NANOMAT 2015 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 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 The third aim of this forum is to select new unpublished results of young scientists and publish them in two special issues of Solid State Phenomena.



All the aims have been achieved. The School-Conference was successful. 22 invited, 51 oral and 86 poster reports have been presented by the participants, including noted professors, young scientists and post graduate students from 17 Asian and European countries. The ASCO-Nanomat 2015 was a multidisciplinary school-conference, which has been held for the second time, and had eleven scientific sections:

- Atomic-scale controlled surfaces/interfaces and nanostructure self-organization
- Semiconducting nanoheterostructures: growth, structure and characterization
- Nanosilicides and bulk silicides: synthesis and characterization
- Carbon based nanomaterials: technology, structure and characterization
- First principal calculations and molecular modeling of nanostructures
- Formation and properties of ferromagnetic, thermoelectric and ferroelectric materials and nanosystems
- Optical materials, nonlinear optical mediums and laser metrology
- Nanostructured coatings: formation technology and properties
- Nanocomposites and functional hybrid materials: formation technology, structure and characterization
- Biohybrids and biomaterials: biomimetic materials, biomineralization, and biosystems
- Nanodevices and sensors for photonics, optoelectronics and electromechanics



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 82 unpublished articles, which were recommended for publication in two books of Solid State Phenomena as selected Proceedings. The first one presented here is named “Physics and Technology of Nanostructured Materials III”

We, the Organizing Committee, are very pleased to publish the first party of selected articles of “ASCO-NANOMAT 2015” 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.

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