

## **PREFACE: 9TH MINSK INTERNATIONAL SEMINAR**

This Special Issue of the *Heat Pipe Science and Technology. An International Journal* contains selected papers from the Proceedings of the 9th Minsk International Seminar "HEAT PIPES, HEAT PUMPS, REFRIGERATORS, POWER SOURCES" (MIS), which took place on September 07–10, 2015 in Minsk, Belarus with more than 100 attendants from 22 countries. The IX Minsk International Seminar Proceedings incorporate more than 80 papers, including 9 invited lectures. These selected papers are focused on the theory, experiments, and applications of convective heat and mass transfer in two-phase flows, heat pipes, heat pumps, refrigerators, power sources and are aimed at enhancing the dialogue between the multiple groups interesting in development, transfer, and application of renewable energy technologies. The considerable potential impact on the energy systems is realized by wide application of heat pumps, fuel cells, and solid/liquid sorption systems of two and tri-generation of energy. A new stream of the Seminar is associated with application of nanotechnologies. Nanofluids and nanocoatings applied in miniature heat transfer devices are intended to improve the thermal characteristics of heat pipes, heat pumps, refrigerators, and different power sources, whose size and operating costs can be reduced by using nanotechnologies. The nanoroughness of the heat transfer surfaces due to nanocoatings increases the surface area and wettability of the vapor–liquid interface and evaporation heat transfer. Heat pipes with nanofluids and nanocoatings are easily implemented into multistage adsorption systems and ensure the heat and mass recovery from one stage system to another. Such solid sorption machines are very compact, light and have a good potential to be used in air–fuel cells, electronic thermal control, transport applications, and space programs. All of the papers accepted for the Seminar were rigorously reviewed by experts, including the International Scientific members of the Seminar. Decision regarding the inclusion in the Proceedings was based on authors' responses to peer reviews.

As the Guest Editors of this Special Issue of the *Heat Pipe Science and Technology. An International Journal* we are very grateful to the Seminar International Scientific Committee members for their valuable contribution to the reviewing of all full papers and keynote lectures: O. G. Penyazkov, S. Kakaç, R. Cotta, A. G. Fedorov, Yu. I. Aristov, B. B. Saha, B. Bonjour, Yu. F. Maydanik, V. V. Kuznetsov, A. A. Mahamad, M. Groll, V. V. Yagov, K. A. Goncharov, M. Mochizuki, and M. Ohadi.

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Guest Editors:

*Leonard L. Vasiliev and Alexander Zhuravlyov,  
A. V. Luikov Heat and Mass Transfer Institute,  
National Academy of Sciences of Belarus,  
15 P. Brovka Str., Minsk, 220072, Belarus*