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**Joint research project on GRAPHENE**

In the Research Institute for Nuclear Problems, Belarusian State University, (INP BSU) the joint Belarus-China project "**The development of coatings with modified graphene for the protection against microwave radiation**" is carried out since June 2014 (project #1 from the Program of scientific-technological cooperation on 2015-2016, approved by the XI session of the Intergovernmental China-Belarus commission on the cooperation in science and technology). China partner is Du Bang Ltd., Harbin. During the project realization, significant results have been achieved in the field of design, fabrication and application of ***graphene***based composite materials. The results have been published in a set of high-ranked scientific journals. At that, financing of the project (about $50 000 at present) is completely carried out from the off-budget sources of the institute while the China partner contribution was restricted to assigning the China-originated ***graphene***powder without any financial support and contribution into research. We guess that the current status of the project does not provide necessary conditions for further progress in its realization.

On the other hand, during the Professor Sergey Maksimenko vist the 2014 China Harbin International Economic and Trade Fair, several meetings taken place and agreement has been has been signed which all together promise essential progress in China-Belarus collaboration on ***graphene*** (or, more generally, ***nano-carbon***) science and applications. A special presentation "Nanocarbon Based Materials For Electromagnetic Applications" has been delivered by Prof. Sergey Maksimenko at Harbin Institute of Technology, at Institute of Petrochemistry, Heilongjiang Academy of Science, and at Harbin University of Science and Technology. A significant interest to the topic and to the cooperation on that have been expressed in all institutions. Moreover, the Agreement has been signed hereafter between INP BSU and Institute of Petrochemistry on International Research Cooperation on Nanocarbon Based Materials for Electromagnetic Applications. Thus, a conceptual platform for the development of joint research in the topic defined above has been established, and INP BSU has well-experienced internationally recognized team which can provide progress in the research together with China partners.

Indeed, during last two decades INP BSU team shows advanced achievements in nanocarbon science and technology, ranging from pioneering theoretical works on nanoelectromagnetics (Physical Review B, 1999) to experiments with **graphene/polymer** sandwiches (Scientific Reports, 2014) demonstrating unexpected extraordinary absorption in **monolayer graphene**. For the contribution in nanoelectromagnetics, Prof. Maksimenko has been elected in 2009 as SPIE Fellow. In addition to national R&D programs, four EU FP7 projects and one project within EU Program "Hirizon 2020" are carried in INP BSU together with European partners on nanocarbon based materials. Moreover, the INP BSU is the only one between research institutions from FSU countries entering the European initiative and megagrant "Graphene Flagship" joining more than 150 EU research institutions. There are also stable R&D connections with Russian leading institutions working on nanocarbons, in particular from Siberian Branch of Russian Academy of Sciences.

Based on the above, INP BU proposes to revive the current **joint Belarus-China project** "**The development of coatings with modified graphene for the protection against microwave radiation**" involving Harbin University of Science and Technology and other Harbin research institutions as new participants and keeping Du Bang Ltd. role as one of the graphene supplier for further R&D. Establishing of a new project on nanocarbon materials is also possible. INP BSU together with other BSU institutions and departments can provide research program for such a collaborative project, short- and long-term training including MS and PhD supervision, joint research both in BSU and in Harbin. As an overgoal, the establishment of joint Belarus-China research and education laboratory on nanocarbon materials and applications is proposed, which would be an essential new step in the Belarus-China R&D collaboration.