

**Letter of Intent
Of the Deutsches Elektronen-Synchrotron DESY (Hamburg, Germany)
And the
National Research Centre “Kurchatov Institute” (Moscow, Russian Federation)
Concerning the**

**German-Russian Cooperation in Strategic Research Fields:
The Ioffe-Roentgen Institute**

Cooperation in research and technology is one of the most important aspects of the relations between Germany and Russia, as documented by a number of agreements between the two countries in the last decades, starting with the “Intergovernmental agreement on scientific and technological cooperation between Germany and the USSR”, which came into force on 7 July 1987, and strengthened through the German-Russian “Joint Declaration on a Strategic Partnership in Education, Research and Innovation”, signed on 11 April 2005. This strategic partnership includes a variety of programmes and projects, concerning education and research, run by outstanding institutions in both countries. Both partners put a strong priority on those sectors of cooperation which are most relevant to the innovation process, possess where special sectoral agreements have been concluded. An example of this type of agreement is the Memorandum of Understanding on “Development and Use of Accelerator-Driven Photon Sources”, signed on October 15, 2007, by the German and Russian Ministers of Education and Research.

For both the German and Russian scientific communities, the most significant goal of their cooperation is progress in those research fields, which will help to solve the Grand Challenges of our modern society in energy, health, environment and key technologies.

On the German side, this is the mission of the “Helmholtz Association”, Germany’s largest scientific organization with 33,000 employees in 17 research centres.

To the mission and responsibility of the Helmholtz Association belongs providing the national research community with so called large research infrastructures, which because of their magnitude and complexity can only be built and operated in a highly specialized and technologically extremely demanding environment. The Deutsches Elektronen-Synchrotron DESY, the Helmholtz Zentrum Berlin (HZB), the Karlsruhe Institute of Technology (KIT) and the GSI Helmholtz Centre for Heavy Ion Research, all members of the Helmholtz Association, construct, operate and further develop among the most advanced sources of photons, neutrons and ions worldwide. DESY and GSI play a major role in the construction of the two European facilities XFEL and FAIR, of which the Russian Federation is a most important shareholder.

On the Russian side, this is the mission of the National Research Centre (NRC) „Kurchatov Institute“, the largest Russian center of nuclear physics with 12,000 employees in 4 different research institutes. The main task of the NRC „Kurchatov Institute“ is to ensure stable technological development and modernization of fields of economy that are based on carrying out of fundamental and applied research exploiting unique large installations. The High Energy Physics Institute (IHEP) in Protvino, the Petersburg Physics Institute (PNPI) in Gatchina as well as the Institute

of Theoretical and Experimental Physics (ITEP) in Moscow, that are also parts of the NRC „Kurchatov Institute“, possess similarly extended experiences in construction and operation of unique large installations generating and using beams of protons, neutrons, heavy ions and photons. NRC „Kurchatov Institute“ is scientific coordinator of participation of Russian institutions in such large multiinternational projects as XFEL, FAIR, ITER, and LHC in CERN.

In the spirit of their common tradition, the German and Russian research institutions intend to strengthen their cooperation in the above mentioned strategic research fields. Both communities attribute a decisive role to the development of advanced nano-/ bio-materials, capable to adapt to the exigencies of future life: materials for sustainable energy concepts, for new information technologies, for more efficient transport systems. On the other hand, the medical needs of a growing and ageing population will be dependent on the individual, personalized design of drugs and pharmaceuticals. In front of this perspective the German and Russian scientific communities intend to support each other and cooperate closely especially in the field of nano- and biomaterial research at large facilities, which offer an incredible potential for the much needed field of fine analysis of matter.

In order to coordinate and focus their common efforts in this challenging field, DESY and the NRC Kurchatov Institute plan to create the **Ioffe-Roentgen Institute (IRI)**, with the vision to become a world leading Institute for the development and use of large infrastructures in the field of advanced materials.

The foundation of this Institute has been expressly supported in the joint declaration between the Russian Ministry for Science and Research and the German Ministry for Education and Research, signed in Moscow on May 23, 2011.

DESY and the NRC Kurchatov Institute wish to establish a long-term, stable and fruitful cooperation in the use and further development of synchrotron radiation sources and free electron lasers as well as neutron and ion sources. The strong Russian engagement in the European XFEL in Hamburg and in FAIR in Darmstadt is an impressive step in this direction.

The **Ioffe-Roentgen Institute** will include and foster all scientists, projects and initiatives from both countries directed towards the understanding of matter on the nanoscale, and consequently to its tailoring. The IRI will encompass all bilateral activities coherent to its mission of research, education and innovation such as:

- The construction of common experimental infrastructure and/or outstations at large facilities in both countries
- R & D activities to develop new large research infrastructure, in particular accelerators
- The preparation of bilateral research projects
- The exchange of scientific and technical personnel
- The organization of bilateral Conferences and Workshops
- The organization of summer schools, training periods and common experimental time at the large facilities, especially for young scientists

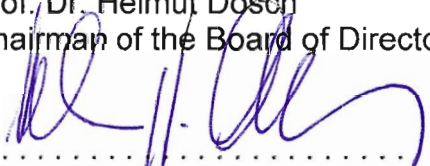
The IRI will coordinate, focus and support all the mentioned activities independently from the proposing institution, it will be a common home for scientists and projects from German and Russian universities and research institutes.

On the German side, the Helmholtz Centres, particularly those operating large experimental infrastructures will be strong partners of the IRI. DESY will coordinate the German side of the IRI, the NRC Kurchatov Institute will play a similar role on the Russian side.

Moscow, 23 May 2011

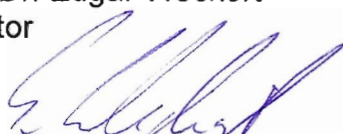
Deutsches Elektronen-Synchrotron
(DESY)

Prof. Dr. Helmut Dosch
Chairman of the Board of Directors



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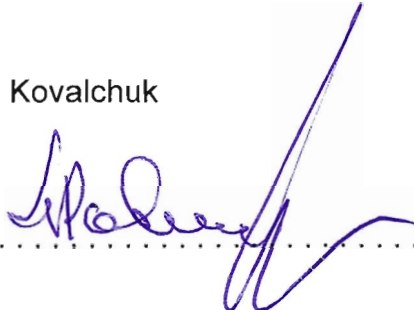
Prof. Dr. Edgar Weckert
Director



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NRC Kurchatov Institute

Prof. Dr. M. Kovalchuk
Director



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