NEW PROSPECTS FOR BILATERAL RUSSIAN-FRENCH S&T&I COOPERATION IN THE AREA OF MATERIALS RESEARCH AND BIOTECHNOLOGY EMPLOYING LARGE-SCALE SCIENCE FACILITIES

Workshop

Russian Centre for Science and Culture in Paris

Tuesday, 29.10.2019, 9.00 – 16.00

61 Rue Boissière 75116 Paris

DRAFT AGENDA

9.00-9.30	**REGISTRATION**
9.30 – 9.45	**Welcoming words and objectives of the workshop** **Konstantin Volkov,** the Head of the Russian Centre for Science and Culture in Paris **Nicolas Dromel,** Directeur du Département des Grandes Infrastructures de Recherche, Ministère de Enseignement supérieur, de la Recherche et de Innovation (France) **Alexey Semin** Deputy Director of the Department of State Scientific and Scientific-Technical Policy of the Ministry of Science and Higher Education of the Russian Federation
9.45 – 11.30	**Plenary session 1: Russian large-scale science facilities: new opportunities in materials science and biotechnology for researchers from around the world** Chair **(Marine Melkonyan)** **Reports duration -15 min** The National project for **Science:** focus on facilitating the attractiveness of Russia for the leading Russian and foreign researchers and young perspective specialists **Alexey Semin** Deputy Director of the Department of State Scientific and Scientific-Technical Policy of the Ministry of Science and Higher Education of the Russian Federation New NICA Accelerator Complex **Vadim Kolesnikov**, Head of the sector, Joint Institute for Nuclear Research (JINR), Dubna High flux reactor PIK and International Center for Neutron Research

	Sergey V. Grigoryev, the Deputy Director for International Affairs of the Petersburg Nuclear Physics Institute (PNPI), Professor of St. Petersburg State University Developing new modes of mutually beneficial cooperation with CERN **Vladimir Shevchenko,** Doctor of Science, the first Deputy Director of the nuclear physics complex, NRC "Kurchatov Institute"; Director of the Center for infrastructure interaction megascience, NUST MISIS Development of Franco-Russian relationships in Biology using multiple program **Alexis Gautreau**, Ph.D., Director of Research at CNRS, Professor at Ecole Polytechnique, President of the Biology Department, Institut Plytechnique de Paris Contributing to development of the Russian large-scale research infrastructure through European **CREMLIN** and **CREMLINplus** projects **Marine Melkonyan,** NCP for research infrastructures, NUST MISIS **Questions & answers**
11.30-12.00	**COFFEE BREAK**
12.00 - 12.40	**Panel discussion: New opportunities for bilateral Russian-French S&T&I cooperation in materials science and biotechnology** Moderator: **Marine Melkonyan** **Panelists:** **Abdo Malac**, Counsellor for higher education, science and technology, Embassy of France in Russia **Kirill Bikov**, Embasy of the Russian Federation in France **Frédéric RAVEL,** Directeur scientifique secteur énergie, développement durable, chimie et proceeds, Ministère de Enseignement supérieur, de la Recherche et de Innovation (France) **Alexey Semin** Deputy Director of the Department of State Scientific and Scientific-Technical Policy of the Ministry of Science and Higher Education of the Russian Federation **Pavel Postnikov**, Tomsk Polytechnic University
12.40-13.40	**Break for LUNCH**

13.40 -15.40	**Plenary session 2: Biotechnology, medicine and materials research for different applications. Success stories.** **Chair: Maxim Abakumov** **Reports duration -10 min** The evolution of viral hepatitis in liver cancer. **Igor Malov** M.D., Professor, Rector of IRKUTSK STATE MEDICAL UNIVERSITY (ISMU) Science police of Institut de Chimie de CNRS **Mehran Mostafavi**, Institut de Chimie de CNRS The combined screening of HIV, Viral Hepatitis in 15 minutes a unique and innovative approach for the eradication of these diseases **Paul Kauffmann**, PhD, CEO, Directeur de MagIA Diagnostics, Grenoble. Français Magnetic nanoparticles in the treatment and diagnosis of oncological diseases **Maxim Abakumov,** Ph.D., Head of the Laboratory "Biomedical Nanomaterials", NUST MISIS Add-on for an NMR spectrometer for fast field variation in the range 10 nanotesla – 9.4 tesla **Konstantin Ivanov,** Dr. Habil. In physics and mathematics, International Tomography Center, SB of the RAS Creation of new biocompatible powder materials for prosthetics of bone tissues using additive technologies **Maksim Egorov,** Ph.D., Don State Technical University Hybrid “smart” materials: novel approaches to preparation and application **Pavel Postnikov**, Tomsk Polytechnic University, (Joint project with the Institute of Radical Chemistry, University of Lille, Institute of Materials Chemistry (Paris)) The role of surface and interface chemistry in the rational design of functional materials **Mohamed Mehdi CHEHIMI,** Research Director (Grade DR1) National Center for Scientific Research (CNRS) Immobilized biocatalysts for ecobiotechnology.

	Maria Kuyukina, Professor, Doctor of sciences Perm State University Porous materials formed by molecular self-assembly for new generation of micro- and nanoelectronic devices **Vorotilov Konstantin** SEC «Technological center», Director, MIREA - Russian Technological University Scientific research in the field of biotechnology **Bagan Vitalii** , Ph.D.,Moscow Institute of Physics and Technology (National Research University) French-Russian cooperation in Baikal''s ice rings study **Denis Zyryanov**, Ph.D., Water Problems Institute Russian Academy of Science **Questions & answers**
15.40 – 16.00	**CLOSING AND CONCLUDING REMARKS**

Summary

Nearly all modern industries benefit from developments in materials research. To be leaders in industrial growth and to maintain a vibrant economy, it is critical to be successful in materials science, bio- and nanotechnologies, engineering innovations. Scientists and engineers in many disciplines, including solid-state physics and elementary particles physics, chemistry, electronics, biology, and mechanics provide many ideas and motivation for materials science and engineering research.

The important component of support for basic research in materials science is the state-of-the-art research infrastructure, in particular, so called the large-scale science facilities. Modern materials science makes intense use of large-scale science facilities: neutron reactors, synchrotron sources, free electron lasers, where sources, optics and detectors allow for a wide range of possible experiments putting forwards the limits of the analysis of the structure and dynamics of matter and materials.

Large-scale science facilities contribute to breakthrough research in the field of materials science; serve as an intellectual focus that attract scientists from around the world. Projects, implemented on these facilities are one of the most efficient tools to facilitate international cooperation in science, technology and education.

On the other hand, design, construction, operation and upgrade of the large-scale science facilities create demands for new materials, innovative equipment and components, manufacturing tools. Materials scientists and engineers can be at the forefront of large-scale science facilities development.

The workshop aims to provide an attractive and welcoming platform for representatives of science community and large-scale science facilities to share experience and exchange views on prospects of coherent and effective interaction.

Benefits of the large-scale science facilities for materials research and engineering, bio- and nanotechnologies