



Saint-Petersburg State Polytechnic University
Center for Advanced Studies



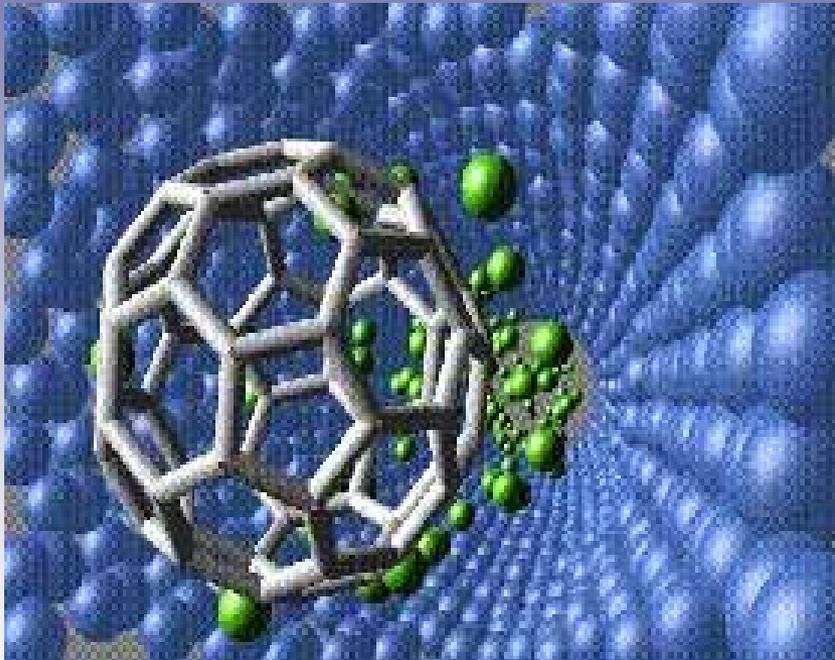
Sergey V. Kozyrev

Athens, 11 April 2008

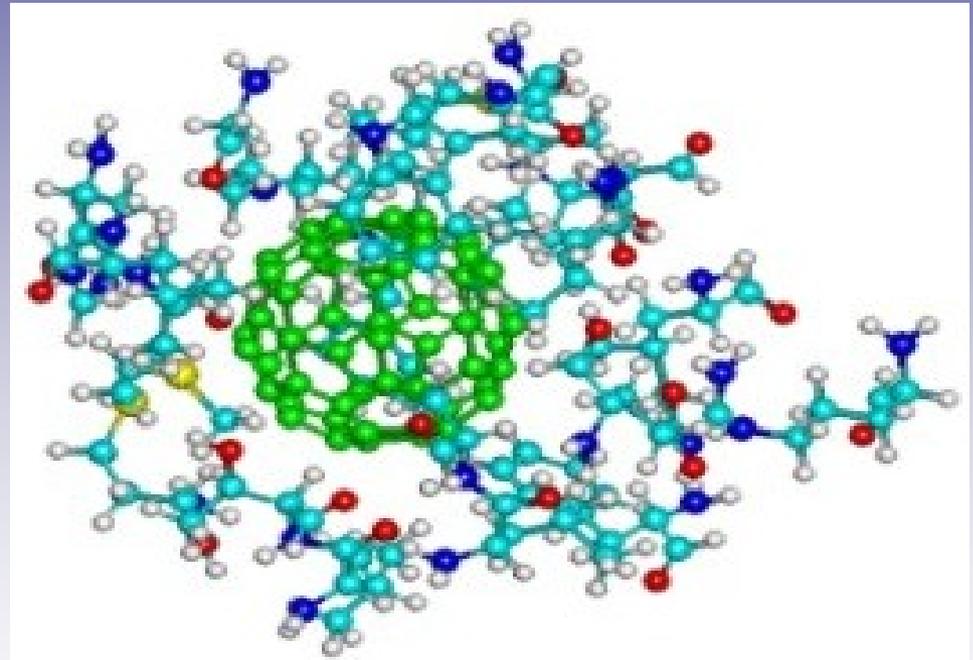
Emerging Science and Technology

TOP → BOTTOM

NANO + BIO



Nanotechnology



Nanobiotechnology

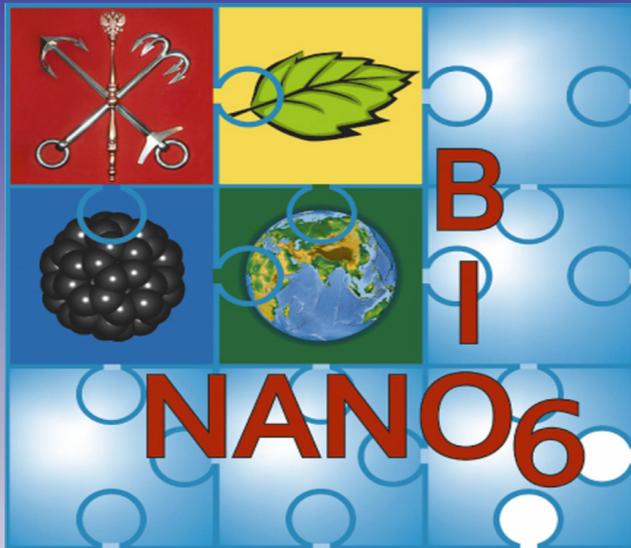
Nanobionics

Synthetic Biology

Future Summit Nano & Bio & Info

St. Petersburg International Workshop on NanoBioTechnologies

27 -29 November 2006



Main Organizers

- Ministry of Education and Science of the RF
- Saint-Petersburg Polytechnical University
- M.V.Lomonosov Moscow State University
- Austrian - Russian Working Group
- Saint-Petersburg State University
Technology and Design
- Saint-Petersburg Physico-Technical Science
and Education Center of Russian Academy
of Science
- Center for Advanced Studies of SPbSPU
- Center for Microelectronics and Diagnostics
of SPbSEU
- National Documentation Centre of Greece

The third position all over the world in
NanoBio Meeting = Excellent result!

Satellite Meetings

- Round Table "St. Petersburg RoadMap for
Nanotechnologies and Nanobiotechnologies in
High-Tech Industry of St.Petersburg"
- Austrian-Russian Workgroup on
Nanobiotechnology
- German-Russian Network on Computational
Systems Biology
- Russian – Dutch workshop "Modelling and
inferring developmental regulatory networks"
- Russian young scientist competition for FASIE
- Special Sessions Funding Opportunities (FP7,
NIH, RFBR)

St. Petersburg International Workshop on NanoBioTechnologies

27 -29 November 2006



180 participants from:

*Russia, Austria, USA, France,
Holland, Germany, Finland,
Sweden, South Korea,
Greece, Romania,
Czechia, Belarus
the Great Britain,
China*

Int. Corporation:

*LG TCM, Intel, General Motors,
Siemens, Philips, Dupont*

Conference Co-Chairs

Mikhail Alfimov (Russia), Director of the Photochemistry Center of RAS

Mikhail Fiodorov (Russia), Rector of St. Petersburg State Polytechnical University

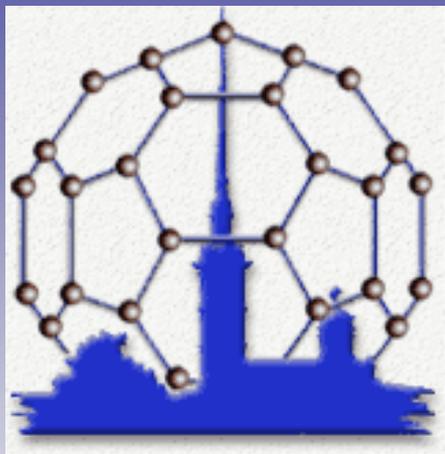
Viktor Sadovnichij, Rector of M.V.Lomonosov Moscow State University

Co-Chairs of Scientific and Organizing Committees

John Reinitz (USA)

Sergey Kozyrev (Russia)

Welcome!

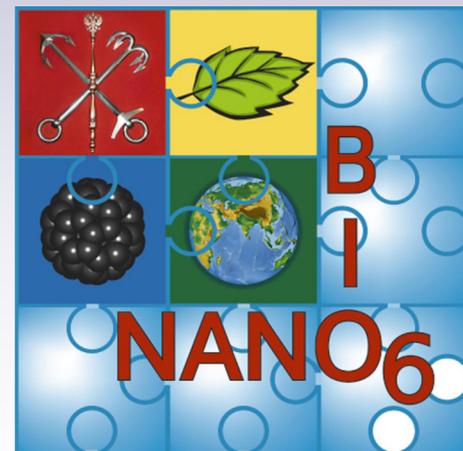


8-th International Workshop Fullerenes and Atomic Clusters IWFAC'2007

St. Petersburg, Russia • July 2 - July 6, 2007 •

2-th International Conference on NanoBioTechnologies NANO BIO'08

St. Petersburg, Russia • June 30 - July 4, 2008



NIST-NEST as bridge from FP6 to FP7 for Russian Federation





Submitted projects for the 1st call of FP7

	Preliminary topic / FP7 Thematic priority	Ref no. if applicable or FP7 Call Thematic Code
	Submitted in 1st Call	
1	"Integrated model of sustainable planning for utility systems in the dwelled areas". Cooperation - Environment	FP7-ENV-2007-1 Ref. No. FP7-212597
2	«Folk2Folk: Social Sharing Networks» (STREP) Cooperation - ICT	FP7-ICT-2007-1
3	«Inconet.EECA» (CSA), Cooperation - INCO	FP7-INCO-2007-1
4	"Advanced functionality of amorphous materials via nano-self-organization" (CP-FP), Cooperation – NMP	FP7-NMP-2007- SMALL-1 Ref.No. FP7- 211770
5	"..." Cooperation – NMP	FP7-NMP-2007-1

Proposals under Development for the 2nd call of FP7

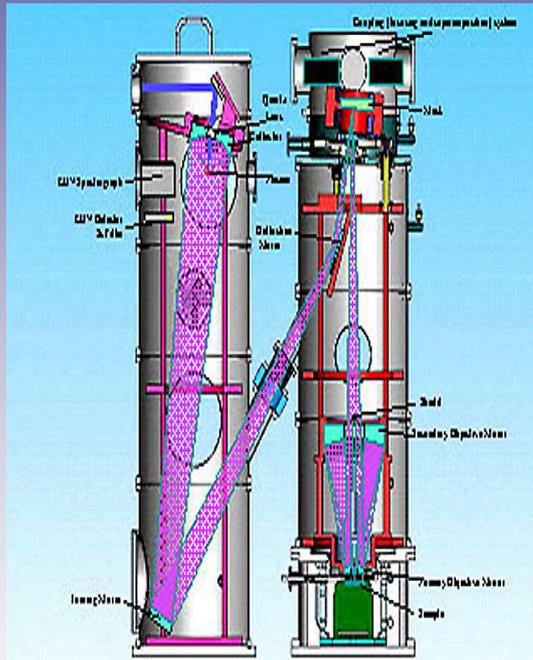
1	«Ecology of Solid Wastes» Cooperation – Environment + Energy	???
2	"Water supply management including hydro power in NIS Countries of Central Asia" Cooperation – Environment	<u>Austria</u> , Germany, France, Russia, CIS Asian countries
3	«Scenarios for critical civil infrastructures security» Cooperation – Security + ICT	<u>Germany</u> , Austria, Russia, (some of: Ukraine, Greece, Slovakia, Denmark, Sweden)
4	«Water treatment processes and tools» Cooperation – Environment + Health	<u>Italy</u> , Russia, (to be decided)
5	«Vibro-resonance technologies», Cooperation – Environment	???
6	«Renewable energy storages» Cooperation – Environment + Energy	<u>Italy</u> , Germany, Sweden, Russia, Estonia
7	"Human Body Modelling" Cooperation – Health + ICT	<u>Belgium</u> , UK, ..., Russia
8	«Super-resolution Lithography» Cooperation - NMP	<u>Switzerland</u> , Austria, Russia, (to be decided)

EUV&SXR Super-Resolution Nanolithography and Nanomicroscopy (5-15 nm) for Frontier Application “Beyond Rayleigh’s Limitation”

We search the industrial partner for the FP7 project

Theme 4 - Nanosciences, Nanotechnologies, Materials and New Production Technologies - NMP.”

SMALL or MEDIUM-SCALE focused research project



2002-2005 it was supported by the Japan Government, ISTC Contract #0991, US\$ 1 million

Russian key person: :

Prof. Ruben P. Seisyan

Head of Lab. in Ioffe Institute,
Head of Chair in Saint Petersburg
Polytechnical University,

rseis@ffm.ioffe.ru

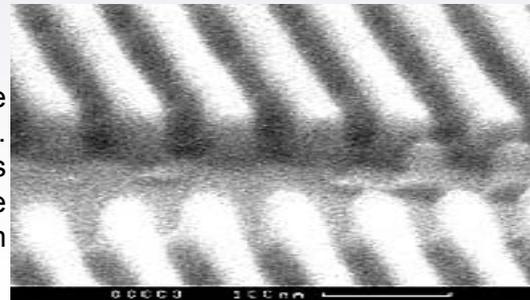
FP7 Coordinator:

Patrik Hoffmann

EPFL-APL, Station 17
CH-1015 Lausanne
Switzerland

The Nanolithographer

Vacuum housing on its normal place inside the clean room at February 2007. in Ioffe Institute. The image module is on the right, on the left is the illumination module during vacuum testing.

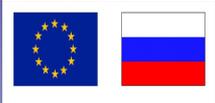


Microphotograph of interference structure on the sample surface. Scale rule length – 100 nm.

$\lambda = 13.4$ nm



Dissemination of information about NIS-NEST activity and Organization of NCP Idea in Russia



FP7 Seminar, SPb State Polytechnical University, St Petersburg, 20 February 2006

(Reports of key speakers on <http://www.spbcas.ru/russian/news/NISNEST/papers.html>
CD disk containing information about FP7 translated in Russian)

- **Meeting in the Russian Ministry of Education and Science under chair of deputy minister V.N. Fridlyanov, Moscow, 21 February 2007**
- **Meeting in the Committee on Science and Higher Education of the Government of St.Petersburg under chair of Committee head A.D. Viktorov, St Petersburg ,14 March 2007**
- **Meeting of Russian - Austrian Intergovernmental Working Group on Innovation Geared cooperation in Industry and Applied Research, Vienna,23 April 2007**
(Resolution of Russian - Austrian Intergovernmental Working Group,Hard copies of Report "Today's Joint Efforts for Industry in the future" by Sergey Kozyrev and Alexander Viktorov).



Thanks for Invitation and Attention!

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