

Seventh Framework Programme



Information and Communication Technologies

Coordination and Support Actions (Supporting)



Project title:	Linking R&D Strategies, Foresight and Stimulation of EU-Russia Cooperation in Nanoelectronics Technology
Project Acronym:	EU-RU.NET
Grant agreement no.:	257511
Type of funding scheme:	Coordination and support actions (supporting)

Deliverable number:	D1.1
Deliverable title:	EU-RU.NET Project Web site
Dissemination level:	Public
Scheduled delivery date:	Month 1
Actual delivery date:	Month 5
Author(s):	EUROTEX
Approved by:	Consortium
Short summary:	<p>The website was planned as the public face of the project, targeting mainly external audience interested in EU-Russia R&D cooperation. It provides basis information about project objectives, participants, pilot projects and events. The design and functionality of the site was reviewed by several participants and most of their comments and recommendations were taken into consideration. The site will be developed further during the course of the project. It is available at www.eu-ru.net</p>

The site was developed with the help of Serif WebPlus X4 software purchased by the coordinator from www.serif.com.

The starting page of the website is shown in fig. 1 below. It provides a brief overview of the project, latest news, and, importantly, links to the other pages of the website (on top).

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EU-RU.NET

Linking R&D Strategies, Foresight and Stimulation of EU-Russia Cooperation in Nanoelectronics Technology



STRENGTH THROUGH COOPERATION

WORKING TOGETHER FOR KNOWLEDGE LEADERSHIP

Welcome to the web site of the EU 7th Framework Programme Coordination and Support Action Project EU-RU.NET.

On 2 June 2010 the EU-RU.NET kick-off meeting took place in the Bavarian Representation to the European Union in Brussels. 25 representatives of the 10 participant organisations and the project officer from the European Commission discussed in details the Work Programme of the project consisting of five work packages.

EU-RU.NET PROJECT IN BRIEF

- 5 EU and 5 Russian Organisations, Over 50 leading scientists
- Working Groups, Round Tables in different fields of Nanoelectronics
- 12 Collaborative Pilot Projects in different fields of Nanoelectronics
- Linking EU and Russian Strategies for Nanoelectronics Technology
- Drawing Recommendations on how to strengthen cooperation

[Click here for the Power Point Show of the Project](#) 

[Click here to view the kick-off meeting images](#) 

EU-RU.NET Participant Wins 2010 France - Taiwan Science Award



EU-RU.NET participant Professor Patrick SOUKIASSIAN (Université de Paris-Sud, Orsay and CEA-Saclay) and Professor Youkuang HWU (Institute of Physics of the Academia Sinica, Taipei) are the 2010 Laureates of the French Academy of Sciences France-Taiwan Science Foundation's Grand Prize for their research program «Nanochemistry at advanced semiconductor surfaces and interfaces: Epitaxial graphene and silicon carbide». Using synchrotron radiation-based photoelectron spectroscopy and microscopy, they found evidence of unprecedented properties of silicon carbide surfaces and interfaces, namely self-organisation at the silicon carbide surface upon thermal annealing. These carbon atomic layers appear to be of strong interest for high performance applications in future electronic devices.

In the picture: Prof. Y. Hwu, Prof. P. Soukiasian, and Alain Carpentier, Vice President of the French Academy of Sciences

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Figure 1. The starting (main) page of the website

The next page, “The Project”, shown in fig. 2, describes the EU-RU.NET objectives and provides links to the Internet websites of all participants.

[Home](#) [The Project](#) [Events](#) [Working Groups](#) [Pilot Projects](#) [Deliverables](#) [Contact](#)

EU-RU.NET

Linking R&D Strategies, Foresight and Stimulation of EU-Russia Cooperation in Nanoelectronics Technology

ABOUT EU-RU.NET PROJECT



A large number of leading European and Russian scientists have come together in this [EU FP7 ICT Coordination and Support Action](#) project with the sole purpose of strengthening the EU-Russia cooperation in Nanoelectronics Technology. This is in line with the EU strategy of deepening and broadening the international aspect of its SBT policy. [Cooperation with Russia](#) is an important part of it. By proposing and succeeding in linking the Russian and the [EU strategies for the development of Nanoelectronics Technology](#), an important element for keeping European industry competitive at global level would be put in place.



To reach the objective of the EU-RU.NET project, the consortium of five EU and five Russian organisations identified the most urgent and promising fields for cooperation, and set up [working groups of experts](#) to support the participation of EU and Russian scientists at workshops and brokerage events to encourage the setting up of new collaborations, including joint EU or bilateral project proposals.



[13 collaborative Pilot R&D projects](#) associated with EU-RU.NET will help participants to identify the bottlenecks of cooperation and propose improvements. A Foresight study will be carried out for the future of EU-Russia cooperation in Nanoelectronics Technology. The Strategy Experts Group will analyze the results and achievements of the project, will develop roadmaps and propose new actions. Recommendations on linking strategies and strengthening cooperation will be prepared for the EU and Russian officials responsible for the development of public programmes in the area of Nanoelectronics. Project deliverables will demonstrate to the public the advantages of R&D cooperation between EU and Russia.

PARTICIPANTS

- [Fraunhofer Society \(Germany\)](#)
- [Russian Academy of Sciences](#)
- [French Commission for Atomic Energy and Alternative Energies](#)
- [Moscow Lomonosov University](#)
- [Italian Research Council](#)
- [St Petersburg Electrotechnical University](#)
- [Interuniversity Microelectronics Centre \(Belgium\)](#)
- [Scientific Research Center for Molecular Electronics and Mikron Factory \(Russia\)](#)
- [European Centre for Knowledge and Technology Transfer \(Belgium\)](#)
- [State University - Higher School of Economics \(Russia\)](#)

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Figure 2. Page “The Project” with short description of the project

Page “Events” in fig. 3 lists the conferences and workshops in Europe that will be attended by EU-RU.NET participants. Some of these events are organised by the project participant organisations. During these events roundtables will be organised on EU-Russia R&D cooperation in nanoelectronics. Links are provided to the websites of the listed events.

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YOU CAN FIND US AT THE FOLLOWING COMING NANOELECTRONICS AND NANOTECHNOLOGY EVENTS

2011	DATE	TITLE	PLACE
March	6 - 10	Second International Conference on Multifunctional, Hybrid and Nanomaterials	Strasbourg
April	4 - 6	European Advanced Equipment Control/Advanced Process Control (AEC/APC) Conference	Dresden
April	24 - 29	Graphene Week 2011: Fundamental Science of Graphene and Applications of Graphene-Based Devices	Innsbruck
May	5 - 6	Plasma etch and strip in microelectronics	Mechelen
May	8 - 12	Materials for advanced metallization	Dresden
May	10 - 12	E-MRS 2011 Spring Meeting	Nice, France
June	19 - 25	19th International Symposium "Nanostructures: Physics and Technology"	Ekaterinburg, Russia
September	12 - 15	Euromat Conference 2011	Montpellier
September	19 - 23	Micro and nanoengineering (MNE)	Berlin
September	19 - 23	E-MRS 2011 Fall Meeting	Warsaw
October	4 - 6	"Micro- and nanoelectronics" (ICMNE-2011) with extended Session "Quantum Informatics"	Izhevsk, Moscow region
October	TBC	Young scientists' School on Physics and Technology of Micro- and Nanosystems	St Petersburg
October	TBC	Workshop on carbon based low dimensional materials (CARBOMAT)	Catania, Italy
November	TBC	4th Nanotechnology International Forum	Moscow
2012	DATE	TITLE	PLACE
April	TBC	European Advanced Equipment Control/Advanced Process Control (AEC/APC) Conference	TBC

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Figure 3. Page “Events”

Page 4, shown in fig. 4, is devoted to the Working Groups that are created inside the project on several topics, including one on strategy. It invites external experts to join the Working Groups by providing a link to the e-mail address of the leader of WP3 at Fraunhofer IISB.

The screenshot shows a website page with a red header. The header contains the text 'EU-RU.NET' in large white letters, followed by the tagline 'Linking R&D Strategies, Foresight and Stimulation of EU-Russia Cooperation in Nanoelectronics Technology'. A navigation menu at the top right includes links for 'Home', 'The Project', 'Events', 'Working Groups', 'Pilot Projects', 'Deliverables', and 'Contact'. The main content area is white and features the title 'EU-RU.NET Working Groups' in red. Below the title is a paragraph in red: 'In order to foster successful EU-Russia Cooperation in Nanoelectronics Technology, the project participants have set up four Working Groups of Experts as follows:'. This is followed by four entries, each with a small image and a list of topics:

- WG1:** End of the roadmap and beyond CMOS
Increasing process variability
Innovative new metrology methods
Nanotubes and graphene
New device structures
- WG2:** System-on-Chip/System-in-Package
Heterogeneous integration
- WG3:** Manufacturing technologies including metrology applications
- WG4:** Strategy (of EU-Russia Cooperation in Nanoelectronics Technology)

At the bottom of the main content area, there is a blue text block: 'If you wish to become a member and participate in the activities of a EU-RU.NET Working Group, please send a letter to [Dr. Richard Oechsner](#) from [Fraunhofer IISB](#). New experts are always welcome!'. The footer of the page is red and contains the text '© EUROTEX.ORG'.

Figure 4. Page "Working Groups"

The 13 Pilot Projects inside EU-RU.NET are briefly presented in the page “Pilot Projects” shown in fig. 5 below.

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EU-RU.NET

Linking R&D Strategies, Foresight and Stimulation of EU-Russia Cooperation in Nanoelectronics Technology

PILOT TRIAL PROJECTS

Joint working groups of experts have specified subjects for 13 collaborative R&D pilot trial projects in prospective areas. Within EU-RU.NET, a pilot project is defined as a small-scale preliminary effort conducted before the main research to test an idea or working approach. Pilot projects target generation of new knowledge, joint publications, and eventually possibility of continuation in the form of new EU, Russian or bilateral R&D projects. They will help EU-RU.NET participants to identify the bottlenecks of cooperation and propose improvements.

1. SIMULATION OF NANOSCALE FIELD EFFECT TRANSISTORS
2. PLASMA ETCHING OF NEW MATERIALS INVOLVED IN GATE STACK PATTERNING FOR ULSI
3. MODELING OF NANOSCALE ELECTRONIC DEVICES BASED ON LOW-DIMENSIONAL NANOSTRUCTURED MATERIALS
4. RELIABILITY OF CU/LOW-K INTERCONNECTS: CHALLENGES OF PLASMA PROCESSING
5. RELIABILITY OF CU/LOW-K INTERCONNECTS: MECHANISMS OF LOW-K FAILURE AND DEGRADATION
6. ENGINEERING THE BAND GAP OF GRAPHENE EPITAXIALLY GROWN ON SILICON CARBIDE
7. 3D SELF-ASSEMBLY FOR MOLECULAR ELECTRONICS AND PHOTONICS
8. COMPARATIVE STUDY OF EUROPEAN AND RUSSIAN NANOELECTRONICS INNOVATION SYSTEMS AND THE WAYS TO BUILD SYNERGY FOR THE BENEFIT OF FUTURE COOPERATION
9. RESEARCH AND DEVELOPMENT OF NANODIAMOND EMITTER-BASED AUTOEMISSION DEVICES
10. MONOLITHIC INTEGRATION OF LIGHT-EMITTING DEVICES AND SILICON TRANSISTORS
11. III-V SEMICONDUCTOR NANOWIRES FOR LIGHT EMITTING DEVICES ON SILICON
12. FRACTIONAL QUANTIZATION OF BALLISTIC CONDUCTANCE
13. FABRICATION AND STUDY OF THE NOVEL SEMICONDUCTING ORGANIC AND CARBON NANOSTRUCTURED MATERIALS FOR NANOELECTRONICS APPLICATIONS

If you wish to participate in a EU-RU.NET Pilot Trial Project, please send a letter to [Dr. Mikhail Beklanov](#) from [IMEC](#).

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Figure 5. Page “Pilot Projects”

In course of the project a large number of deliverables will be produced by the participants. All project deliverables will be available for downloads from the page “Deliverables”, shown in fig. 6 below. When ready, the deliverables will be posted in the site and will become available to the public.

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During the course of the Project the Participants will develop a large number of deliverables. As soon as they are ready they will become available for downloads from this page.

The following EU-RU.NET Project Deliverables will be open to the public:

D1.1: EU-RU.NET Project web site
D4.1: Dissemination and awareness plans for Europe and Russia
D4.2: Dissemination during May-July 2010
D2.1: Composition of working groups and their action plans
D2.2: List of events
D2.3: Analytical guidelines

D2.4: First update of the action plans
D5.1: Strategy Experts Group and its working plan
D4.3: Dissemination during August-October 2010
D4.4: Dissemination during November 2010-January 2011
D2.5: Second update of the action plans
D4.5: Dissemination during February-April 2011
D5.2: Annual strategy report
D5.3: Annual report on activities to support Russian R&D and ICT Work Programmes
D4.6: Annual Dissemination Report
D4.7: First update of dissemination plans
D4.8: Dissemination during May-July 2011
D2.7: Final update of the action plans
D4.9: Dissemination during August-October 2011
D4.10: Final update of dissemination plans
D5.4: Interim report on the activities of the Strategy Experts Group
D5.5: Interim report on activities to support Russian R&D and ICT Work Programmes
D4.11: Dissemination during November 2011-January 2012

D1.6: Final Project Report
D2.9: Final report on working groups and events
D3.5: Final report on pilot trials
D4.12: Dissemination during February-April 2012
D4.13: Final dissemination Report
D4.14: Dissemination and exploitation beyond EU-RU.NET
D5.6: Final activity report of Strategy Experts Group
D5.7: Final report on linking strategies
D5.8: Final report on activities to support Russian R&D and ICT Work Programmes
D5.9: Foresight, roadmaps for EU-Russia cooperation

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Figure 6. Page “Deliverables”

Finally, the page “Contacts” (fig. 7) lists the coordinator’s contact details in case someone would like to know more about EU-RU.NET project.

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CONTACT

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CONTACT THE PROJECT COORDINATOR

The coordinator of the EU-RU.NET Project is Dr Ruben Vardapetian from the the European Centre for Knowledge and Technology Transfer (**EUROTEX**), a Brussels based international non-profit association, registered under the Belgian law.

The objective of EUROTEX is strengthening R&D cooperation and technology transfer between Europe and, primarily, the EECA (Eastern Europe and Central Asia) countries.

EUROTEX

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Figure 7. Page “Contacts”

As project develops, new pages might be added to reflect different aspects of EU-Russia cooperation in Nanoelectronics.