

QUESTIONNAIRE

(*) – mandatory fields

	Details about organisation
* Organisation name	National Technical University of Ukraine “Kyiv Polytechnic Institute”
Organisation acronym	NTUU “KPI”
* Organisation Activity Type (RES - Research, HE - University, SME - Small and Medium Enterprise, IND - Industry, OTH - Other)	HE -University
* Keywords of main research areas	electron microscopy, virtual laboratory, metals and affine materials, medical objects, biological objects, diffusion, nanomaterials
* Head of organisation (first name, family name)	Michael Zgurovsky
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* Description of organisation and its research achievements for the last five years (~ 5000 signs)
<p>NTUU "KPI" was founded in 1898 on an initiative of scientific-technical circles and entrepreneurs of Russia and Ukraine in response to needs of industry of the Southern West of the country which developed rapidly at the end of XIX century.</p> <p>The life and activities of the renowned scientists – V.M.Kyrpychov, K.A.Timiryazhev, M.Ye.Zhukovsky, D.I.Mendeleyev, I.I.Sikorsky, S.P.Tymoshenko, S.P.Korolyov, B.Ye.Paton, V.M.Chelomey, A.M.Lyulka, M.P.Kravchuk, S.V.Serensen and others were closely linked with our university.</p> <p>NTUU "KPI" cooperates fruitfully with 112 technical universities from 38 countries of the world, international organizations (EC, CU, UNDP,</p>

UNESCO, UNIDO, WIPO, NATO, EDNES, ICSU, CODATA, Salzburg Seminar); well-known firms (MOTOROLA, SIEMENS, FESTO, SAMSUNG, INTEL and others), takes part in international education and scientific projects and programs. The Science park at NTUU "KPI" is to provide transfer of technologies, assist in realization of University "spin-offs projects".

NTUU "KPI" was among the first universities of Ukraine that joined the community of the European Universities, and signed the Magna Charta of the European Universities ("Magna Charta Universitatum") in September 2003. It actively assisted in the official joining of Ukraine in 2005 to Bologna process (Bergen, Norway).

In November 2006 the Centre of supercomputer calculation, the Ukrainian Branch of the World Data Centre was opened at NTUU "KPI".

	Contact Information
* Contact person (first name, family name)	Sergey Sidorenko
* Department / Laboratory	Metal Physics Department
* Position	Head of the Department
* Qualification and research experience	Professor
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International co-operation / Participation in EU RTD programmes or other bilateral / multilateral actions
INTAS, TACIS, TEMPUS, COST, EUREKA, other RTD programmes (please specify programme/s, project title/s and year/s)
1) TEMPUS JEP-25163-2004 Bridging the gap between University and business "Ukrbridge" (2005-2008)
2) VISBY Project Virtual Integrated University System, VIUS, 2005 Virtual Integrated University System, VIUS II, 2006
3) UNESKO International Basic Science Programme

Project 2-UA-01
 “International Preadmission Training Centre of Excellence”, 2007

	* Please, use “X” to indicate the scientific area/s of your potential project
CHEMISTRY	
SOCIAL AND HUMAN SCIENCES	
ECONOMIC SCIENCES	
ENGINEERING SCIENCE	
ENVIRONMENT	
AGRICULTURE AND FOOD	
HEALTH	
MATHEMATICS	
INFORMATION SCIENCE	
PHYSICS	
NANOTECHNOLOGIES	X
ENERGY	
TRANSPORT	
SPACE	

*** Summary of potential research project envisaged hosting of European researcher for the period of between 1 and 2 years**

The objective of this project is to unite within the Black Sea region the capabilities of a number of scientific schools including the NTUU "KPI" Metal Physics Department for solving efficiently problems of physics and material science in the field of advanced nanomaterials and technologies of nanomaterials by using electron microscopy and other modern experimental techniques. The BSUN – NTUU "KPI" "Memorandum of Understanding" signed September 6, 2006, also defines this objective: "8. A special emphasis will be put on the cooperation in Advanced Nanomaterials, Nanotechnologies and investigation techniques, particularly, – electron microscopy (TEM, SPM, AFM, LEED, HEED, others). to establish the BSUN Centre on Electron Microscopy for Advanced Materials." It should be noted that today the management of scientific activities at the MPD (www.kpm.ntu-kpi.kiev.ua) is based both on research capabilities of the MPD itself, affiliated research centers of the National Academy of Science of Ukraine and universities which are our partners abroad where our students and scientists run our current scientific projects, and on strengthening virtual grounds in an international scientific cooperation by international teams including department's representatives

forming and by computer networking making use. MPD of the NTUU "KPI" has developed inner-department teaching/research network PhysMetNet and gained certain experience in its management. With the help of PhysMetNet MPD creates virtual informational space as new tools for learning activities and research.

That is why Metal Physics Department is ready to and started realize VILEMAN: BSUN International Project "Virtual International Laboratory in Electron Microscopy for Advanced Nanomaterials" for universities – members of BSUN – as a first step on the way of establishing "BSUN Centre of Electron Microscopy for Advanced Nanomaterials" in the NTUU "KPI". It may create the basis for proposing (in future) a european project of the universities consortium to participate in 7FP topic calls, and particularly in the bs.ERA.NET programme or in another of such international kind.

Objects for research: **metals and affine materials, metallic materials and other materials with complex structure and composition, various nanophased and nanostructured materials, medical objects, biological objects.**

Areas for electron microscopy applications may be served as the subjects for consultations and discussions at the "VILEMAN Forum" will be located at www.bsun-elmicros.ntukpi.kiev.ua with participation of NTUU "KPI" MPD.

Metal Physics Department Instrumental potential: transmission electron microscope (140 kV); transmission electron microscope (100 kV, manufactured in 2007); scanning electron microscope equipped with microbeam analyzer REMMA-101A (0,5–30 kV); vacuum many functional unit VUP-5 designed for ion sputtering and other techniques specimens preparation for TEM; a jet unit for TEM specimens preparation PTF; ultrasonic disperser agent UZDN-A; X-Ray diffractometer DRON-4–13C; Electron Diffraction unit (25–100 kV) EMR-100; SIMS and Auger techniques.

VILEMAN contractual basis. It is implied that running projects by Virtual Laboratory are to be done by contracts. This provides definite funds needed to form and to augment laboratory's activities. But this idea is to be discussed by consortium members in more details. This is very important to construct real way to raise money by scientific activities!

Our team: Sergiy I. Sidorenko – Chief of the Metal Physics Department, VILEMAN Project co-director on behalf of NTUU "KPI", Prof. Svitlana M. Voloshko – project coordinator, Ass. Prof. Eugen V. Ivashchenko – deputy coordinator in management, Prof. Yuri N. Makogon – deputy coordinator in nanotechnologies, Prof. Alexandra V. Byakova – deputy coordinator in complex composition materials, PhD Igor Ye. Kotenko –

deputy coordinator in scientific problems, Ass. Prof. Volodimir A. Mohort – deputy coordinator in education in electron microscopy, Ing. Anna D. Kholmska – coordinator in ICT, PhD Sergiy A. Zamulko – deputy coordinator in ICT, Nataliia V Marchenko – Chairman of MPD Students Council, deputy coordinator in students mobility within BSUN countries and consortium universities members.

At this time five universities take part in the project: Technical University of Constanta "Ovidius" (Romania), National Technical University of Ukraine "Kyiv Polytechnic Institute", National Technical University of Ukraine "Kharkiv Polytechnical Institute" and Kremenchuk State Politechnical University named by M.V. Ostrogradsky – as members of BSUN, and Debrecen University as a partner, – and some universities of the Black Sea region confirm their intentions to be members of the consortium.

	Please, confirm your agreement on data publication and dissemination
I agree with the publication of the data on the web-site http://www.inco-eeca.net , and dissemination among Mobility National Contact Points of the EU MS and AC (YES / NO)	yes
Date	25 November 2008