Contacts and overall information about institution

Name of Organisation:	Vasyl Stefanyk Precarpathian National University		
City	Ivano-Frankivsk	Zip Code:	76018
Street	Shevchenka, 57		
Status of Organisation:	Higher education establishmen (University, etc.)		
Name of Research Unit:	Science&Educational Centre (SEC) “Nanomaterials in Accumulation and Generation Energy		
S & T Activity Fields:			
FP7 Priorities	Energy		
Frascati classification	1. Natural Sciences		
Description of activities	Main researche directions of Science-Education Centre: 1. Cathode materials for lithium power sources on metal oxide, hydroxides, sulfides, fluorides structures based (The optimization of obtaining technology of nanosized TiO2, H2TiO3, Mg(OH)2 materials; The increasing of characteristics of lithium power sources on their bases; The obtaining of cathode powder materials on the base of metal and metalloids sulfides and fluorides and development of lithium power sources with superhigh specific energy characteristics 2. Porous carbon materials (The obtaining and physical-chemical investigation of nanoporous carbon (NC) as supercapacitor’s electrode materials; The optimization of obtaining technology of NC based on the base of plant raw material; The development of new technologies of NC modification with the aim of supercapacitor’s specific energy characteristics increasing; Complex investigations of structure and electrochemistry compounds materials on the base of NC. 3. Magnetic nanomatherials & Dye Sensitezed Solar Cell (The development of new methods of nanomaterials synthesis on the base of Fe oxides- hydroxides and Fe,Cr,Mn,V-dopped TiO2; Testing of obtained compound as electrode materials for secondary lithium power sources; The elaboration of electrode materials for low-cost and effective photoelectrochemical devices-dye sensitized solar cells; Electrochemical devices based on the photointercalation Li+. 4. Cathode materials for lithium power sources on the base of spinel and rutile structures (The development of cathode materials on the base of Mg-modified spinel and rutile structures; The cathode materials of lithium power sources on the base of nano- and microdispersed forms of Fe3O4; The investigation of intercalation / deintercalation properties of Li-Fe spinels as function of synthesis conditions, doping, morphology.		
Website:			
Overall Description of Institute (Research Unit)	Science&Educational Centre (SEC) “Nanomaterials in Accumulation and Generation Energy Devices” was founded in 2009 (as winner of CRDF call by CREST Programm). Key moment in SEC activity is attraction for researching young research workers, graduate students (as a rule, except the last year of study) and students. Researche object – Development and perfection the technologies of receipt oxide, chalcogenide and carbon nanomaterials for the devices of generation and accumulation of energy, and fundamental study and prognostication of their physical and chemical properties.		
Head of Research Unit:	Name:	Dr. Volodymyr Kotsyubynskiy	
Position Title:	Post-Doc		
Work Phone:	+380342596179	Other Phone:	n/a
Fax:	+380342231574	Email:	sec_nano@pu.if.ua
Contact Person of Research Unit :	Name:		

Work Phone:		Other Phone:	
Fax:		Email:	

Resources and international Activities

Number of Researchers in Unit:	35
Research Facilities:	Simultaneous Thermal analyzer (TG-DTA Apparatus) STA 449 F3 Jupiter with software Automatic porous meter Quantachrome Autosorb (Nova 2200e)
Number of International Projects:	2
Name and Number of major Publications:	1. Gun'ko V.M., Bogatyrev V.M., Myronyuk I.F., Chelyadyn V.L. Morphological, structural and adsorption features of oxide composites with silica and titania matrices // Apllied Surface Science.–2010.- V256.– pp. 5263-5269 2. Segin M.Ya., Budzulyak I.M., Ilnytsyy R.V., Ostafiychuk B.K, Solovko Ya.T., Yaremiy I.P., Yablon L.S. Nanodispersed TiO2 Stucture Changes under the laser irradiation influence // Physical Engineering of Surface, 2010. – V.8, №3. – P.222-227. 3. Patent of Ukraibe # 80761. Sources of electrical current. 4. Patent of Ukraine # 80764 Supercondenser. 5. Patent of Ukraine # 81673 Lithium-Ionic Sources of electrical current.

Participation in 7th Framework Programme:

Food, Agriculture, Fisheries and Biotechnology:	
Energy:	
Environment (Including Climate Change):	
Health:	
Information and Communication Technologies:	
Nano Sciences, Nano Technologies, Materials and New Production Technologies:	
Security	
Socio-economic Sciences and the Humanities	
Space	
Transport (Including Aeronautics)	
Capacities	
Other international project experience:	Project CRDF (USA) # UKX2-9200-IF-08 "Creation and functioning on the base of Vasyl Stefanyk PreCarpathian National University Science&Education Centre «Nanomaterials in accumulation and generation of energy devices»" (2009-2011)