**Experts Profile Brochure**

**Materials:**

* Basalt fiber technology for fire protection and thermic isolation (p.6)
* Development of weight-saving magnesium alloys to house avionics electronics (p.26-27)
* Aluminum/Magnesium matrix reinforced with SiC nano- particles for Improvement of mechanical properties, deformability and temperature resistance. (p.28-29)
* Development of nano-engineered catalysts for the highly efficient direct synthesis of valuable hydrocarbons from light off-gases of oil and gas processing, as well as from bio-gases, bio-ethanol and plant oils. (p.34-35)
* Application of nano-diamonds in galvanic processes (p.43-44)
* Production of implants from nanostructured biocompatible ceramics (p.9-10) & (p.46-47)
* Construction of solar collectors which use energy of the sun to provide remote districts with electricity and heat water (p.50-51)
* Development, manufacturing and certification of nanotitanium and items made thereof for medicine and industry (p.56-57)
* Acid extraction of metals from ore, waste piles, slag and other wastes and their deposition from acid solutions in the form of oxides. (p. 58-59)
* Electron beam technology for melting and casting of titan and electron beam furnaces (p. 62-63)
* Generation of nanocrystalline fibers on their basis for mid-and far-infrared range (2-40 microns) (p.64-65)
* Nanostructured Inorganic-Organic Hybrid Materials and Photonic Devices for Chemical Sensing in Liquid and Gas Media (p.76-77)
* Development of supramolecular fluorescent quencher based on nitroxide attached cyclodextrines (p. 83-84)
* Development of functional, structural nanostructured ceramics and coatings (p. 92-93 & 134-135)
* Investigate deformation and thermal-speed parameters of hot and cold plastic deformation providing nano-structured state of steel with grain size less than 300 nm and determine the possible using of these parameters at rolling the equipment of industrial plants (p. 101-102 & 165-166)
* Intelligent materials in the footwear: Intelligent leather (p.104-105)
* Nanostructured polymers and nanocomposites, Nanostructured Biomaterials and Biochemicals, Inorganic and Hybrid Nanomaterials, Molecular Dynamics and Modelling (p.106-107).
* Deposition of innovative superhard nanocomposite coatings by means of a new high density gas pulse plasma method based on a patented system. (p. 108-109).
* Discrete-continuum modeling of mechanical behavior (deformation, loss of stability, strength and fracture) of nanostructured materials, composites filled with nanoscale and microscale nanostructured particles, elements of components designed from nanostructured objects (p. 113-114)
* Synthesis of carbon-encapsulated iron carbide nanoparticles ( superparamagnetic) by high pressure –high temperature decomposition of ferrocene . Covalent surface functionalization of INPs by aminoacids (glycine), sacharides (amikacin), and chemotherapeutical agents (doxorubicin). Investigation of bio-functionalized INPs by microscopy imaging of living cell morphology and by studies of effects of INPs on biochemical dynamic processes in living cells involving intracellular intake, binding, transport and controlled release of NPs in relation to targeted drug delivery application (p.119-120)
* Develop the theoretical foundation for the characterization of the electromagnetic shielding behavior of polymer-matrix composite (PMC) with nanoparticles, and (b) to evaluate the influence of the PMC structure and the nanofillers size, density and distribution on the electromagnetic shielding efficiency for frequencies ranging from tens of kHz up to the GHz region. (p138-139)
* Development of bio-photonics sensors based on natural and artificial nano-structures and nanomaterials. (p.144-145)
* Spectroscopy and imaging of single quantum objects (quantum dots, molecular complexes, dye molecules embedded into condensed matter). Spectral nanodiagnostics of structure and dynamics of disordered solids by single-molecule spectromicroscopy (p.151-152).
* Searching for novel bioregulators among the marine organisms, including microorganisms, studying their structure and biological activity and working out the novel technologies to obtain the novel medicines and valuable biochemical preparations for diagnostics and treatment such diseases as cancer, viral, autoimmune, cardiovascular and neurodegenerative etc. (p.161-162)
* Development of high-sensetive mesurement systems for ND inspection of novel materials and novel-materials-based structures. (p.163-164)
* Supercomputer quantum-mechanical computing of the influence of impurity ions on the atomic, electronic structures and elastic properties of Ti and SiO2 nanostructures. Therefore, it is interesting to study the effects of the doped oxygen atom on the agglomeration process of titanium clusters. (p.175-176)
* Semiconductor nanostructures for quantum optics and quantum information (p.188-189)
* Development of new methods and technologies for surface treatment and functionalisation, including ion beam and plasma technologies. Industrial application: selflubricationg coatings, biocompatibility (p.193-194)
* Design and manufacturing of further exceptional metal nanoparticles on microbial surfaces, including metal hybrids. (Further Profiles p. 6-7)
* Development of novel solid-state lasers (based on Tm- and Ho-doped crystals and fibers) at wavelength of 2 μm for endoscopic approach to use in several medical disciplines such as urology, gynaecology, cardiology. (Further Profiles p. 8-9)
* Development of nano-engineered catalysts for the highly efficient direct synthesis of valuable hydrocarbons from light off-gases of oil and gas processing, as well as from bio-gases, bip-ethanol and plant oils (Further Profiles p. 12-13)
* Development and introducing in Powder Metllurgy (PM) industry optical instrument for simultaneous real time control of the main parameters characterized sintering process of production of nanostructured materials by PM technologies (Further Profiles p. 14-15)
* Plasma based decontamination / sterilization of sensitive materials especially for medical / biomedical application lice endoscopes and catheters to realize a secure procedure for multiple use of such devices (reduction of risk for infection) (Further Profiles p. 29-30)
* The main goal of the project is development of scientific basis for cathodes and anodes performance enhancement of Solid Oxide Fuel Cells (SOFC). The project is concerned with characterization and understanding of SOFCs electrochemical kinetics and degradation. This study is focused on different functional parts of SOFCs. (InnovativeMaterials\_11\_March p. 52-54)
* New nanocrystalline, superconducting and intermetallic materials, materials with phase and metal‐insulator transitions (InnovativeMaterials\_11\_March p. 57-58)
* Development and creation of new Heusler alloys based on 3d‐metals and metal‐ceramic compounds based on Ti by methods of severe plastic deformation, pressure treatment and integrated doping for technical applications (InnovativeMaterials\_11\_March p. 59-60)
* development of multi‐functional materials exhibiting a high mechanical strength together with a high coercivity and a strong magnetization. These materials are nanostructured in such a way that the dislocation mobility is reduced (increase of the yield strength) and the size of magnetic domains is minimized (increase of the coercivity). (InnovativeMaterials\_11\_March p. 63-64)
* Preparation of magnetic nanostructures and thin films and investigations of their properties (InnovativeMaterials\_11\_March p. 67-68)
* Metamaterials and their physical properties as well as application in microwave and mm‐wavelength electronics (InnovativeMaterials\_11\_March p. 69-70)
* Synthesis and physic‐chemical properties of mesoporous composites on the basis of silica and aluminum oxide; application of these materials in oil‐refining industry (InnovativeMaterials\_11\_March p. 73-75)
* Synthesis and characterization of nanosized noble metal catalysts to test them in alternative catalytic assays and form the basis for design and manufacturing of further exceptional metal nanoparticles on microbial surfaces, including metal hybrids. (InnovativeMaterials\_11\_March p. 76-78)
* Organisation and creation of international education and training school for nanotechnology. Combination with a Virtual Training Centre (InnovativeMaterials\_11\_March p. 79-80)
* Novel method for modifying of the nano‐relief of friction surfaces by using surface‐active compounds for improving the sliding properties in by dry and mixed friction. (InnovativeMaterials\_11\_March p. 81-83)
* Novel method for depositing of the superhard nanostructured coatings for cutting tools and machine components (InnovativeMaterials\_11\_March p. 81-83)
* Develop and establish phenotypic „cell based assays“ for drug profiling (InnovativeMaterials\_11\_March p. 84-85)

**ICT**

* Monitoring of underground pipeline and mathematical simulation of affecting of oil and gas wells on degradation of permafrost. (p. 36-37)
* Carpooling service: a carpooling service that will allow users to offer and request ride sharing journeys using their WEB Browser and/or mobile phone, and receive instant matching. (Further profiles p. 38-40)
* Social interaction through memories: a platform to enable citizens, to share memories and upload artefacts (photographs, letters etc.) related to these memories. (Further profiles p. 38-40)
* Decision support system for logistics/industrial maintenance: provision of a standard methodological framework and of the necessary IT tools in order to improve the performance of industries as relates to their maintenance and logistics departments. (Further profiles p. 38-40)
* Soundwalk service: an information system for collecting, creating, organizing and processing of multimedia content, focusing on sound, for the digital representation of soundscapes providing both indoor environmental education and interactive open field soundwalk services. (Further profiles p. 38-40)

**ICT & Health**

* Behavioral changes for smoking cessation using ICT games (p.7-8)
* Installation, operation and establishment of HER mdoc to monitor major children diseases (p. 11-12)
* Development and construction of a cardio-diagnosis aid system (CARDAS) based on rich vibrometry, relational ECG, sphygmometry and the appropriate medical databases. (p. 30-31)
* Development, manufacturing and certification of nanotitanium and items made thereof for medicine and industry (p.56-57)
* Intelligent materials in the footwear: Intelligent leather (p.104-105)
* Production of implants from nanostructured biocompatible ceramics (p.9-10) & (p.46-47)
* Development of novel solid-state lasers (based on Tm- and Ho-doped crystals and fibers) at wavelength of 2 μm for endoscopic approach to use in several medical disciplines such as urology, gynaecology, cardiology. (Further Profiles p. 8-9)

**Health**

* Use of immune state images as an additional prognostic tool for disease outcome in breast cancer patients or other diseases. (p.32-33)
* Development of the device for xenon inhalations (p. 41-42)
* Epi-gallocatechine gallate (EGCG) structure based new therapeutic group can be designed by in silico methods, synthesized and their effects on Alzheimer mechanisms can be tested by in vitro drug screening methods. (p.67-68 & 203-204)
* Development of a new medical device for physiotherapy. New low-power IR laser for chronic pain relief should be constructed and certificated. (p.142-143)
* Searching for novel bioregulators among the marine organisms, including microorganisms, studying their structure and biological activity and working out the novel technologies to obtain the novel medicines and valuable biochemical preparations for diagnostics and treatment such diseases as cancer, viral, autoimmune, cardiovascular and neurodegenerative etc. (p.161-162)
* Genetic and functional analysis of ion channels and CHIPs in patients with neurodegenerative diseases (p.182-183).
* Basic mechanisms of ischemic cell death and migraine. Neuroprotection and anti-migraine treatments (p.196-196)
* Production of implants from nanostructured biocompatible ceramics (p.9-10) & (p.46-47)
* Development of novel solid-state lasers (based on Tm- and Ho-doped crystals and fibers) at wavelength of 2 μm for endoscopic approach to use in several medical disciplines such as urology, gynaecology, cardiology. (Further Profiles p. 8-9)
* Nano‐encapsulation or nano‐delivery system: therapy using nanotechnology for transport of macromolecules across biological barriers. (Further Profiles p. 10-11 & 34-35)
* Development of small molecule‐ and biologics‐based agonists and antagonists of the Wnt/Frizzled signaling as novel therapeutic agents (Further Profiles p. 16-17)
* Selective modulation of biologically active two‐chain plant lectins using ionic liquids‐ molten salts – liquid at room temperature. Quantitative inactivation of sugar‐bindung B chains of ribosome inactivating lectins of type II like mistletoe lectins and ricin and their use in tumour and metastasis therapy. (Further Profiles p. 22-23)
* Know-how transfer in telemedicine, e-health and semantic interoperability, leading to individualised patient guidance services for patients with diabetes mellitus. (Further Profiles p. 24-25)
* Discovery of a small molecule drug candidate for a particular target. Rational protein (enzyme, receptor, antibody...) design with a given specificity (Further Profiles p. 35-36)
* Challenges and perspectives for improved management of HIV/ Hepatitis coinfection. (Health\_11\_March, p. 18-20)
* Novel antiviral compound as a basis for medication against vesicular stomatitis virus. (Health\_11\_March, p. 23-25)
* Creating the special‐purpose system for medical video data and signals analysis. (Health\_11\_March, p. 26-27 & 30-31)
* The effectiveness of Highly Active Antiretroviral Therapy (HAART) is dependent on the productive function of the thymus, which can be reflected in the number of T cell receptor excision circles (TRECs) – episomal molecules that are formed during T cell receptor rearrangement process. Hence, determination of the number of TRECs opens the opportunity for analyzing possible effects of curing HIV. (Health\_11\_March, p. 34-35)
* Development of new methods of treatment of neurodegenerative diseases (Parkinson´s disease, Alzheimer´s disease, multiple sclerosis). Evaluation of mechanism of the development of neurodegenerative by long term longitudinal in‐vivo studies. Large‐scale, high‐throughput automated systems for phenotyping in‐vivo animal models of human neurodegenerative disease. (Health\_11\_March, p36-37)
* Development of small molecule‐ and biologics‐based agonists and antagonists of the Wnt/Frizzled signaling as novel therapeutic agents (Health\_11\_March, p38-39 & 42-43)
* Develop and establish phenotypic „cell based assays“ for drug profiling (Health\_11\_March, p40-41)
* Rapid detection of HIV viral resistance mutations by real time PCR in comparison with sequencing. (Health\_11\_March, p44-45)
* In this project we will create threedimensional mathematical model (3D-model) of the heart of human and laboratory animals and make their computer implementation for further fundamental research and applications in physiology, pharmacology and medicine. (Health\_11\_March, p46-48)

**Biotechnology**

* Potato plant resistant against Phytophthora infestans. This pathogen causes late blight and yield losses of 8‐9 billion Euros per year worldwide. (Further Profiles p. 20-21)
* Selective modulation of biologically active two‐chain plant lectins using ionic liquids‐ molten salts – liquid at room temperature. Quantitative inactivation of sugar‐bindung B chains of ribosome inactivating lectins of type II like mistletoe lectins and ricin and their use in tumour and metastasis therapy. (Further Profiles p. 22-23)
* Construction of a pilot facility for production of lactic acid at the ATB consequently fills a gap in the various phases of bioprocess engineering from applied fundamental research through application research to the launch of biotechnological processes in practice. (Further Profiles p. 31-32)

**Environment Climate & Biotechnology**

* Pomology and adaptation to different climatic conditions, future climate changes, CO2 footprint study (p.22 & 23)
* Acid extraction of metals from ore, waste piles, slag and other wastes and their deposition from acid solutions in the form of oxides. (p. 58-59)
* Coevolution of man and environment in a dynamic perspective including the last five centuries and present days populations and environments. (p.72-74)
* Permanent sampling sites for greenhouse gases and their isotopes as well as water isotopes measurement. Modelling, and paleoclimate studieds (p.78-79).
* Study of the polar irregular patterns through the implementation of new mathematical tools in data (p.81-82)
* Identify the soil changes, to characterize the mechanisms and the and to formalize the results in models in order to simulate the processes and to predict the changes (p.85-86)
* Improve and apply an original and new method to date in a most accurate manner the long Greenland paleoclimatic record and to infer the past change in the volume of the ice sheet and their influence on the sea level. (p. 87-88)
* Studies and modeling of climate change processes in the Arctic by integrated use of field observations, satellite remote sensing and numerical modeling. (p 97-98)
* Development and validation of sea ice parameters derived from satellite remote sensing, including sea ice extent, sea ice types and sea ice thickness. (p 97-98)
* Implications of and conditions for increased shipping activities in Arctic waters. (p 97-98)
* Characterization of the most important plant communities in boreal and mountain ecosystems and study how natural and anthropogenic factors may affect these ecosystems. (p.99-100)
* Studying how abiotic and biotic parameters affect the ecophysiology indicator plants. (p.99-100)
* Finding and studying links between plant communities and biogeochemical processes (p.99-100)
* Study the East sector of Russian Arctic to reveal the environmental changes at the past which can throw light on the fast enhanced sea ice-cover degradation at this region during last decades (p.110-111)
* Modern state and scenario for development of natural ecosystems in regions with mixed floristic and faunistic zones in conditions of climate change. (p.122-123 & 129-130)
* Reconstruct the last millennium climate in the Khibini mountains and surrounding subartic regions we will use the multi-proxy approach (p. 131-132 & 177-178)
* Polar bear satellite tracking in the Russian Arctic Regions (p. 149-150)
* Studying of activity of microbial processes of methane generation and oxidation in coastal water areas of the seas of Arctic regions. (p. 168-169)
* Study the snow cover and permafrost changes in the Russian North under the contemporary and future climate change.(p.173-174)
* Conversion of chemical energy into light: Formation of "light depositories" in natural and synthetic materials (p.180-181)
* Study of impacts of climate change and anthropogenic pressures on marine ecosystems based on historical and recent in situ data and modeling (p. 184-185)
* Development of cost effective thermal storage systems for CSP. (p.186-187)
* Interactions of Tourism, Agriculture and Biodiversity Within the Coastal Zone Management (p.198-199)
* ARCTIC ECOSYSTEM’S BIODIVERSITY AND GLOBAL CLIMATE CHANGE: MARGIN WAYS OF BIOSPHERE’S DEVELOPMENT UNDER THE DISTURBANCE OF PLANETARY HEAT AND MOISTURE BALANCE (Environment\_11\_March, p. 56-58 & 65-67 & 91-93)
* Study of three different types of conductive membranes (1) glass‐ceramics lithium electrolytes, 2) composite polymer electrolytes, 3) ceramic electrolytes) )to develop solvent‐free all‐solid‐state rechargeable lithium‐ion battery. (Environment\_11\_March, p. 59-61)
* Currently, technological aspects of georesources, defining complex impact on the environment, causing the need for research into the characteristics of the effects of extraction and redistribution of natural resources to restore the area man‐made landscapes The problem of restoring damaged lands solved individually, depending on many factors such as technical‐technological, and natural. The variety of mineral reserves and zonal‐geographical features of the region, located in several natural zones, differing in soil and vegetation, climate, geology, socio‐economic conditions rule out the possibility of using common technological and biological methods of remediation after mastering georesources. (Environment\_11\_March, p. 62-64)
* The subjects of the research proposed are new materials for all‐solid‐state lithium‐ion batteries: ‐ solvent‐fr ee polymer electrolytes with single‐ion lithium conductivity of 10‐4‐10‐3 Sm cm‐1 at ambient temperatures;, ‐ transition‐metal dichalcogenides as cathode materials;, nano‐Si and nano‐Si‐based composites as anode materials. (Environment\_11\_March, p. 68-70)
* Removal of toxic metals from industrial wastes by flotation method with the use of organic reagents. (Environment\_11\_March, p. 73-75)
* The main goal of the project is development of algorithms and software for image analysis and microstructure modeling for researches and engineers working in the area of SOFCs Solid Oxide Fuel Cells). (Environment\_11\_March, p. 78-80)
* Paleoclimatic reconstructions using ice in caves as sources of data (Environment\_11\_March, p. 81-82)
* Research of processes of heat exchange and mass exchange in liquid mediums in the field of a hydrodynamic cavitation. (Environment\_11\_March, p. 83-85)
* Project is devoted to computer design of new ternary and quaternary semiconductors based on TiO2, ZnO, In2O3 and GaN binary compounds. The main purpose of project is design of new efficient photocatalyst materials with reduced band gap (< 2.2 eV) to absorb a significant part of visible light and achieve a hydrogen conversion efficiency >15%. (Environment\_11\_March, p. 86-85)
* Organization of monitoring state of natural environment protected areas (Environment\_11\_March, p. 89-90)
* New nanocrystalline, superconducting and intermetallic materials, materials with phase and metal‐insulator transitions (Environment\_11\_March, p. 94-95)
* Study the spatio‐temporal changes of the treeline ecotone on a centennial time scale in the Urals, to identify the driving forces for the observed changes and to quantify its effects on carbon sequestration. (Environment\_11\_March, p. 96-98)
* Modern Landscape differentiation analysis, socio-economic changes, anthropogenic factor, maintenance of ecological stability strategies, monitoring components of landscape sphere (Environment\_11\_March, p. 99-101 & 124-126)
* BIODIVERSITY AND ECOPHYSIOLOGY OF EUROPEAN NORTH NATURAL ECOSYSTEMS IN A CHANGING CLIMATE (Environment\_11\_March, p. 104-106)
* Methods of creation and investigation of thin film solid electrolyte on the porous tubular electrode substrate for IT‐SOFC . The main goal – to find fast, cheep and exercisable method of the tubular IT‐SOFC production (Environment\_11\_March, p. 107-108)
* Novel collectors for extraction of useful components from various ores and man‐caused wastes. (Environment\_11\_March, p. 109-110)
* Metamaterials and their physical properties as well as application in microwave and mm‐wavelength electronics (Environment\_11\_March, p. 111-112)
* Industrial wastes are several natural components concentrated commonly, and it can be recycled back in nature with minor negative effects if the correct way is found; ‐ Copper slag and volcanic rocks have some essential similarities, and such slag can bring positive effects to soils, like volcano does it in nature actually (Italy, Japan, etc). (Environment\_11\_March, p. 115-117)
* Long‐term dynamics of composition and structure of terrestrial biota from the Polar Ural, Yamal and Gydan Peninsula as response to climatic changes in late Pleistocene and Holocene (Environment\_11\_March, p. 118-120)
* Development of methods and algorithms to solve inverse problem concerning retrieval of vertical profile of concentration of atmospheric trace gases from high resolution IR spectra of the atmosphere measured by modern satellite and ground based spectrometers (Environment\_11\_March, p. 121-123)
* Functional aspects of urban ecology of terrestrial animals as indicator of potential risks of communities’ transformation and indicators environmental health . (Environment\_11\_March, p. 127-128)
* Plants screening of Northern floras for the presence of biologically active compounds (mainly phytoecdysteroids and steroidal and triterpenoid glycosides), estimation of the productivity and biological stock of valuable plants in natural using remote sencing methods and GIS‐technologies, plant introduction into field and cell cultures and development of biotechnology of their production and creation of new type of adaptogenic preparations and nutritional supplememts for the improvement on people’s life in the North (Environment\_11\_March, p. 129-131)
* Synthesis and characterization of nanosized noble metal catalysts to test them in alternative catalytic assays and form the basis for design and manufacturing of further exceptional metal nanoparticles on microbial surfaces, including metal hybrids. (Environment\_11\_March, p. 132-134)
* In this project we will focus on multi‐proxy reconstructions of two key areas in the Arctic and Sub‐Arctic: Kola peninsula, Solovetsky Archipelago, and in the Vologodsky region to study the regional sensitivity to climate change in the different areas along a north‐south transect in the Northern European Russia. (Environment\_11\_March, p. 135-137 & 138-141)
* Development of new methods for photo catalysis e.g. the photo catalytic decomposition of Water (Environment\_11\_March, p. 142-143)
* Image analysis of ceramic materials ageing (degradation) (Environment\_11\_March, p. 144-145)
* New materials for solid oxide fuel cells, solid oxide electrolyses and new ceramic materials for batteries(Environment\_11\_March, p. 144-145)
* Study the consequences of climate change on natural ecosystems with regard to carbon sequestration potential, changes in community structure, biodiversity and land use. (Environment\_11\_March, p. 146-147)
* High‐resolution spectroscopic and dynamic study of functional materials containing rare earths. (Environment\_5\_April, p. 148-149)
* The search for and investigation in novel reagents for solvent extraction and flotation processes for metal ions and minerals (Environment\_5\_April, p. 150-154)
* To define the dominant physical and biological processes leading to aggregation of zooplankton and Bowhead whales (Environment\_5\_April, p. 155-156)
* Focus on improvement of the environmental situation of contaminated areas in the North-West region of Russia: soil monitoring and remediation; effects of the environmental contamination on soil, wild and crop, plants; assess key factors affecting mobility; develop phytoextraction procedures (Environment\_5\_April, p. 157-158)
* Marine biota vs environmental changes. High‐resolution study of the rapid paleoceanographic transitions (glacial to interglacial, centennial to millennial fluctuations, etc.). (Environment\_5\_April, p. 159-160)

**Energy**

* Numerical Simulations (CFD) for the improvement of biomass boiler designs. (p.24 & 25)
* Effective power consumptions in home and office area (p. 39-40 and p. 50-51).
* Producing plants working on the basis of methane fermentation of manure for producing organic fertilizers and biogas (p.50-51)
* Construction of solar collectors which use energy of the sun to provide remote districts with electricity and heat water (p.50-51)
* Reducing of ball and energy demands in a process of ore crushing in a ball mill (p. 52-53) MMM
* Development of small power boilers to burnpellets made from crop waste (p.54-55) EEEEE
* Converting organic containing wastes into hear and energy carriers and/or for alternative energy based on processing of biomass. (p. 60-61) EEE

**Socio-Economic Studies**

* Coevolution of man and environment in a dynamic perspective including the last five centuries and present days populations and environments. (p.72-74)
* Theoretical considerations and empirical data on the firm as well as the regional level, looking especially on the advanced requirements and the transformational needs concerning the educational system in a knowledgebased economic and social environment (p.89-90)
* Elaboration of economic institutional models for the purpose of innovative development of firms and regional systems (p.95-96)
* Analysis and working out of alternative forms of maintenance of employment of the population in a transformed society (p. 117-118)
* Exchange of experience and coordination of scientific research in the sphere of social and humanitarian problems of nanotechnological modernization and creation of conditions for experts' preparation on the basis of optimization of research activity. (p. 124-125).
* Research factors, influencing the creation and development of spin-off companies in universities (p.127-128)
* Elaborate on experience of socio-economic models of development in different categories of European countries, including Russia, particularly on the experience of "welfare states", to assess results and prospects of these models in the sphere of integration policies including multiculturalism, assimilation, etc. (p. 136-137)
* Cognitive information technologies for information and analytical support of safety management in the development of Arctic regions of Russia in the context of globalization. (p.153-154 & 158-159)
* Ontology of belief: personal and socio-cultural mechanisms of succession of values. Department of Cultural Relations (p. 156-157)
* Analysis of the exact structure of government social transfers in Russia and of the profile of the typical recipient of these welfare transfers (p.170-171)
* Detailed analysis of the labour market and workforce, specifically the dynamics of employment, workforce activity, and the creation of additional jobs in the economy (p.170-171)
* Study the accessibility of higher professional education to different social and demographic groups of population under conditions of strong differentiation in the incomes of population and inequality in socio-economic development of the regions of contemporary Russia. (p.170-171)
* Systematic comparative e-Governance benchmarks for Russia and Europe (p.190-191)
* Construction of sustainable social models of multi‐ethnic economic spaces development (SocioEconomic\_Studies\_11\_March, p. 30-31)
* Adapting to Environmental Changes: Health conditions, Human Security and Socio‐Cultural adaptations to Environmental change in the Circumpolar Area. A Comparative Approach to an Analysis of Impacts of Oil and Gas Activities on HumanSecurity in the Komi Republic, Russia and Lofoten, Norway (SocioEconomic\_Studies\_11\_March, p. 32-33)
* Modern Landscape differentiation analysis, socio-economic changes, anthropogenic factor, maintenance of ecological stability strategies, monitoring components of landscape sphere (SocioEconomic\_Studies\_11\_March, p. 35-37 & 47-49)
* Integrated Socio‐Economic Modeling for Analysis of Countries’ Sustainable Development (SocioEconomic\_Studies\_11\_March, p. 38-40)
* Conducting interdisciplinary research which would provide predictive quantitative measure of how territorial risk (TR) is connected with and affecting the life expectancy (LE) of population of the same territory, and the territorial life quality index (TLQI) (SocioEconomic\_Studies\_11\_March, p. 41-46)
* Investigate how the grounding of conceptual content and it's embodiment could affect conceptual change and, if due to received results a transformation of Education System is needed. (SocioEconomic\_Studies\_11\_March, p. 50-51)
* Research factors, influencing the creation and development of spin‐off companies in universities SocioEconomic\_Studies\_11\_March, p. 52-54)
* Organisation and creation of international education and training school for nanotechnology. Combination with a Virtual Training Centre SocioEconomic\_Studies\_11\_March, p. 55-56)