

| #        | Full Title  | Leading Institution   | Project Manager      | Requested Funds | USA (US \$) | Canada (US \$) | European Union (EURO) | Other (US \$) | Total Funding (US \$) | Total Funding (US \$ + EURO) | Comments                 |
|----------|---|---|----------------------|-----------------|-------------|----------------|-----------------------|---------------|-----------------------|------------------------------|--------------------------|
| 881 (C)  | Part b: Modification of the Structure and Surface Layer Properties of the Hard Magnetic Materials under their Irradiation with the Pulsed Plasma Streams  | "Kharkiv Institute of Physics and Technology" National Scientific Center, Kharkiv                           | Tereshin Volodymyr   | \$150,634       | \$150,634   |                |                       |               | \$150,634             | \$ 150634                    | US:5<br>Canada:2<br>EU:2 |
| 991      | Research of Possible Stabilization Forms for Quas Isomorphous Activator Centers in High Melting Complex Oxide Single Crystals and Development of New Scintillation and Laser Materials on Their Basis | "Institute for Single Crystals" Scientific and Technological Concern; Kharkiv                               | Malyukin Yuri        | \$150,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1413     | Development of Element Base and Principles of Construction of Radartracking Means for Guaranteed Increase of a Level of Safety of Traffic in Difficult Conditions                                     | Usikovs Institute of Radiophysics and Electronics; Kharkiv  | Lutsenko Vladislav   | \$167,101       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1577 (J) | Investigation of Reactor Irradiation Effect on Radiation Stability and Mechanical Properties of Articles from Zirconium Alloys after High-Speed High-Frequency Treatment                              | "Kharkiv Institute of Physics and Technology" National Scientific Center, Kharkiv                           | Stukalov Anatoliy    | \$300,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1587     | Development of the New Technology of the New Class of Metal Insulator Materials for Magnetoresistive Sensors  | Institute of Magnetism; Kyiv  | Belokolos Eugene     | \$82,812        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1600     | Market Study of Bioenergy Technologies and Development of Bioenergy Concept in Ukraine  | Institute of Engineering Thermophysics; Kyiv  | Geletukha Georgii G. | \$75,000        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1605     | Optical Dust Concentration Meter for Ecological and Technological Control of Smoke and Exhaust Gases "Dust Meter"   | "Ukrainian Research and Development Institute of Analytical Instrumentation" Open Joint Stock Company; Kyiv | Mikhlejeva Inna      | \$153,425       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1623     | Interaction of ZrO <sub>2</sub> with Metal Melts and the Development of Products for Industry and Everyday Life   | Bakul Institute for Superhard Materials; Kyiv   | Perevertailo Vasyi   | \$130,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1628     | Development of the Method of Assessment and Techniques for Prevention the Hydrogen Degradation of Metals  | Karpenko Institute of Physics and Mechanics; Lviv   | Andrejkiv Olexander  | \$148,960       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1637     | Interactive System for Representation of Video Information  | "Technology" Small Production Enterprise, Vyshneve  | Kadan Victor         | \$193,146       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1647     | Laser Excitation of Quick-Running Chemical Reactions in a Condensed Medium  | "Pivdenne" State Design Bureau; Dnipropetrovsk  | Buntchuk Yuriy       | \$172,350       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1657     | The Growth of High-Quality Acousto-Optical Mercurous Chloride Hg <sub>2</sub> Cl <sub>2</sub> Single Crystals   | "Elent A", Non-Traditional Technologies Science and Engineering Center, Dnipropetrovsk                      | Akimov Sergiy        | \$140,260       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |

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| 1658     | Growing of High-Quality Acousto-Optic and Electro-Optic NaBi(MoO <sub>4</sub> ) <sub>2</sub> and LiNbO <sub>3</sub> Single Crystals | "Eient A", Non-Traditional Technologies Science and Engineering Center, Dnipropetrovsk | Akimov Sergii            | \$163,500       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1669     | Development and Research of Screening Construction with the Use of Amorphous and Polycrystalline Materials                          | International Science and Technology University; Kyiv                                  | Kazantsev Victor         | \$52,975        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1677     | Surface Hardening of Titanium Alloys for Improving Fatigue Strength and Life  | Karpenko Institute of Physics and Mechanics; Lviv                                      | Fedirko Victor M.        | \$135,000       | \$121,500   | \$13,500       |                       |               | \$135,000             | \$ 135000                    | US:5<br>Canada:5<br>EU:2 |
| 1682     | Development of a Technology of Processing Ballistite Rocket Propellants in Civil Explosives   | "Proton" Research and Design Center; Lviv  | Chuchmaryev Olexander S. | \$82,800        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:1 |
| 1683     | Development of a Technology of Processing Perchlorate Rocket Propellants in Civil Explosives  | "Proton" Research and Design Center; Lviv  | Chuchmaryev Olexander S. | \$81,000        | \$72,900    | \$8,100        |                       |               | \$81,000              | \$ 81000                     | US:5<br>Canada:5<br>EU:1 |
| 1685 (R) | Predicting Seismic Hazard Dynamics Based on Complex Geophysical Monitoring Data   | Subbotin Institute of Geophysics; Lviv   | Verbytskyi Taras         | \$184,279       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1686     | Creation of Radiophysic Methods for Detection of Infrasonic Pollution of Atmosphere   | Lviv Center of Institute of Space Research; Lviv                                       | Soroka Silvestr          | \$120,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1692     | Development the Energy Saving Installation of a Fuel Submission for Gas-Turbine Engines   | Ivano-Frankivsk State Technical University of Oil and Gas; Ivano-Frankivsk             | Kozak Lyubomyr           | \$55,000        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1701     | Development and Creation of Neural Networks of Ultra-High Productivity, Learning Effectiveness, Exactness and Reliability           | State Scientific and Research Institute of Information Infrastructure; Lviv            | Hrytsyk Volodymyr V.     | \$167,877       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1702     | Information Videoscope of Ultrahigh Resolution for Investigation of Programmed Death (Apoptosis) of Human Tumor Cells               | State Scientific and Research Institute of Information Infrastructure; Lviv            | Hrytsyk Volodymyr V.     | \$183,994       |             | \$18,399       | €165,595              |               | \$18,399              | \$ 18399<br>€ 165595         | US:1<br>Canada:5<br>EU:5 |
| 1705     | Multifunctional Associative Memory of Large Volume, Response, Reliability on the Basis of Simulated Neural Networks                 | State Scientific and Research Institute of Information Infrastructure; Lviv            | Hrytsyk Volodymyr V.     | \$160,339       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1709     | Elaboration of Laser-Based and Combined Intercalation Methods for Nanotechnologies of Low Dimension Structures                      | Stefanyk Precarpathian University; Ivano-Frankivsk                                     | Ostafychuk Bogdan K.     | \$148,200       | \$148,200   |                |                       |               | \$148,200             | \$ 148200                    | US:5<br>Canada:2<br>EU:2 |
| 1716     | Elaboration of Neural Network System for Prediction of Gelo-Technogenic Influence on Human Health                                   | State Scientific and Research Institute of Information Infrastructure; Lviv            | Hrytsyk Volodymyr V.     | \$94,776        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1717     | Creation of Information System and Multimedia Catalogue "Ukrainian Icon XIII-XVIII c."  | State Scientific and Research Institute of Information Infrastructure; Lviv            | Stekh Stefania           | \$69,738        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |

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| 1719 | Increase of Operational Resources for Nuclear Industry Applications  | Nuclear Power Plant Operational Support Institute; Kyiv                           | Igor Klymenko         | \$129,513       | \$129,513   |                |                       |               | \$129,513             | \$ 129513                    | US:5<br>Canada:2<br>EU:2 |
| 1744 | Enlargement of Three Dimensional Holographic Memory Capacity   | Kharkiv Military University; Kharkiv  | Kupchenko Leonid F.   | \$95,200        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1745 | Polycrystal Composite Superhard Materials Based on Diamond Ultrafine Powders   | Bakul Institute for Superhard Materials; Kyiv                                     | Shul'zhenko O.O.      | \$123,850       |             | \$12,385       | €111,465              |               | \$12,385              | \$ 12385<br>€ 111465         | US:2<br>Canada:5<br>EU:5 |
| 1748 | Development of the Superlight Aircraft of New Generation   | "Kharkiv Aviation Institute" State Space University; Kharkiv                      | Neshmonin Petro       | \$130,315       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1765 | Development of the Methods for Modification and Optimization of Gas-Aerosol Release Monitoring System of VVER Equipped NPP                           | Kharkiv State University; Kharkiv   | Rudychev Volodymyr G. | \$149,864       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1767 | Development of Radio Devices for Monitoring of Parameters of Physical Environments, Functional Materials and Coatings                                | Usikovs Institute of Radiophysics and Electronics; Kharkiv                        | Maystrenko Yuri       | \$94,380        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1768 | Radioactive Enhancement of Treatment by platinum cytostatics   | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Dikiy Mykola          | \$80,000        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1774 | Creation of Protective Thick Metal-Metalloid Coatings with Quasiamorphous Heterostructure by High-Speed Ion-Atomic Sputtering Method                 | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Gann Volodymyr        | \$68,816        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1783 | Combined Plasma Source with Regulated Contents of Flow Components  | "Kharkiv Aviation Institute" State Space University; Kharkiv                      | Kolesnik Volodymyr P. | \$96,767        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1789 | Alloyed Diamond-Like Carbon Films - New Material for Optics and Electronics  | "Institute for Single Crystals" Scientific and Technological Concern; Kharkiv     | Semenov A.V.          | \$88,051        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1790 | Super Hard Coatings of Boron-Nitrides for Tools  | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Safonov Volodymyr J.  | \$99,950        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1792 | Organization of Ion Preparation Processes of Metal Product Surfaces for Deposition of Coatings in Vacuum   | "Kharkiv Aviation Institute" State Space University; Kharkiv                      | Kolesnik Volodymyr P. | \$124,394       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1793 | Development of Single Crystal Growth Technology and Exploration of Properties of Antiferromagnetic Garnets for Optical and Magneto-Optical Recording | "Institute for Single Crystals" Scientific and Technological Concern; Kharkiv     | Kosmyna Myron         | \$110,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1796 | Neutron Source for Boron-Neutron-Capture Therapy (BNCT)  | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Sanin Vasyi' M.       | \$99,714        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:1 |

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| 1797 | Complex for Radio Nuclide Production on the Basis of Ion Linear Accelerator   | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv                 | Bomko Vasyi           | \$99,714        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:1 |
| 1798 | Fluoride Single Crystals for Electronics and Medicine   | "Institute for Single Crystals" Scientific and Technological Concern; Kharkiv                     | Blank Abram           | \$151,300       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1799 | Soil Moisture Mapping   | Usikovs Institute of Radiophysics and Electronics; Kharkiv  | Timochenko Alla I.    | \$102,685       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1815 | Flexible intercity traffic radar control system   | "Ukrinformzakhist" State Science- and Production Center of Information Technical Protection; Kyiv | Kovbasa Olexij        | \$180,700       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1823 | Development and Experimental Researches of Non-Destructive Methods of Predictive Diagnosing of Products of Electronics  | "Mykropyriad" Public Enterprise Scientific and Research Institute; Kyiv                           | Soldatenko Leonid M.  | \$152,300       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1826 | HF Ultra Wide-Band Radars for Environmental Monitoring  | "Ukrinformzakhist" State Science- and Production Center of Information Technical Protection; Kyiv | Shayda Volodymyr      | \$187,150       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1835 | Technology of Self-Adjustment Chemical-Mechanical Polishing for Surface Planarization with Refractory Materials   | Bakul Institute for Superhard Materials; Kyiv   | Stachniv Mykola       | \$108,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1837 | New Corrosion-Resistant and Wear-Resistant Coating for Oil and Gas Industry Equipment   | Frantsevich Institute for Problems of Materials Science; Kyiv                                     | Slys I.               | \$120,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1847 | Structure and Properties of Eutectically Reinforced Materials Based on Titanium Intermetallics and Silicides  | Frantsevich Institute for Problems of Materials Science; Kyiv                                     | Firstov Sergii O.     | \$120,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1855 | Research and Development of Super-Low Noise Interferency-Protected Magnetometers  | Lviv Center of Institute of Space Research; Lviv  | Korepanov Valerii     | \$195,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1858 | Methods and Instrumentation Development for Radio and Acoustic Atmosphere and Marine Environment Diagnostics  | Usikovs Institute of Radiophysics and Electronics; Kharkiv  | Ivanov V.K.           | \$117,870       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1861 | The Influence of Stochastic Electromagnetic Radiation on Substances   | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv                 | Bez'yazychnyj Ivan A. | \$166,960       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1863 | Research into the Interaction Between Energetically Saturated Plasma and High-Frequency Antenna Interface to Enhance the Efficiency of Plasma Heating in Magnetic Fusion Devices and to Improve High-Frequency Vacuum-Plasma Technology Systems | Kharkiv State University; Kharkiv   | Girka Igor            | \$193,710       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |

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| 1875 | Multispectrum Receiving Complex for Early Warning of Human Created Disasters   | "Iceberg" State Research Center; Kyiv   | Radzikhovsky Vasyi    | \$120,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1885 | Design of New Means of Remote Sensing for Aerospace Ecological and Biological Monitoring of Natural Environment  | "Kharkiv Aviation Institute" State Space University; Kharkiv                      | VOLOSUYUK Valery      | \$67,590        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1886 | Multifunctional Vacuumed Microwave Technology Apparatus  | Kharkiv State University; Kharkiv   | Popov Victor S.       | \$94,000        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1888 | Investigation of Mechanisms for Dust Production and Transportation in Radiation Fields at Chernobyl  | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Meľnyk Yurii P.       | \$84,810        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1889 | Detection System for a Positron-Emission Tomograph Based on Silicon Pad Sensors  | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | MASLOV Mykola         | \$106,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1891 | Universal Measuring Unit for Application in Microwave Devices  | Usikovs Institute of Radiophysics and Electronics; Kharkiv                        | Kuzmychov Igor K.     | \$96,190        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1893 | Scientific Basics of High Efficient Silicon Hetero Photo Cells Creation with Amorphous Crystalline Multi-Interface Structures for Solar Power            | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Ayzatskii Mykola I.   | \$126,885       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1896 | Deep Modification of Constructive Materials by Ion-Plasma Flow   | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Karmazov Gennady N.   | \$119,586       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1899 | Neutron Source for Boron-Neutron Capture Therapy Based on the Linear Accelerator of the Lithium Ions   | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Mazalov Yurii P.      | \$99,714        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1901 | Study of the Mechanism of Precipitation of Electrons and Protons from the Earth's Inner Radiation Belt   | Kharkiv State University; Kharkiv   | Shmatko Yevgen S.     | \$141,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1905 | Combined Scintillation Detectors of Gamma Rays and Neutrons, and Dosimeters Based on Them  | "Institute for Single Crystals" Scientific and Technological Concern; Kharkiv     | Sysoeva Olena P.      | \$147,720       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1911 | Pyroelectric generator of X-rays   | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Shchagin Olexander    | \$96,760        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1915 | Methodology for Pre-Reactor Testing of Structural Materials for Molten-Salt Nuclear Transmutation Facilities Using Simulating Irradiation by Electronics | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Reznichenko Eduard A. | \$140,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1918 | Serviceability of New Structural Al-Cu-Li Alloys Under Extraordinary Conditions  | Verkin Institute for Low Temperature Physics and Engineering; Kharkiv             | Pokhyt Yurii O.       | \$110,500       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |

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| 1923 | Production and Quasi-Steady Maintenance of High Density Plasmas by RF Methods in Stellarator Systems  | "Kharkiv Institute of Physics and Technology" National Scientific Center, Kharkiv | Volkov Eugene D.          | \$235,264       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1925 | Portable Spectrometer of Electronic-Spin-Resonance for Medical and Biological Investigations  | Usikovs Institute of Radiophysics and Electronics, Kharkiv                        | Yeremka Victor            | \$114,345       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1926 | Small-Size ESR-Spectrometer for Medical Investigations and Diagnostics  | Usikovs Institute of Radiophysics and Electronics, Kharkiv                        | Yeremka Victor D.         | \$109,868       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1930 | Reactive Functional Colloidal Carriers for Chemical, Biological and Microelectronic Technologies  | "Lvivska Polytechnica" State University, Lviv                                     | Zeichenko Olexander S.    | \$170,000       | \$153,000   | \$17,000       |                       |               | \$170,000             | \$ 170000                    | US:5<br>Canada:5<br>EU:2 |
| 1938 | Self-Organization of Coherent Structures of Anomalous Transport in Electromagnetic Media  | "Kharkiv Institute of Physics and Technology" National Scientific Center, Kharkiv | Vodyanytskii Olexander A. | \$92,933        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1940 | Remote Control of Sea Surface Using Coastal HF Radars   | Usikovs Institute of Radiophysics and Electronics, Kharkiv                        | Melyanovskii Pavlo A.     | \$100,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1942 | Klystron with Secondary-Emission Metallic Cathodes for Medical Electron Accelerators  | "Kharkiv Institute of Physics and Technology" National Scientific Center, Kharkiv | Zakutin Valerii V.        | \$187,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1943 | Microalloying Improvement of Operating Peculiarities of Welded Joints   | Ukrainian Engineer-Pedagogical Academy, Kharkiv                                   | Yefimentko Mykola G.      | \$69,510        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1947 | Development of Instrument and Procedures for Non-Destructive Quantitative Express Analysis of Chlorine, Sulfur, Phosphorus, and Silicon in Inorganic and Organic Substances | "Plus Radio" Scientific and Technical Center, Kyiv                                | Kiseliov Vladyslav        | \$200,000       |             |                | €200,000              |               |                       | € 200000                     | US:1<br>Canada:2<br>EU:5 |
| 1948 | Police Radar with Low Probability of Detection for Traffic Safety   | Usikovs Institute of Radiophysics and Electronics, Kharkiv                        | Lukin Kostiantyn A.       | \$149,820       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1949 | Development of Scientific and Technological Fundamentals for Elaboration and Application of Magnetic High-Speed Bearings  | "Kharkiv Aviation Institute" State Space University, Kharkiv                      | Rashkovan Vasyli M.       | \$84,935        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1954 | Microwave Method and Instrumentation for Precise Monitoring of Chornobyl's Sarcophagus  | Usikovs Institute of Radiophysics and Electronics, Kharkiv                        | Lukin Konstantin O.       | \$198,000       |             |                |                       |               |                       |                              | US:1<br>Canada:2<br>EU:1 |
| 1957 | Investigation of Trichel Pulses in Non-Equilibrium Plasma under Atmospheric Pressure for Plasm-Chemical Reactor Optimization  | "Kharkiv Institute of Physics and Technology" National Scientific Center, Kharkiv | Buts Olexander V.         | \$70,000        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1959 | Development of Converters of Energy of Various Types on the Basis of the Phenomenon of Parametrical Resonance   | Pidgorny's Institute for Problems of Machine Building, Kharkiv                    | Shubenko Olexander L.     | \$54,460        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |

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|------|--|--|--------------------------|-----------------|-------------|----------------|-----------------------|---------------|-----------------------|------------------------------|--------------------------|
| 1962 | Adjusting Influence of laser Radiation on Biological Properties  | Kharkiv State University; Kharkiv  | Svich V.                 | \$120,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1964 | Development of Technologies for Super High Frequently Treatment of Medical Raw Materials   | Usikova Institute of Radiophysics and Electronics; Kharkiv   | Yefimov Boris            | \$112,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1968 | High-Current Electron Gun with Secondary Emission  | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv                                  | Cherenshchykov Sergii O. | \$73,900        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1973 | Effects of Macromolecule Conformation on Dielectric Properties of Polymer Composites in the Microwave Frequency  | Institute for Surface Chemistry; Kyiv  | Dubrovina Lyubov V.      | \$16,500        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 1974 | Computer-Aided Multi-Factor Analysis of Bio-Electrical Parameters of the Brain   | National Technical University of Ukraine "Kyiv Polytechnical Institute"; Kyiv                                      | Zhuikov Valery           | \$161,083       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 1975 | The Conditions of Tungsten Substitution in Cast Hard Alloys by Transition Metals of IV-VI Groups   | Frantsevich Institute for Problems of Materials Science; Kyiv  | Velikanova Tamara        | \$57,300        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2002 | Laser Control System for Nuclear Power Engineering and Decommissioning of Chernobyl NPP  | "Physical and Chemical Material Science" Science and Training Center at the Kyiv Taras Shevchenko University; Kyiv | Yarovi Leonid            | \$176,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2003 | Development of Methods for the Intensive Heat Treatment of Iron-Nickel Alloys  | Kurdyumov Institute for Metal Physics; Kyiv  | Danichenko Vitaly        | \$68,520        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2005 | Development of a Method, Software, and Hardware for Computer-Aided Monitoring of Radioactive Contamination of the Atmosphere   | "Atom Complex Prylad" Scientific Industrial Company; Kyiv  | Babenko Vitalii          | \$100,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2007 | Development of a Computerized Complex and Technology for Automated Thermal Straightening of Welded Sheet Structures  | Paton Electric Welding Institute; Kyiv   | Lobanov Leonid           | \$180,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2011 | Development of the Physico-Chemical Basis for Refining, Obtaining and Investigation of the Properties of High Purity Nb and V for Application in New Industrial Fields | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv                                  | Lavrynenko Sergiy        | \$160,281       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2013 | The Elaboration of the Theoretical Foundations for Distance Monitoring of Natural Environment Based on the Geo Information Modeling                                    | Kharkiv State University; Kharkiv  | Suchov Volodymyr M.      | \$115,500       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2023 | Non-Submersible Water Pump for Deep Wells  | "Pivdenne" State Design Bureau; Dnipropetrovsk   | Buntchuk Yuriy           | \$160,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2039 | Development and Investigation of High-Stable He-Ne Laser Modules for Prediction Controlling and Measuring Systems  | "Arsenal" Central Design Office; Kyiv  | Klochko Olexandr I.      | \$159,716       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:1 |

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| 2042 | Development of Combined Thin-Film Scintillators/Dosimeters on the Basis of Doped Oxide Crystals   | Kyiv Taras Shevchenko University; Kyiv   | Nedilko Sergii         | \$150,300       |             |                | €150,300              |               |                       | € 150300                     | US:2<br>Canada:2<br>EU:5 |
| 2043 | Development of the Electro-Refining of Platinum-Containing Secondary Raw Materials and Plating from Molten Electrolytes                                     | Vernadskii Institute of General and Inorganic Chemistry; Kyiv                                  | Tumanova Nelly         | \$174,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2045 | Noncomposite Conducting Polymers and Electrolytes for Lithium and Zink-air Batteries  | Pisarzhevsky Institute of Physical Chemistry; Kyiv   | Pokhodenko Vitaly      | \$168,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:1 |
| 2053 | Research and Development Methods for Preventing Ultra-Fine Radioactive Dust Formation in Handling Nuclear Materials   | Kharkiv State University; Kharkiv  | Vasylyev Victor        | \$154,363       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2058 | Development and Investigation of Magnesium-Aluminate Spinel Crystals for Devices of Energy Transformation   | "Institute for Single Crystals" Scientific and Technological Concern; Kharkiv                  | Lytvynov Leonid        | \$95,000        | \$95,000    |                |                       |               | \$95,000              | \$ 95000                     | US:5<br>Canada:2<br>EU:2 |
| 2063 | Investigation and Development of an Acoustic Method for More Efficient Oil, Gas Condensate and Water Extraction   | Kharkiv State University; Kharkiv  | Pelikhaty Mykola       | \$152,992       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2064 | Development of the Methods for Forest Fire Prediction, Detection and Monitoring Based on Information from Aerospace Radiophysical Remote Sensing Facilities | Usikovs Institute of Radiophysics and Electronics; Kharkiv                                     | Komyak Volodymyr       | \$185,554       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2065 | Development and Fabrication of the Georadar Navigation System   | Usikovs Institute of Radiophysics and Electronics; Kharkiv                                     | Masafov Sergii         | \$102,434       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2071 | Definition of Physical Parameters of Bio-Tissues at Ultrasonic Inspection of Mammary Gland with the Purpose of Expansion of Diagnostic Opportunities        | "Scientific Research Institute of Radio Engineering Measurements" Joint Stock Company; Kharkiv | Leontyev Volodymyr     | \$140,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2072 | Microwave Reflectometry for Plasma Fluctuation Studies and Development of Methods and Apparatus for Its Application   | Kharkiv State University; Kharkiv  | Azarenkov Mykola       | \$149,844       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2075 | Applying of Protective, Strengthening and Biocompatible Coatings to Orthopedic Implants by Ion-Plasma Deposition Methods                                    | "Kharkiv Aviation Institute" State Space University; Kharkiv                                   | Rashkovan Vasyf M.     | \$99,800        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2079 | Holographic Materials for Neutron and Optical Spectroscopy  | Kyiv Taras Shevchenko University; Kyiv   | Obukhovskii Vyacheslav | \$65,200        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2081 | Thin Film 3-D Formation and Development of Devices and Technology for Creation of Functional Elements of Multi-Sectional Structure                          | Kharkiv State University; Kharkiv  | Bobkov Valentyn        | \$165,948       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |

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| 2083 | Mechanisms of the Ionization Increasing in Plasma Sources of Low Pressure   | Kharkiv State University; Kharkiv   | Azarenkov Mykola O.      | \$83,050        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2088 | Investigation of the Physical Properties of Water Electrolyte Systems and Creation of Under Satellite System for Control of Natural Media                                 | Kharkiv State University; Kharkiv   | Ashenko Anatoliy         | \$224,700       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:1 |
| 2092 | Development, Exploration and Implementation of a Device for Vacuum Tool Coating by a Melted Substance   | Kharkiv Science and Research Institute of Machine-Building Technology; Kharkiv    | Movshovych Isac Ya.      | \$82,100        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2099 | Development and Constructing of Tunable Lasers for Optical Range of Spectrum on the Basis of Solid-State Matrices Activated by Dyes                                       | Usikovs Institute of Radiophysics and Electronics; Kharkiv                        | Shevchenko Valerii V.    | \$109,990       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2104 | Development of the Theoretical Background for Thermal Defractometry and Tomography and Their Use for Diagnostics of Nuclear Power Plant Equipment                         | Kharkiv State Technical University of Radioelectronics; Kharkiv                   | Storozhenko Volodymyr A. | \$198,400       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2108 | Adiabatic Plasma Devices Controlled by Magnetic Field for Charged Particles Focusing  | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Ivanov Borys I.          | \$85,300        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2116 | Precise Radar Measurements for Checking Condition and for Scheduled Preventive Maintenance of Water-Moderated Power Reactors  | Usikovs Institute of Radiophysics and Electronics; Kharkiv                        | Velichko Anatoliy        | \$94,720        |             |                | €94,720               |               |                       | € 94720                      | US:2<br>Canada:2<br>EU:5 |
| 2119 | Investigation and Development of New Metal Materials and Products from them for the Use in Medicine   | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Tikhnovskii Mykhailo A.  | \$93,000        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2123 | Electromagnetic Interaction Between the Lightest Nuclei and Hadrons   | Kharkiv State University; Kharkiv   | Trubnikov Sergiy         | \$109,450       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2124 | Development of Methods and Facilities for Instant Bio-Indication of a Person's Low-Dose Irradiation   | "ISKRA" Science and Research Institute; Lugansk                                   | Dolinsky Gennady         | \$118,695       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2127 | New Methods of Early Diagnostics of Pathologic Damages in Biological Objects and the Skin Using Circularly Polarized SHF Electromagnetic Wave (Using the Sadovsky Effect) | Kharkiv State University; Kharkiv   | Azarenkov Mykola O.      | \$159,599       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2128 | Harmonic GaAs-Oscillators for the Short Wave Edge of mm-Wave Range  | Kharkiv State University; Kharkiv   | Prokhorov E.D.           | \$77,000        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2129 | Research and Development of Microhydroelectric Station Units for Low Head and Velocity  | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Kovalevsky Mykhailo      | \$108,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |

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| 2134 | Fiber-Optical System for Control of Harmful Gases in the Atmosphere  | "Metrology" The State Scientific and Industrial Association; Kharkiv                       | Machehkin Yuri         | \$116,390       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2136 | Realization of Ecological Mapping of Eastern Regions of Ukraine  | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv          | Levenets Volodymyr V.  | \$109,605       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2138 | All-Weather Condition Detector of Motion Based on Millimeter Wave Coherent Radar for Industrial Security   | Usikovs Institute of Radiophysics and Electronics; Kharkiv                                 | Masalov Sergiy         | \$125,235       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2139 | Development of Mechanisms of Generation of Coherent X-Ray Radiation  | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv          | Buts Vyacheslav O.     | \$143,077       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2142 | Research of a Possibility of Hydrocarbon Vapor Detection in an Air with the Help of HCN Laser  | Usikovs Institute of Radiophysics and Electronics; Kharkiv                                 | Kuleshov Yevgen        | \$139,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2143 | Transmutation Level Determination of Zirconium Alloys Doping Under Operation in Water-Water Reactors   | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv          | Shilayev Borys A.      | \$40,000        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2145 | Elaboration of the New Methods of the Treatment and Prevention of Traumatological Damages and Orthopedic Diseases Using Ozonizer on the Base of High-Pressure Glow Discharge                         | Sitenko Kharkiv Scientific and Research Institute of Orthopedics and Traumatology; Kharkiv | Radchenko Volodymyr O. | \$95,000        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2146 | Methods for Desinfection of Poultry Farming Forage and Production by Ozone-Enriched Air  | Institute of Experimental and Clinical Veterinary Medicine; Kharkiv                        | Malinin Oleg O.        | \$97,500        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2148 | Research and Development of Increased Energy Saving Methods for Glass Making   | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv          | Shirokov Borys         | \$140,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2150 | The Study of Accuracy Time Scales Comparison Using Various Methods   | "Metrology" The State Scientific and Industrial Association; Kharkiv                       | Solovyov Valentyn S.   | \$121,740       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2152 | Measurement of the Parameters of the Laser Radiation by Bolometers from Thin Wire  | Kharkiv State University; Kharkiv  | Kuzmichov Volodymyr M. | \$58,793        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2155 | The Complex Study of the Mechanism of Process of Middle Energies Ions Interaction with Solids and the Development on This Base the Quantitative Methods of Solid Diagnostics with Atomic Resolutions | Kharkiv State University; Kharkiv  | Koval Adolf G.         | \$200,000       |             |                | €200,000              |               |                       | € 200000                     | US:2<br>Canada:2<br>EU:5 |
| 2156 | Magneto Induction Effect of Extensive Air Showers as a New Detection Method  | Kharkiv State University; Kharkiv  | Shmatko Yevgen S.      | \$94,000        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |

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| 2157 | Development of Experimental Equipment for Dehydration of Colloidal Mixtures by Means of Their Artificial Freezing and Subsequent Defrosting | "Kharkiv Aviation Institute" State Space University; Kharkiv                                      | Petukhov Iliia I.    | \$94,000        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2162 | The Elaboration of Highly Effective Dispersing Elements for the Wavelength Range of 0.5 to 1.2 nm Based on Fullerene Films                  | Kharkiv State Polytechnical University; Kharkiv   | Mikhailov Igor       | \$115,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2167 | The Regional System for the High Level Accuracy Satellite Geodetic Definitions  | "Navigation and Geodetic Center" Private Company; Kharkiv   | Gorb Olexander I.    | \$171,400       | \$171,400   |                |                       |               | \$171,400             | \$ 171400                    | US:5<br>Canada:2<br>EU:2 |
| 2174 | Production of Casting Out of Deformable Aluminum Alloys under Electromagnetic Pressure with Non-Solidifying Gating System                   | Physico-Technological Institute of Metals and Alloys; Kyiv  | Dubodelov Victor     | \$121,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2175 | Monitoring System for Ecologically Threaten+M76ing Hydro-Constructions  | "Ukrinformzakhist" State Science- and Production Center of Information Technical Protection; Kyiv | Kovbasa Olexii P.    | \$162,500       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2190 | Development of Numerical Methods and Codes for Electromagnetic Field Modelling in Hot Magnetized Plasmas                                    | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv                 | Moiseyenko Volodymyr | \$58,960        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2191 | Study of Localized Eigenmodes and Continuum Spectrum in Toroidal Fusion Devices   | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv                 | Moiseyenko Volodymyr | \$58,960        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2206 | Enhancing Serviceability of Welded Joints of Dissimilar Metals by Optimizing Their Design and Technological Parameters                      | Institute for Problems of Strength; Kyiv  | Lebedev Anatolii A.  | \$110,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2207 | Development of Physical-Chemical and Thermal-Physics Base for Production of Bimetallic/Multilayer Castings of High Durability               | Physico-Technological Institute of Metals and Alloys; Kyiv  | Kostenko Georgii     | \$151,176       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2219 | System for Personal Identification by Voice and Sound Recording   | Kyiv Scientific Research Institute of Forensic Examinations; Kyiv                                 | Novoselsky Olexander | \$99,530        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2224 | Synthesis of the Surface Layer of Superhard Powder Material to Produce Ceramics and Composite Materials                                     | "Arvina" Scientific and Production Center; Kyiv   | Vesna Valery         | \$195,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2231 | Improvement of Wear Resistance of Equipment and Its Renovation under Conditions of Non-Interruptible Operation                              | "Pivdenne" State Design Bureau; Dnipropetrovsk  | Ivanov Yurii O.      | \$90,672        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2239 | Sound Amplification by Stimulated Emission of Radiation in liquid crystal systems   | Institute of Physics; Kyiv  | Lev Bogdan           | \$83,860        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2242 | New Methods and Tools of Image Processing for Telemedicine Technologies   | "Intermag" Science and Production Firm; Kyiv  | Novoselets Mykhailo  | \$177,600       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |

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| 2245 | Formation of an Automatic Informative System for Diagnostics and Treatment of Diseases of the Gastrointestinal Tract   | "SATURN-MICRO" Research and Production Enterprise; Kyiv                           | Kabanov Olexander        | \$90,700        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2249 | Development of Principles and Instrumentation for Multifunctional Eye Investigation  | Institute of Biomedical Engineering; Kyiv   | Molebny Vasyl' V.        | \$160,075       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2251 | Quasi-Continuous Monitoring of Leakage in Steam Generators at NPPs   | "ATOMICS" Ltd; Kyiv   | Pahenychnyj Volodymyr    | \$160,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2253 | Information Technology and System for Preservation of Cultural Possessions of Ukraine  | State Scientific and Research Institute of Information Infrastructure; Lviv       | Opotak Yu.V.             | \$76,149        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2254 | Elaboration of High-Effective Computer Technology of Tutoring Holy Bible   | State Scientific and Research Institute of Information Infrastructure; Lviv       | Hrytsyk V.V.             | \$98,462        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2255 | Information System of Recreation Resources and Technologies "Carpathian Healthy Springs"   | State Scientific and Research Institute of Information Infrastructure; Lviv       | Stekh Stefania           | \$76,137        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2259 | Nonlinear Generation of Second Harmonics of Laser Irradiation Using Passive Resonator  | "Lvivska Polytechnica" State University; Lviv                                     | Bobitskii Yaroslav V.    | \$159,729       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2261 | Creation of Information System and Multimedia Catalogue "Ukrainian Icon XIII-XVIII c."   | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Cherenshchykov Sergii O. | \$119,427       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2262 | Elaborating a Method of Measuring the Ceramics Dielectric Constant in Vicinity to the Temperature of Vaporization and Constructing the Corresponding Device              | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Antipov Vyacheslav S.    | \$93,170        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2264 | Development of the Basis Elements and Principles of Construction of Radars for the Guaranteed Increase of a Safety Level of Automobile Traffic in Complicated Conditions | Usikovs Institute of Radiophysics and Electronics; Kharkiv                        | Lutsenko Vladyslav I.    | \$84,000        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2265 | Study of a Nature of Ion-Induced Phase Transitions in Silver by Bombardment with Chemically Active Elements: O+, N+, D+, (H+)  | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Morozov Olexander M.     | \$59,796        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2272 | The High-Power Compact Linear Accelerator with an Alternating-Phase Focusing   | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Khyzhniak Mykola A.      | \$200,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2273 | Effect of Low Radiation Doses on Live Cell Properties  | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Khyzhniak Mykola A.      | \$180,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2275 | Development of Methods of Optimal Filtering the Reflected Signal when Sounding of the Underground Structure of the Soil  | Usikovs Institute of Radiophysics and Electronics; Kharkiv                        | Korrienko Yurii V.       | \$98,445        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |

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|------|---|---|-------------------------|-----------------|-------------|----------------|-----------------------|---------------|-----------------------|------------------------------|--------------------------|
| 2280 | Epiphysis-Gonad System Reactivity to Electromagnetic Field Effects  | Ukrainian Pharmacotherapy of Endocrine Diseases Research Institute; Kharkiv       | Gladkova Alla I.        | \$168,522       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2282 | VHF Radiating Systems and Devices of Arbitrary and Directed Polarizations for Radioelectronic Systems   | Kharkiv State University; Kharkiv   | Shmat'ko Alexander      | \$98,076        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2283 | Elaboration of Methods and Equipment for Complex Influence of Electrical Fields, Electromagnetic Radiations and Ozone on the Microorganisms for Disinfection of Liquids | Kharkiv State University; Kharkiv   | Katrich Victor O.       | \$98,000        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2284 | The All-Purpose, High-Resolution Device for Sound Velocity and Attenuation Measurements in the Meter Wave Band  | Verkin Institute for Low Temperature Physics and Engineering; Kharkiv             | Fil Vyacheslav          | \$81,300        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2285 | Effective Electro-Chemiluminescent Materials Development for Use in the Newest Techniques of Homo-, Heterogeneous and Bio-Electro-Chemiluminescent Analysis             | Kharkiv State Technical University of Radioelectronics; Kharkiv                   | Bykh Anatolii           | \$167,725       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2291 | Improvement of Surface-Volumetric Materials Properties Complex of Nuclear Reactors by Impulses of Super-Power Radiation   | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Yuferov Volodymyr B.    | \$145,341       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2294 | Method of Analysis In Vitro of Molecular Mechanisms of Action of Drugs for Their Designing, Selection of Doses and Combinations   | Problem Scientific and Research Laboratory of Molecular Mechanisms; Kharkiv       | Konev Fedir A.          | \$154,374       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2295 | Apparatus and Technique for the Early Diagnostics, Therapy, and Preventive Maintenance of Cardiovascular Diseases   | Problem Scientific and Research Laboratory of Molecular Mechanisms; Kharkiv       | Kovaleva Olga           | \$152,405       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2296 | Creation of the Equipment Complex for the Analysis of Hydration Parameters of Bioobjects and Their Water Component  | Usikovs Institute of Radiophysics and Electronics; Kharkiv                        | Schegoleva T.           | \$102,174       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2297 | Development of Semen Quality Control Non-Destructive Methods  | Problem Scientific and Research Laboratory of Molecular Mechanisms; Kharkiv       | Kolesnikov Volodymyr    | \$161,396       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2298 | Express-Testing System for Cereal Culture Maturity in the Harvest Period for Ukraine Farms  | Problem Scientific and Research Laboratory of Molecular Mechanisms; Kharkiv       | Kolesnikov Volodymyr G. | \$135,872       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2299 | Prediction of Complications of Acute Myocardial Infarction  | Problem Scientific and Research Laboratory of Molecular Mechanisms; Kharkiv       | Vasilieva Olena         | \$70,769        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2300 | Origin, Preparation and Diagnostic Capacity of Natural Pulse Electromagnetic Radiation from the Earth Interior as a Precursor and an Indicator of Geodynamic Processes  | Usikovs Institute of Radiophysics and Electronics; Kharkiv                        | Uvarov Volodymyr M.     | \$142,380       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |

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| 2301 | Development and Investigation of the Physical Characteristics of Bulk and Long-Dimensional Products from High-Temperature Superconductors | "Kharkiv Institute of Physics and Technology" National Scientific Center, Kharkiv                               | Petrusenko Yurii         | \$123,400       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2302 | Creation of Elements of Radio Electronic Systems For Remote Detection and Identification of Ecological Catastrophes                       | Kharkiv State Technical University of Radioelectronics, Kharkiv   | Presnyakov Igor          | \$97,020        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2303 | Plasma Source of Charge Particles on Surface Waves in a Magnetic Field  | Kharkiv State University, Kharkiv   | Azarenkov Mykola         | \$154,352       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2305 | Investigation of Ways for Creation of Low-Voltage Sources of Electromagnetic Radiation Based on Free Electron Beams                       | Usikovs Institute of Radiophysics and Electronics, Kharkiv  | Yefimov Borys P.         | \$79,900        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2306 | Increase the Information and Expansion of Functionality of X-Ray Diagnostic and Defectoscopic Apparatus                                   | Usikovs Institute of Radiophysics and Electronics, Kharkiv  | Yefimov Borys P.         | \$135,002       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2307 | Methods and Equipment Development for Measurement and Operating Control of Cement Material Mineral Structure                              | Usikovs Institute of Radiophysics and Electronics, Kharkiv  | Yefimov Boris            | \$92,550        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2314 | Preparations and Neutron Irradiator for Complex of Boron-Neutron-Captured Therapy of Cancer Tumors  | "Plasmed" Kharkiv State Scientific and Technological Enterprise for Producing Pharmaceutical Equipment, Kharkiv | Kirjukhin Mykola M.      | \$178,901       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2316 | Producing of Artificial Energy Carriers by Means of Nonequilibrium Plasma Chemistry   | "Plasmed" Kharkiv State Scientific and Technological Enterprise for Producing Pharmaceutical Equipment, Kharkiv | Zabashta Lidia O.        | \$149,990       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2318 | Work Out and Investigation of the Fluoridical Processing of Fuel-containing Masses Object "Shelter" Chornobyl'ska AES                     | "Kharkiv Institute of Physics and Technology" National Scientific Center, Kharkiv                               | Shyrokov Borys           | \$160,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2320 | Microwave-Band Methods for Ecologically Safe Biotechnology  | Kharkiv State University, Kharkiv   | Pereverzeva Valentyna F. | \$115,159       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2321 | New Technologies for Strengthening of Metal Parts Based on High-Energy Magnetic - Impulse Processing                                      | Kharkiv State Polytechnical University, Kharkiv   | Khimenko Lev             | \$127,540       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2322 | New Type of Foil and Coating Composite for Cryogenic Technique  | Kharkiv State Polytechnical University, Kharkiv   | Ilinskii Olexander I.    | \$164,335       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2324 | Low-Cost, Inertial Measurement Unit of a Carousel Type for a Commercial Application   | "Arsenal" Plant, Kyiv   | Chikovani Valerii V.     | \$149,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2328 | Optical and Electronic Methods and Equipment for Contactless Non-Destructive Monitoring of Large-Sized Structures                         | Kyiv Taras Shevchenko University, Kyiv  | Udalov Evgenii P.        | \$160,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |

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| 2329 | Control Over Field of Tempers in Big-Volume Structures   | "Pivdenne" State Design Bureau; Dnipropetrovsk  | Pakhomov Sergii M.     | \$90,672        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2330 | Processing of Ferrous Metal Ore and Control of the Product Properties  | "Pivdenne" State Design Bureau; Dnipropetrovsk  | Tcherykov Volodymyr    | \$106,260       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2333 | Simulation of Temperature Conditions in Highly Thermo-Loaded FIN-WALL Systems  | "Kyiv Institute of Automation" Scientific and Production Corporation; Kyiv  | Marinenko Volodymyr    | \$131,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2334 | Optical and Electronic Weed Identification for Local Herbicide Application Systems                                   | "RITM" Interbranch Research Institute of Mechanics Problems at the Technical University of Ukraine "Kiev Politechnical Institute"; Kyiv | Pavlyuk Volodymyr      | \$56,430        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2337 | A Mobile System of Electromagnetic Phase Location for Oil and Gas Pipelines  | Glushkov Institute of Cybernetics; Kyiv   | Bekh Olexander         | \$109,200       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2339 | Technology for Raw Materials Utilization During Production of Porcelain, Glass and Fireproof Materials               | Institute of Pulse Research and Engineering; Mykolaiv   | Rizun Anatoliy         | \$41,899        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2343 | Intratonic Correlations, Electronic Structure and Structural Phase Transformations in Alloys Exposed to Radiation    | Kyiv Taras Shevchenko University; Kyiv  | Kulich Mykola          | \$191,750       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2352 | Working Out of the Lubrication Material Obtaining Technology of New Generation on the Base of Polytetrafluorethylene | "Southern Machine-Building Plant" Production Association; Dnipropetrovsk  | Ranskii Anatolii P.    | \$78,469        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2353 | Obtaining Thermal Coatings for Serving in Extreme Conditions   | Frantsevich Institute for Problems of Materials Science; Kyiv   | Rudoy Anatolii P.      | \$110,124       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2357 | Complex Compounds of Transitional Metals with Specific Bioactivity   | "Southern Machine-Building Plant" Production Association; Dnipropetrovsk  | Shtemenko Olexander V. | \$64,065        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2358 | Special Plastic Lubricants Production Technology Elaboration   | Ukrainian State Chemical and Technological University; Dnipropetrovsk   | Ransky Anatolii        | \$64,101        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2359 | Elaboration of Composition Materials Based on Aromatic Polyamide Phenlon for Tribotechnical Applications             | Ukrainian State Chemical and Technological University; Dnipropetrovsk   | Sytar Volodymyr I.     | \$92,080        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2368 | Synergetic Factors Interaction in Technological Process with Phase Transformations                                   | National Technical University of Ukraine "Kyiv Polytechnical Institute"; Kyiv   | Zavorotnyi Victor      | \$61,080        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2373 | Development of Production Process of Articulated Square Trusses from a Composite Material                            | East Ukrainian State University; Lugansk  | Rach Valentyn          | \$51,645        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |

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| 2375 | Development and Fabrication of Experimental Samples of Thermo-Visual Devices on the Base of Pyroelectric Materials                | Institute of Physics; Kyiv   | Bundza Bogdan          | \$196,055       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2376 | Research of Extra-Low Frequency Perturbations of Atmospheric Pressure for Diagnostics and Correction of Meteorological Dependency | Kyiv Taras Shevchenko University; Kyiv   | Gorgo Yuri P.          | \$138,690       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2377 | Studying the Properties of a Fusible Hydrogen Compound of Boron and Materials on Its Base   | Frantsevich Institute for Problems of Materials Science; Kyiv                                      | Morozov Igor A.        | \$97,794        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2387 | Catalysts for Deep Hydro-Desulfurization of Motor Fuel  | Institute for Surface Chemistry; Kyiv  | Pluto Yuriy            | \$114,882       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2391 | Improvement of Monitoring Radioactive Nuclides Resulted from Radiation Accident   | Chornobyl Center on Nuclear Safety, Radioactive Waste and Radioecology; Kyiv                       | Ogorodnyk Stanislav S. | \$127,600       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2392 | Improvement of Technologies for the Equipment, Facilities and Territory Decontamination   | Chornobyl Center on Nuclear Safety, Radioactive Waste and Radioecology; Kyiv                       | Ogorodnyk Stanislav S. | \$97,800        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2393 | Improvement of the Remote Technology for the Investigation of Dangerous Sites   | Chornobyl Center on Nuclear Safety, Radioactive Waste and Radioecology; Kyiv                       | Ogorodnyk Stanislav S. | \$91,700        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2394 | Improvement of Informational Monitoring of Key Events in Ukraine's Nuclear Industry   | Chornobyl Center on Nuclear Safety, Radioactive Waste and Radioecology; Kyiv                       | Kurichik Mykola        | \$89,000        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2395 | Means of Prophylaxis and Correction of the Health Impaired as a Result of Catastrophes  | Chornobyl Center on Nuclear Safety, Radioactive Waste and Radioecology; Kyiv                       | Rudnev Mykhailo        | \$98,330        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2396 | Development of Fundamentals and Technologies for Deformation-Free Welding of Steel and Aluminum Alloys Panels and Shells          | Paton Electric Welding Institute; Kyiv   | Sanchenko Vitalii      | \$190,976       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2411 | Development of Dye-Doped Polymer Systems as the Standards for Time-Resolved Spectroscopy  | Institute of Physics; Kyiv   | Bondar Mykhailo        | \$190,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2415 | Coherent and Vortex Structures in Dynamics Systems: Simulation, Identification and Control  | Scientific Foundation of Scientists and Specialists of Molecular Cybernetics and Informatics; Kyiv | Samoilenko Yuriy       | \$70,000        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2420 | Comprehensive Investigations of the Processes and Consequences of the Charged Particles Beams - Material Interactions             | Kyiv Taras Shevchenko University; Kyiv   | Dotsenko Ivan          | \$150,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2421 | Development of Facilities for Non-invasive Measurement of Iron in the Human Body (Magnetic Biopsy)                                | Glushkov Institute of Cybernetics; Kyiv  | Sosnytskyy Volodymyr   | \$198,430       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |

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| 2424 | Study of the Chemical Interaction of Helium and an Investigation of the Properties of the Derived Compounds                                      | Frantsevich Institute for Problems of Materials Science; Kyiv                                      | Morozova Raisa            | \$126,764       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2   |
| 2430 | Complex Opto-Electronic Analyzer for Hemodynamic Parameters and Vascular Tone  | Research Technological Lazer Center; Kyiv  | Trushina Valerina         | \$47,240        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2   |
| 2434 | Technology Development of Reversible High-Capacity Hydrogenation of Fullerene-Similar Materials  | Frantsevich Institute for Problems of Materials Science; Kyiv                                      | Schur Dmytro              | \$166,765       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2   |
| 2444 | Development of Two-Dimensional Photonic Structures Based on Macroporous Silicon  | Institute of Semiconductor Physics; Kyiv   | Karachevtseva Lyudmyla A. | \$144,000       | -\$64,800   |                | €64,800               |               |                       | € 64800                      | US:4<br>Canada:2<br>EU:5,4 |
| 2445 | Intracavity KTiOP4 electro-optic Q-switch-frequency doubler for Nd <sup>3+</sup> -doped laser  | Institute of Semiconductor Physics; Kyiv   | Oryeshko Eugene           | \$148,500       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2   |
| 2446 | Development of Pulsed Technologies for Dismantling Metal Structures at Nuclear Power Installations and under Extreme Conditions                  | Paton Electric Welding Institute; Kyiv   | Palamarchuk Borys I.      | \$170,610       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2   |
| 2447 | Magneto-Resistive Sensor Based on Laser-Annealing Amorphous Materials  | Institute for Information Recording Problems; Kyiv   | Kravets Vasyi             | \$170,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2   |
| 2448 | Electronic Control Systems for Plant Equipment for Heat-Carrier Production   | Daughter Enterprise "Orizon-automation" of State Plant "Orizon-instrument"; Smita                  | Zubkov Pavlo M.           | \$191,641       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2   |
| 2449 | Development of Prototypes for a New Class of Transducers for Motion Measurement  | "ELECTROPRYLAD" Scientific and Industrial Complex; Kyiv  | Yatsko Laslo D.           | \$198,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2   |
| 2450 | Investigation of Interaction of Fast Neutrons and Gamma-Quanta with Transuranium Elements and Construction Materials                             | Kyiv Taras Shevchenko University; Kyiv   | Primenko Georgii I.       | \$94,200        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2   |
| 2454 | Development of Methods for Synthesis and Upgrading of Colored Stones   | State Scientific Center of Environmental Radiogeochemistry; Kyiv                                   | Komov Igor                | \$197,205       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2   |
| 2463 | Computing Technology Development Using the Principles of Nonlinear Dynamics of Oscillatory and Wave Processes in Physical and Biological Systems | Scientific Foundation of Scientists and Specialists of Molecular Cybernetics and Informatics; Kyiv | Samolienko Yurii I.       | \$70,000        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2   |
| 2466 | A Remote Control System for Inspection of the State of Hot under Reactor   | Special Design Bureau of Television Systems; Lviv  | Vival Ivan                | \$58,300        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2   |
| 2467 | Regular and Chaotic Conversion of Electromagnetic and Acoustic Waves in Heterostructures with Quantum Well and in Magnetic Crystals              | Usikovs Institute of Radiophysics and Electronics; Kharkiv   | Korolyuk Alexii P.        | \$157,149       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2   |

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| 2469 | Formation and Investigation of the Solid Coatings from Aluminides with High Hardness and Fracture Toughness Characteristics | National Technical University of Ukraine "Kyiv Polytechnical Institute", Kyiv   | Sidorenko Sergii I. | \$134,630       |             | \$13,453       | €121,077              |               | \$13,453              | \$ 13453<br>€ 121077         | US:2<br>Canada:5<br>EU:5 |
| 2476 | Development of Semipermeable Membranes with Bacteriostatic Action for Water Treatment System                                | National University of "Kyiv-Mohyla Academy", Kyiv  | Nigmatulin Renat R. | \$186,460       |             | \$24,645       | €167,805              |               | \$24,645              | \$ 24645<br>€ 167805         | US:1<br>Canada:5<br>EU:5 |
| 2477 | Non-Linear Properties of Structurally Modified Semiconductors in Millimeter and Optical Range                               | Usikovs Institute of Radiophysics and Electronics, Kharkiv  | Popenko Nina O.     | \$186,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2478 | Electronic Weight Measuring Equipment   | Daughter Enterprise "Orizon-automation" of State Plant "Orizon-instrument", Smila   | Kohanenko Volodymyr | \$221,475       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2479 | Long Life Power Supply System for Space Applications  | "Hartron" Research and Production Association, Joint Stock Company, Kharkiv State Technical University of Radio Electronics, Zaporizhia | Bobkov Valentyn     | \$145,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2484 | Study of Regularities and Development of Technologies of Gold and Silver Recovery from Gold-Containing Ores                 | "Pridneprovsky Hydrometallurgical Plant" State Enterprise, Dnipropetrovsk   | Korovin Yuriy       | \$163,446       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2487 | Complex Treatment of Metallurgical Wastes with Scandium Removal   | State Scientific Research and Development Institute of Titanium, Zaporizhia   | Komarov Olexij      | \$125,860       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:1 |
| 2489 | The Two-Nozzle Injection for the Water Cooling Towers of the Splashing Type   | "Dnepropetrovsk plant Temp" Joint Stock Company, Dnipropetrovsk   | Gavrish Felix       | \$148,600       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2511 | Production Technology of High-Purity Silicon Monocrystals for Photo-Receiver and Ionize Radiation Detectors                 | State Scientific Research and Development Institute of Titanium, Zaporizhia   | Trubitsyn Yurii V.  | \$179,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2517 | Development of Voice-Control Plasma Surgical Apparatus  | "Pivdenne" State Design Bureau, Dnipropetrovsk  | Dranovsky Volodymyr | \$124,344       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2536 | Development of Combined Extruder with Increased Operating Performances  | "Pivdenne" State Design Bureau, Dnipropetrovsk  | Petushenko Yuri G.  | \$62,340        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2542 | The Autonomous Plant for Condensation of Raw Oil Steam  | "Pivdenne" State Design Bureau, Dnipropetrovsk  | Oglikh Valery       | \$98,450        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2547 | Instrument for Controlling the Quality of Non-Ferrous Metals and Separation of Their Alloys                                 | State Scientific Research and Development Institute of Titanium, Zaporizhia   | Brynza Olexandr     | \$67,400        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2557 | Elaboration and Device Complex Trail for Pipe Production of Raised Quality  | Novomoskovsk Pipes Plant, Novomoskovsk  | Vdovin Valentyn     | \$119,200       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |

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| 2564 | Production of the High Purity Aluminum Nitride and Multilevel Integrated-Circuits Substrate on Based It                            | "Reactivelectron" Scientific and Technologic Center, Donetsk   | Policshuk Volodymyr | \$90,000        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2566 | Development of the Wide-Range Radio-Absorbing Magnetic Materials for High Effective Absorbents of Electromagnetic Waves            | "Reactivelectron" Scientific and Technologic Center, Donetsk   | Klochay I.          | \$107,295       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2574 | Technology of Synthesis of Super Hard Materials  | National Mining Academy of Ukraine: Dnipropetrovsk   | Davydenko Olexandr  | \$138,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2575 | Technology of Deriving of Constructional Metal Materials with a High Level of Dispersion of Energy                                 | National Mining Academy of Ukraine: Dnipropetrovsk   | Bezsonov Yurii      | \$138,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2581 | Hardware-Software Monitoring Equipment Based on Spectrometer of Photon Emitted by Sputtered Particles                              | Donetsk State University: Donetsk  | Melnichuk Igor      | \$135,511       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2582 | Pulsed Electromagnetic Field for Controlling Material Structure and Properties   | Galkin Donetsk Institute for Physics and Technology: Donetsk   | Datsko Oleg         | \$71,729        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2588 | Combined Optical/Digital Security Devices with Magnetic and Luminescent Marking Elements   | Kyiv Taras Shevchenko University: Kyiv   | Girnyk Volodymyr    | \$128,110       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2593 | A Remote Control System for Checking Through Holes and/or Wells the State of Radiation Hazard Premises within the Object "Shelter" | Special Design Bureau of Television Systems: Lviv  | Voytovych Volodymyr | \$76,340        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2594 | A Remote Control System for Checking the State of Exhausted Heat Releasing Rods (HRR) Before Their Burial                          | Special Design Bureau of Television Systems: Lviv  | Basyuk Mykola       | \$92,455        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2597 | Reduction of Military Engineering: Use for Civil Purposes of Heavy Mechanized Bridges  | "UkrNDIproektstalkonstruktziya", Ukrainian Research and Design Institute of the steel constructions, Joint Stock Company: Kyiv | Gordeyev Vadym M.   | \$92,620        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:1 |
| 2598 | Photoluminescence and Photoelectrical Biomedical Diagnostics Based on the Semiconductor Porous Layers                              | Palladin Institute of Biochemistry: Kyiv   | Kurskiy Mykhailo    | \$131,935       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2599 | Pilot Solar Heating System with Discrete Orientation   | "Ukrgeioprom" Scientific and Production Enterprise: Kyiv   | Smirnov S.          | \$53,680        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2600 | Development of Tire-Cutting Machine  | "Pivdenne" State Design Bureau: Dnipropetrovsk   | Legeza Volodymyr S. | \$201,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |

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| 2601     | Development of Coatings for Implantates with Specified Biomedical Properties   | "Pivdenne" State Design Bureau; Dnipropetrovsk                                | Tarasov Yuriy        | \$248,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2603     | The Development of New Magnetic Perovskite-Like Semiconductors with Huge Magnetoresistance for Highly-Sensitive Magnetoresistive Elements on Their Basis | Frantsevich Institute for Problems of Materials Science; Kyiv                 | Lashkarev Georgiy    | \$156,036       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2606     | Techniques of Diamond Micro Turning of Optical Parts   | "Arsenal" Central Design Office; Kyiv   | Perekhod'ko Mykola   | \$280,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2607     | Development of Seismic Safety Methods for Carrying out Blasting Operations   | "Ukrtekhnobezpeka" Foundation; Kyiv   | Boiko Victor         | \$99,951        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2608     | New Aspects in Gravimetry Related to Deposit Exploration   | Subbotin Institute of Geophysics; Kyiv  | Bulah E.G.           | \$97,700        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2610     | Analysis of Factors Causing Orbital Debris and Development of Proposals on Its Minimization or Formation Prevention                                      | "Pivdenne" State Design Bureau; Dnipropetrovsk                                | Lompaniets Eduard P. | \$80,017        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:1 |
| 2620     | Elaboration and Study of Techniques for Improvement of Photorefractive Properties of CdTe and Solid Solutions on Its Basis                               | Institute of Physics; Kyiv  | Borshch Anatoli      | \$160,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2623     | Diamond-like Films for Precision Sensors in Microelectronics   | Mechnikov Odessa State University; Odessa                                     | Mokritskii Vadym A.  | \$78,200        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2624     | Investigations of Basic Compressibility Effects in Sub-, Trans-, Supersonic Flows in Water Free Surfaces   | Institute of Hydromechanics; Kyiv   | Selezov Igor         | \$34,000        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2625     | Development of a Metal-Fueled Electric Power Plant   | National Technical University of Ukraine "Kyiv Polytechnical Institute"; Kyiv | Murashov Olexander   | \$99,600        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2626     | Diffractiontopography  | Kurdyumov Institute for Metal Physics; Kyiv                                   | Molodkin Vadym       | \$178,600       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2627     | Monograph "Statistical Theory of Radiation Scattering by Crystals with Defects"  | Kurdyumov Institute for Metal Physics; Kyiv                                   | Molodkin Vadym B.    | \$49,600        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2629     | Electromagnetic Rheology Methods for Stability Determination of Electrical Equipment under Extreme Loads   | Frantsevich Institute for Problems of Materials Science; Kyiv                 | Raychenko Olexander  | \$91,780        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2630 (R) | Ecological and Chemical Studies for Monitoring Military Installations for Dismantlement  | National University of "Kyiv-Mohyla Academy"; Kyiv                            | Bryk Mykhailo        | \$175,245       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |

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| 2634 | Photochemical Technologies for the Destruction of Highly Toxic Organic Compounds  | Institute for Sorption and Endoecology Problems; Kyiv       | Kapinus Eugene       | \$180,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2638 | Development and Investigation of Multi-Element Radiation Detectors of a New Generation and Equipment Based on Them  | "Institute for Nuclear Research" Scientific Center; Kyiv    | Nemets Oleg F.       | \$185,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2639 | Development of new compositions of shape-memory alloys for medical applications   | Paton Electric Welding Institute; Kyiv                      | Kaleko Davyd         | \$193,526       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2640 | Mass Spectrometry In Agrobiolgy   | Institute for Applied Physics; Sumy                         | Shkurdoda Valery     | \$100,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2644 | Development of Highly Effective Technology to Produce Particular Heat Resistant Elastic Elements  | Kurdyumov Institute for Metal Physics; Kyiv                 | Efimov Olexander I.  | \$135,300       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2645 | Theoretical and Experimental Basis of Activation of Arc Processes and their Application for the Development of Technologies for Welding and Local Heat treatment of Steels of General Purpose | Paton Electric Welding Institute; Kyiv                      | Savytskii Mykhaio M. | \$104,368       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2646 | Simulation of Wave, Diffraction and Vibration Processes in Hydroelastic Systems with Inhomogeneities  | Timoshenko Institute of Mechanics; Kyiv                     | Kubenko Veniamin     | \$66,890        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2647 | Stationary System "Bezpeka" ("Safety") for Monitoring Movement of Ionizing Radiation Sources  | "Atom Complex Prylad" Scientific Industrial Company; Kyiv   | Kazimirov Olexander  | \$100,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2652 | Synthesis of New Materials with an Abnormally Large Change in Electric Resistance and Creation Elements on Their Basis for Energy-Saving and Environment-Improving Devices                    | Institute of Magnetism; Kyiv                                | Pogorilyi Anatoly    | \$207,915       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2653 | Development of the High-Efficiency Ungearing Electric Drive for Elevators and Transport Vehicles Using Spraying of Composite Layers   | "Quant" Pilot Plant, Paton Electric Welding Institute; Kyiv | Stekiov Vasyl        | \$168,525       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2655 | Influence of Transverse Inhomogeneity of the Gas Discharge Plasma on the Characteristics of Laser Generation  | Mechnikov Odessa State University; Odessa                   | Bekshaev Olexander   | \$48,000        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2656 | Energy-Conservation Technology for Underwater Preservation of Stores  | Sevastopol Naval College; Sevastopol                        | Baranov Olexander M. | \$82,620        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2657 | Hardware and Software for Iridodiagnosis for Complex Examination of Patient   | Sevastopol Naval College; Sevastopol                        | Avetisyan Ivan P.    | \$172,200       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |

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| 2658 | Magneto-Optical Transformers  | Simferopol State University; Simferopol   | Dubinko Sergii V.         | \$120,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2659 | Magnetic X-Ray Crystallography of Heavy Rare-Earth Metals, Development and Fabrication of Magnetic Concentrators on Their Base            | "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv | Bulatov Olexander S.      | \$73,700        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2660 | Development of Software for Transient Processes of Electromechanical Systems Analysis   | Ukrainian Engineering Society in Lviv; Lviv                                       | Tchaban Vasyli'           | \$75,000        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2662 | New Low Activated Ceramic-Metal Nanocomposite Materials for Structural Application in Neutron Environment                                 | Galkin Donetsk Institute for Physics and Technology; Donetsk                      | Gogotsi Georgiy           | \$134,178       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2665 | New Generation Aerodynamic Marine Vehicle   | Institute of Hydromechanics; Kyiv   | Korolov Volodymyr         | \$65,340        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2666 | Technology for Production of a Rust Transforming Primer from Electrochemical Waste Using Conversion Equipment                             | "Pivdenne" State Design Bureau; Dnipropetrovsk                                    | Pozdeyev Gennadii         | \$220,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2667 | Modeling of the Reliability of Man-Machine Interface System   | Kyiv Taras Shevchenko University; Kyiv  | Sizykh Natalia V.         | \$128,060       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2669 | Structure and Plasticity of Fullerites  | Verkin Institute for Low Temperature Physics and Engineering; Kharkiv             | Strzhemechnyi Mykhailo O. | \$63,560        |             |                | €63,560               |               |                       | € 63560                      | US:2<br>Canada:2<br>EU:5 |
| 2671 | Space Radar System for Continuous Surveillance of the Earth's Surface   | Kalmykov Center for Radiophysical Sensing of Earth; Kharkiv                       | Kurekhin Olexander S.     | \$112,700       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2680 | Ukrainian Journal of Research & Development   | Institute of Fundamental Problems for High Technology; Kyiv                       | Smertenko Petro           | \$78,800        | \$30,000    |                |                       |               | \$30,000              | \$ 30000                     | US:4<br>Canada:2<br>EU:2 |
| 2682 | Ukrainian Ozone Monitoring Network  | Institute of Physics; Kyiv  | Baschenko Sergiy          | \$139,954       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2685 | Creation of a New Orientation Technology of Details in Flat Section and the Examples of the Devices that Realize It on the Specific Parts | "Relaks" Scientific and Technical Venture; Ternopil                               | Sidorov Yurii             | \$80,080        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2687 | Flexible Compensators for Oil-immersed Transformer Inlets   | "Yuzhkosmos", Concern; Dnipropetrovsk   | Rjabovoi Albert           | \$112,415       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 2694 | Production Process to Manufacture Drill Rods with Increased Service Life  | National Mining Academy of Ukraine; Dnipropetrovsk                                | Didyk Rostyslav           | \$90,672        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |

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| 2699   | Development of Equipment for the Control of Dolphin Health   | Institute for Applied Problems in Physics and Biophysics; Kyiv   | Misjura Anatoliy                 | \$199,890       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| 2702   | Investigation of Plasma Erosion Opening Switch with Pulsed Gas Injection   | Institute of Plasma Electronics and New Method of Acceleration; "Kharkiv Institute of Physics and Technology" National Scientific Center; Kharkiv          | Orishchenko Ivan N.              | \$125,059       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| 3015   | Development of the Piezoelectric Micromanipulator for IVF-Technologies   | "Lileya" Small Scientific Production Enterprise; Kyiv  | Petrenko Serhiy                  | \$133,754       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| <b>Subtotal Regular Ukrainian Projects Approved:</b> |  |  |                                  | \$37,672,058    | \$1,072,147 | \$107,482      | €1,339,322            | \$0           | \$1,179,629           | \$ 1179629<br>€ 1339322      |                          |
| Uzb-30   | Search of Active Strains of Pathogen Microorganisms in Central Asia for Biological Control of Eurasian Origin Weeds. Study of Phytotoxines from Active Strains as Potential Herbicides | Institute of Genetics and Plant Experimental Biology; Tashkent   | Abdukerimov A.                   | \$184,365       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| Uzb-34 (J)   | The Development of the Experimental Installation for Drying and Heat Processing of the Free-Flowing Bulk Materials in Fluidized Bed  | "Pivdenne" State Design Bureau; Dnipropetrovsk/ Uzbekistan State Space Agency "Uzbekcosmos"; Tashkent  | Gelas M./ Muminov Kamal          | \$230,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Uzb-40 (J)   | Monitoring of Optical Glows and VLF Radio Emissions of the Ionosphere Aimed at the investigation of Seismo-Ionospheric Effects   | Kyiv Taras Shevchenko University; Kyiv/ Institute of Seismology; Tashkent  | Ivchenko Vasyli/ Husomiddinov S. | \$183,180       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| Uzb-44 (J)   | Development of Melted Oxidic Materials for Electronic Through the Use of Cryotechnology  | Frantsevich Institute for Problems of Materials Science; Kyiv/ Institute of Material Sciences of Scientific-Production Association "Physics-Sun"; Tashkent | Oliker Valerii/ Gulamova D.      | \$178,859       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| Uzb-48 (J)   | Magneto-resistive and Photovoltaic Cells on the Basis of Tunnel Nanostructures   | Institute of Magnetism; Kyiv/ Arifov Institute of Electronics; Tashkent  | Krupa Mykola M./ Paiziev A.      | \$273,560       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| Uzb-59   | New Method and Equipment for Electrical Discharge Machining of Different Materials, Including High Ohmic Materials   | Arifov Institute of Electronics; Tashkent  | Abdukarimov Erkin T.             | \$97,414        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| Uzb-60   | The Development and Manufacturing of a Portable Small-Sized Pilot Surface-Ionization Indicator of Narcotic Substances  | Arifov Institute of Electronics; Tashkent  | Rasulev Utkur                    | \$87,000        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Uzb-61   | Development of Principles for Translation of Structure-Oriented Programs into Object-Oriented Ones Using Algorhythmic Methods  | The institute of Cybernetics SPU "Cybernetics"; Tashkent   | Nazirov Shodmankul               | \$95,866        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |

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| Uzb-63     | Development of a Vacuum Arc Treatment for Electro-Conductive Material Surface   | Institute of Electronics; Tashkent   | Pozharov Sergey                                 | \$142,648       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Uzb-70     | Technology for Extraction of Gold and Silver from Tailings in a Microwave Field   | Institute of Nuclear Physics; Tashkent   | Khidirov Irsali                                 | \$132,200       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Uzb-76     | Ecological and Economical Estimation of Secondary Resources of Uzbekistan and Creation of Ecological-Pure Technologies for Their Conversion | State Fund of Scientific and Technical Information of the Republic of Uzbekistan; Tashkent                   | Abdiraimov Isameldin                            | \$84,860        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| Uzb-78 (J) | Development of Methods of Increasing Safety of Impact-Resistant Glazing for High Speed Railway Vehicles                                     | Pidgorny's Institute for Problems of Machine Building; Kharkiv/ Tashkent State Air Institute; Tashkent       | Shupikov Alexander N./ Ganihanov Sharafutdin F. | \$114,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Uzb-79 (J) | Development of Methods of Increasing Safety of Impact-Resistant Cockpit Transparencies for Civil Aircraft                                   | Pidgorny's Institute for Problems of Machine Building; Kharkiv/ Tashkent State Air Institute; Tashkent       | Shupikov Alexander N./ Ganihanov Sharafutdin F. | \$124,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Uzb-83 (J) | The Method of Finding and Controlling Stressed Zones in Structure Media by Soliton-Like Waves   | Subbotin Institute of Geophysics; Kyiv/ Institute of Mechanics and Seismic Stability of Structures; Tashkent | Belinskii Ivan V./ Sultanov Karim               | \$119,669       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| Uzb-86 (J) | Wind-Solar Power Plant for Water/Technological Solutions Treatment on Advanced Membrane Technologies Basis                                  | "Pivdenne" State Design Bureau; Kyiv/ Uzbekistan State Space Agency "Uzbekcosmos"; Tashkent                  | Ushkin Mykola/ Rasuleva Olga A.                 | \$200,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| Uzb-91     | Development of Radioactive sources for the X-Ray Fluorescence Analysis and Control of Technological Processes                               | Institute of Nuclear Physics; Tashkent   | Kim German                                      | \$229,760       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Uzb-94 (J) | Correction of Parameters of Solar and Photodiode Silicon Elements by an Influence of Static Electric and Magnetic Fields                    | "KVAZAR", Scientific Research Center; Kyiv/ Heat Physics Department; Tashkent                                | Ashcheulov Anatoly A./ Saidov Abdula A.         | \$195,628       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Uzb-95     | Investigations of Radiation-Induced Non-Stationary Absorption and Luminescence Processes in the Optical Fibers                              | Institute of Nuclear Physics; Tashkent   | Gasarov Eldar M.                                | \$207,100       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:1 |
| Uzb-96     | Search and Investigation of Modes of Supersymmetrical Fission of Actinide Atomic Nuclei   | Institute of Nuclear Physics; Tashkent   | Koblik Yuriy N.                                 | \$87,740        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Uzb-99 (J) | Heat-Resistant Titanium with Intermetallics   | Paton Electric Welding Institute; Kyiv/ Tashkent State University; Tashkent                                  | Kompan Yaroslav Yu./ Abraiov Makhmud A.         | \$197,234       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Uzb-100    | Estimation of Radiation Conditions on Territories of Uzbekistan Having Higher-Level Exposure Dangerous for Human Health                     | Tashkent State University, Institute of Applied Physics; Tashkent  | Inoyatov Anvar K.                               | \$153,240       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |

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| Uzb-107  | Cooperative International Study Contamination in Transboundary Rivers of Central Asia. Navruz II                          | Institute of Nuclear Physics; Tashkent   | Salikhbaev Umar S.                        | \$150,000       | \$150,000   |                |                       |               | \$150,000             | \$ 150000                    | US:5<br>Canada:2<br>EU:2 |
| Uzb-113  | Quasi-Elastic Light Scattering and Cooperative Phenomena in Disordered Lattice of Super-Ionic Conductors                  | Heat Physics Department; Tashkent  | Krivorotov Valeriy                        | \$66,000        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Uzb-118 (J)                                      | Modified Magnetron Line for Deposition of Optical Heat-Reflecting Coatings on Large-Area Glass                            | Institute of Physics; Kyiv/ Institute of Electronics; Tashkent   | Panchenko Oleg/ Amanov Shakirkhodzha      | \$160,282       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| <b>Subtotal Regular Uzbek Projects Approved:</b> |   |  |   | \$3,684,606     | \$150,000   | \$0            | €0                    | \$0           | \$150,000             | \$ 150000<br>0               |                          |
| Gr-27 (J)  | Multicriterial Optimization of Adaptive Sensors Developed for Ecological Monitoring                                       | Institute of Space Research; Kyiv/ Institute of Control Systems; Tbilisi   | Voronin Albert N./ Salukvadze Mindija     | \$139,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Gr-35 (J)  | Development of High-Strength Shock-Resistance Boron Carbide Ceramic Using Material Design Computer Techniques             | Frantsevich Institute for Problems of Materials Science; Kyiv/ Tbilisi Ivane Javakhishvili State University; Tbilisi   | Tkachenko Yurii G./ Mungishvili Z.        | \$159,760       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| Gr-40 (J)  | Development of Field Desorption Ion Source and Technique for Molecular Analysis of Inclusions in Graphite                 | Verkin Institute for Low Temperature Physics and Engineering; Kharkiv/ Georgian Technical University; Tbilisi  | Shelkovskii Vadym/ Dzigrashvili T.        | \$63,882        |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| Gr-41 (J)  | Development and Design of an Operating Model "X-Ray-Band Laser"   | Kharkiv Military University; Kharkiv/ Sukhumi I. Vekua Institute of Physics and Technology; Tbilisi  | Oleksandrova Alevtina/ Salukvadze Revaz   | \$170,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| Gr-44 (J)  | System for Computer-Aided Design of Information and Control Systems (I&C) for Technological Processes (SCADA/MMI Systems) | "Hartron" Research and Production Association, Joint Stock Company, Kharkiv State Technical University of Radio Electronics; Kharkiv/ Georgian Technical University; Tbilisi | Krivososov Anatolii I./ Gogichaishvili G. | \$170,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Gr-49 (J)  | Elaboration of the Registering Layers for the Optical Record in the Ultraviolet Spectral Range                            | Institute of Magnetism; Kyiv/ "MIONI" State Scientific Manufacture; Tbilisi  | Krupa Mykola M./ Yakashvili J.            | \$270,020       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Gr-52 (J)  | Development of a Synergy Control System of Energy Consumption for Systems with Renewable Sources                          | National Technical University of Ukraine "Kyiv Polytechnical Institute"; Kyiv/ Georgian Technical University; Tbilisi  | Tereschenko Tetyana A./ Dvali D.          | \$172,682       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| Gr-59 (J)  | Development of Optimal Manufacturing Technology and Manufacture of High-Pressure Bottles                                  | "Pivdenne" State Design Bureau; Dnipropetrovsk/ Georgian Technical University; Tbilisi   | Yelanskii Yurii A./ Shvangiradze M.       | \$199,210       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:1 |

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| #         | Full Title  | Leading Institution   | Project Manager                            | Requested Funds | USA (US \$) | Canada (US \$) | European Union (EURO) | Other (US \$) | Total Funding (US \$) | Total Funding (US \$ + EURO) | Comments Conditions      |
|-----------|---|---|--|-----------------|-------------|----------------|-----------------------|---------------|-----------------------|------------------------------|--------------------------|
| Gr-63 (J) | Reliability Evaluation for Responsible Structures (Building Structures of Nuclear Power Stations (NPS), Pipelines and Reservoirs)                               | Institute of Mathematics; Kyiv/ Tbilisi Ivane Javakhishvili State University; Tbilisi   | Makarov Vladimir L./ Meladze Hamlet V.     | \$198,517       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Gr-70 (J) | Development and Manufacture of an Experimental Prototype for a Highly-Effective Desalination Installation   | "Pivdenne" State Design Bureau; Dnipropetrovsk/ "Membrane" Scientific Research Center; Tbilisi                                      | Bidniak Leonid G./ Tsisino Kurtshalia      | \$100,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Gr-71 (J) | New Generation of Laser Technologies on the Basis of Photopolymerization Induced by Nera IR Light   | Institute for Sorption and Endoecology Problems; Kyiv/ Institute of Cybernetics; Tbilisi  | Kapinus Eugene/ Khanzer Gaprindashvili     | \$188,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| Gr-74 (J) | Development of a Monitoring System for Water Expenditure in Open Reservoirs and Irrigating Channels   | Mechnikov Odessa State University; Odessa/ "Delta" Research and Development Center; Tbilisi   | Budianska Lyudmyla M./ Khachidze Robert M. | \$147,400       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| Gr-75 (J) | Development of Universal Software Module for Research Kinetics of Damages Accumulation in Materials   | "Pivdenne" State Design Bureau; Dnipropetrovsk/ Sukhumi Physical and Technical Institute; Tbilisi                                   | Pinyagin Victor/ Nardaia Yuri              | \$99,000        |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:1 |
| Gr-79 (J) | Research, Design, Development and Integration of Environmentally Pure Ozone-Safe Fire-Explosion Prevention System of Launch Vehicles for International Programs | "Pivdenne" State Design Bureau; Dnipropetrovsk/ Sukhumi Physical and Technical Institute; Sukhumi                                   | Nezhovanyy Yevgen P./ Chanturidze Vladimir | \$195,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Gr-80 (J) | Electroluminescent and Liquid Crystal Visualization System of Spatial-Temporal Electrical Changes in Semiconductors   | Institute of Semiconductor Physics; Kyiv/ Institute of Cybernetics; Tbilisi   | Glinchuk K.D./ Chilaya G.                  | \$126,136       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| Gr-81 (J) | Microclimate Chamber Development of a Space Greenhouse for International Space Program  | National Technical University of Ukraine "Kyiv Polytechnical Institute"; Kyiv/ Sukhumi Physical and Technical Institute; Tbilisi    | Rassamakhin Borys M./ Nardaia Yuri         | \$131,000       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Gr-83 (J) | Development of Synthesis Techniques and Industrial Technologies of Production of Materials for Reaction Vessels of Lithium Power Sources                        | "Zirconium" State Scientific-Production Enterprise; Oniproderzhnisk/ Institute of Inorganic Chemistry and Electrochemistry; Tbilisi | Plakhotnyk Volodymyr/ Kachibaia Eteri      | \$162,284       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Gr-84 (J) | Investigation of Influence of Microwave Radiation and Thermochemical Processing on Biothermophysical Processes in Plants (Tea, Tobacco)                         | "Ukraine" Open International University of Human Development; Kyiv/ "OPTICA" Scientific Research Institute; Tbilisi                 | Drozdenko Victor/ Avaliani Jemal           | \$199,850       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| Gr-88     | Development of a Mobile Arc Plasma Apparatus for Fusing of Hard Materials   | Institute of Mining Mechanics; Tbilisi  | Gelenidze Medgar                           | \$273,850       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Gr-89     | Synthesizing of New Composite Materials in Ni-Al Systems with Method of Pulse Loading   | F. Tavadze Institute of Metallurgy; Tbilisi   | Chkhartishvili Irakli V.                   | \$370,075       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |

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|-----------|--|---|---------------------------------------|-----------------|-------------|----------------|-----------------------|---------------|-----------------------|------------------------------|--------------------------|
| Gr-90 (J) | High Sensitivity Small-Sized Semiconductor Gas Analyzer for Uninterrupted Control of Methane Content in the Atmosphere of Coal Mines   | Frantsevich Institute for Problems of Materials Science; Kyiv/ Tbilisi State University; Tbilisi                              | Lashkarev Georgii/ Kekelidze Gizi     | \$180,035       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Gr-91 (J) | Novel Radiation-Resistant Composite Chalcogenide and Chalcogen Halide Materials for Electronic, Optoelectronics and Nonlinear Equipment  | Vernadskii Institute of General and Inorganic Chemistry; Kyiv/ Institute of Inorganic Chemistry and Electrochemistry; Tbilisi | Pekhnyo Vasyi I./ Tushurashvili R. G. | \$199,865       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| Gr-92 (J) | Development of New Technologies and Apparatus for Measurement of Capillary Properties of High-Temperature Melts  | Karpenko Institute of Physics and Mechanics; Kyiv/ F. Tavadze Institute of Metallurgy; Tbilisi                                | Muravsky Leonid/ Khantadze Jumber V.  | \$241,588       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:1 |
| Gr-96     | Development of the Effective Bacterial Leaching Technology of Low Grade Manganese Ores and Slimes  | Caucasian Institute of Mineral Resource; Tbilisi  | Sakhvadze Lamara                      | \$242,810       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Gr-97 (J) | Laser Epitaxy IR Photosensitive Quantum-Dimensional Structures with Sigma-Doped Layers   | Institute of Semiconductor Physics; Kyiv/ Tbilisi Ivane Javakishvili State University; Tbilisi                                | Plytsko Sergiy/ Tsakvava Boris E.     | \$197,400       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Gr-98     | Development of Software Package for Dynamic Calculation of Maximum Allowable Discharge (MAD) Depending on River Overall State and Economic Interests of Water Users from Georgia   | Institute of Applied Mathematics; Tbilisi   | Kachiashvili Kartos                   | \$138,701       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Gr-99     | Development of a New Theory of Rock Bumps, as an Earthquake Model, and the Computation of the Dynamic Parameters   | Institute of Mining Mechanics; Tbilisi  | Rekviashvili Iuri                     | \$116,800       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Gr-101    | Creation of Collection of Extremophilic Mycelial Fungi Isolated from All Ecological Niches of the Caucasus, Investigation Their Pathogenicity and Elaboration of the Technologies Based on Their Degradational, Oxidizing and Synthesizing Potential | Durmishidze Institute of Biochemistry and Biotechnology; Tbilisi  | Kutateladze Lali                      | \$280,000       | \$280,000   |                |                       |               | \$280,000             | \$ 280000                    | US:5<br>Canada:2<br>EU:2 |
| Gr-105    | Development of a New High-Performance and Ecologically Clean Technology for Arsenic Sulfide Ores Processing  | Georgian Technical University; Tbilisi  | Iashvili Tengiz                       | \$198,287       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Gr-106    | Phyto-Remediation of Soils Contaminated by Petroleum   | Durmishidze Institute of Biochemistry and Biotechnology ; Tbilisi   | Betsiashvili Mariam                   | \$195,000       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| Gr-109    | Ecological Danger of Pesticides Residues, Establishment of the Ways of Detoxification and Working Out of Practical Recommendations for Deactivation of Contaminated Territories  | Durmishidze Institute of Biochemistry and Biotechnology ; Tbilisi   | Kakhniashvili Christo                 | \$183,420       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |

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|---|--|---|-----------------------|-----------------|-------------|----------------|-----------------------|---------------|-----------------------|------------------------------|--------------------------|
| Gr-110  | Processing of Effective Technology for Biorecultivation of Destroyed Landscapes by the Fertilizers Prepared from Local Unused Resources  | "Sakagrobiomretsvi"; Tbilisi  | Zakaidze M.           | \$206,660       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Gr-112  | Mathematical Modeling and Prediction of Environmental Impacts on Dam and Reservoir Region due to Extreme Landslidegenic Water Waves  | "Energia", LTD; Tbilisi   | Matcharadze G.        | \$116,409       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Gr-113  | Elaboration of Highly-Active Intestinal and Staphylococcal Bacteriophages in Suppository Forms for the Application in a Medical Practice   | Institute of Bacteriophagy, Microbiology and Virology; Tbilisi            | Giorgadze Inga        | \$202,720       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| Gr-115  | Creation and Study of Antimicrobial – Antifungal Composite Using Biodegradable Polymer as a Matrix   | G. Eliava institute of Bacteriophage, microbiology and virology ; Tbilisi | Goderdzishvili Marina | \$280,235       |             |                |                       |               |                       |                              | US:2<br>Canada:2<br>EU:2 |
| Gr-119  | Selection and Property Studies of the Virulent Active Against the Pathogenic Strains of Yersinia Enterocolitica with an Aim of Development of Technology for Obtaining the Polyvalent Medical Preventive Preparation | G. Eliava institute of Bacteriophage, microbiology and virology ; Tbilisi | Darsavelidze Marina   | \$293,805       |             |                |                       |               |                       |                              | US:1<br>Canada:1<br>EU:2 |
| <b>Subtotal Regular Georgian Projects Approved:</b> |  |   |                       | \$6,803,291     | \$280,000   | \$0            | €0                    | \$0           | \$280,000             | \$ 2800000                   |                          |
| <b>Subtotal Regular Projects Approved:</b>          |  |   |                       | \$48,159,954    | \$1,502,147 | \$107,482      | €1,339,322            | \$0           | \$1,609,629           | \$ 1609629<br>€ 1339322      |                          |
| NN-02 (R)   | The Influence of Microgravity on Growth, Structure, and Function of Nerve and Endocrine Transformed Cells  | Institute of Physiology; Kyiv   | Lukyanetz Olena       | \$50,000        | \$50,000    |                |                       |               | \$50,000              | \$ 50000                     | US:5<br>Canada:2<br>EU:1 |
| NN-07 (R)   | The Role of the Second Messengers in Signal Transduction During the Adaptation of Plant Metabolism to the Weightless Conditions  | Institute of Plant Physiology and Genetics; Kyiv                          | Kravets Volodymyr S.  | \$50,000        | \$50,000    |                |                       |               | \$50,000              | \$ 50000                     | US:5<br>Canada:2<br>EU:1 |
| NN-09 (R)   | Moss Protonema as a Model Object in the Study of Microgravity Impact on Plant Growth and Morphogenesis   | Institute of Ecology of the Carpathians; Lviv                             | Demkiv Orest T.       | \$45,000        | \$45,000    |                |                       |               | \$45,000              | \$ 45000                     | US:5<br>Canada:2<br>EU:1 |
| NN-10 (R)   | The Influence of Microgravity on Kinetics and Trophy of Plant Meristem   | Institute of Cell Biology and Genetics Engineering; Kyiv                  | Grodzinsky Dmitry     | \$50,000        | \$50,000    |                |                       |               | \$50,000              | \$ 50000                     | US:5<br>Canada:2<br>EU:1 |
| NN-11 (R)   | Investigation of Microgravity Effect on Tumor Formation in Plants with the Use of Agrobacterium Tumefaciens Induced Crown Gall Tumors as a Model   | Institute of Plant Physiology and Genetics; Kyiv                          | Sarnatska Veresa V.   | \$30,000        | \$30,000    |                |                       |               | \$30,000              | \$ 30000                     | US:5<br>Canada:2<br>EU:2 |
| NN-18 (R)   | Deferense Properties of Fungal (Lichen) Structures in Outer Space  | Institute of botany; Kyiv   | Kondratyuk Sergey     | \$20,000        | \$20,000    |                |                       |               | \$20,000              | \$ 20000                     | US:5<br>Canada:2<br>EU:1 |

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|--|--|---|-------------------------------------|-----------------|-------------|----------------|-----------------------|---------------|-----------------------|------------------------------|--------------------------|
| NN-19 (R)                                    | Investigation of Biomineralization Processes of Microalgae in Microgravity   | Institute of botany; Kyiv   | Estrela-Liopis Victorio R.          | \$30,000        | \$30,000    |                |                       |               | \$30,000              | \$ 30000                     | US:5<br>Canada:2<br>EU:1 |
| NN-20  | Influence of the Space Flight Factors on Aging Pattern and Life Span   | Institute of Gerontology; Kyiv  | Muradian Khachik                    | \$40,000        | \$40,000    |                |                       |               | \$40,000              | \$ 40000                     | US:5<br>Canada:2<br>EU:2 |
| NN-24 (R)                                    | Researching the Effect of Space Flight on Biological Properties of Human Resident Flora in <i>Vitro in Vivo Investigations</i>   | Institute of Urology and Nephrology; Kyiv                             | Rudenko Adel'                       | \$40,000        | \$40,000    |                |                       |               | \$40,000              | \$ 40000                     | US:5<br>Canada:2<br>EU:2 |
| NN-25  | Influence of Spaceflight Conditions on Blood Microcirculation and Rheological Properties of Blood in Human   | Institute of Gerontology; Kyiv  | Korkushko Oleg V.                   | \$40,000        | \$40,000    |                |                       |               | \$40,000              | \$ 40000                     | US:5<br>Canada:2<br>EU:1 |
| NN-27 (R)                                    | Influence of Microgravity on the Grow, Maturity, Reproduction and Behavior of Daphnia  | Palladin Institute of Biochemistry; Kyiv                              | Nazarenko V. I.                     | \$40,000        | \$40,000    |                |                       |               | \$40,000              | \$ 40000                     | US:5<br>Canada:2<br>EU:1 |
| NN-28  | Computer System for Assessment of Mood and Performance   | Center of Ergonomics and Safety; Kyiv                                 | Burov Alexander                     | \$40,000        | \$40,000    |                |                       |               | \$40,000              | \$ 40000                     | US:5<br>Canada:2<br>EU:1 |
| NN-42  | The Development of Physicochemical and Engineering Fundamentals to Get Metallic Materials with Elements of Self-Organization for Operation in Extreme Conditions   | Frantsevich Institute for Problems of Materials Science; Kyiv         | Skorokhod Valery                    | \$100,000       | \$100,000   |                |                       |               | \$100,000             | \$ 100000                    | US:5<br>Canada:2<br>EU:2 |
| NN-43  | Fundamental Physics and Astrophysics on-board the ISS: Theoretical Basis for General Relativity Tests and Astronomical Support of the Asteroid-Hazard Observational Program  | Astronomical Observatory of Kyiv Taras Shevchenko University; Kyiv    | Vavilova Iryna B.                   | \$135,000       | \$135,000   |                |                       |               | \$135,000             | \$ 135000                    | US:5<br>Canada:2<br>EU:1 |
| <b>Subtotal NASA/NSAU Projects Approved:</b> |  |   |                                     | \$710,000       | \$710,000   | \$0            | €0                    | \$0           | \$710,000             | \$ 710000                    |                          |
| P003d  | Scientific Protocol for the Study of Leukemia and Other Hematological Diseases Among Clean Up Workers in Ukraine Following Chernobyl Accident  | Center for Radiation Medicine of AMSU                                 | Prof. Romanenko Anatoliy Yuhimovich | \$395,480       | \$395,480   |                |                       |               | \$395,480             | \$ 395480                    |                          |
| P093a  | Design, Manufacturing and Installation at Texas Tech University of the High Pressure Apparatus for Investigations of Materials Behavior at High Pressure and Shear Strain  | Institute of Superhard Materials                                      | Shvedov Leonid Konstantinovich      | \$14,000        | \$14,000    |                |                       |               | \$14,000              | \$ 14000                     |                          |
| P102   | Development and investigations of the high intensity Li <sup>+</sup> and Na <sup>+</sup> ion emitters and sources for the measurement of plasma parameters in the ASDEX Upgrade tokamak by neutral beam probing diagnostics, in particular beam emission spectroscopy. | National Science Center "Kharkiv Institute of Physics and Technology" | Dr. Krupnik L.I.                    | €15,000         |             |                | €15,000               |               |                       | € 15000                      |                          |
| P103   | Stand for Quasioptical Reserches   | Institute of Radiophysics and Electronics of NASU                     | Kiselyov Volodymyr                  | \$50,000        | \$50,000    |                |                       |               | \$50,000              | \$ 50000                     |                          |
| P104   | Electron-beam Sterilizer   | National Aviation University  | Victor V. Kulish                    | \$729,163       | \$729,163   |                |                       |               | \$729,163             | \$ 729163                    |                          |

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|--|--|--|------------------------------------|--------------------------|-------------|----------------|-----------------------|---------------|-----------------------|------------------------------|----------|
| P106                                       | Development and Delivery of a Big Size Electron Beam Welding Machine   | Paton Welding Institute of NASU  | Nesterenkov V.M.                   | \$1,912,000              | \$1,920,000 |                |                       |               | \$1,912,000           | \$ 1912000                   |          |
| P107                                       | Welding and Brazing for Repair of Aircraft and Gas Turbine Engine Components   | Paton Welding Institute of NASU  | Yushchenko Konstantin A.           | \$1,260,000              | \$1,200,000 |                |                       |               | \$1,260,000           | \$ 1260000                   |          |
| P108                                       | Deposition of Titanium Nitride Coatings onto Flat Panels and Compressor Blades by Modified Electron Beam Physical Vapor Deposition (EB PVD) Process for Cametoid Limited | International Center for Electron Beam Technologies of Paton Welding Institute of NASU | Yakovchuk Konstantin Yuvaniylovich | \$45,000                 |             | \$45,000       |                       |               | \$45,000              | \$ 45000                     |          |
| P109                                       | Solving of the Boundary Problems on Stress-Strained State and Dynamic Characteristics of the Complex Shape Shells - Pneumatic Tires on the Basis of Different Models.    | Institute of Mechanics   | Grigorenko Yaroslav Michaylovich   | €11,000                  |             |                | €11,000               |               |                       | € 11000                      |          |
| P-115                                      | Characterization of Phytoalexins from the Malvaceae in Uzbekistan  | A.S. Sadykov Institute of Bioorganic Chemistry NASU                                    | Golubenko Z.                       | \$295,975                | \$295,975   |                |                       |               | \$295,975             | \$ 295975                    |          |
| P-117                                      | Discovery, Synthesis, and Evaluation of New Pheromones for Insect Pests in Uzbekistan  | A.S. Sadykov Institute of Bioorganic Chemistry NASU                                    | Abdukakharov V. S.                 | \$300,000                | \$300,000   |                |                       |               | \$300,000             | \$ 300000                    |          |
| P118                                       | Performance Testing for grain-refinement in Ti6-4 and alloy 718 by Twist Extrusion   | Donetsk State Technical University   | Orlov Dmitro Valentinovich         | \$19,520                 | \$19,520    |                |                       |               | \$19,520              | \$ 19520                     |          |
| P130                                       | Design, Construction and Onsite Testing of a New N-gamma-fogging Device for Environmental and Geological Applications  | Institute for Single Crystals of NASU  | Galunov Nikolai Zaharovich         | €69,467                  |             |                | €69,467               |               |                       | € 69467                      |          |
| <b>Subtotal Partner Projects Approved:</b> |  |  |                                    | \$ 5,021,138<br>€ 95,467 | \$4,976,138 | \$45,000       | €95,467               | \$0           | \$5,021,138           | \$ 5021138<br>€ 95467        |          |

|               |                           |             |           |            |     |             |                         |  |
|---------------|---------------------------|-------------|-----------|------------|-----|-------------|-------------------------|--|
| <b>TOTAL:</b> | \$ 53,891,092<br>€ 95,467 | \$7,188,285 | \$152,482 | €1,434,789 | \$0 | \$7,340,767 | \$ 7340767<br>€ 1434789 |  |
|---------------|---------------------------|-------------|-----------|------------|-----|-------------|-------------------------|--|







Mr. S. C. Engelken  
Acting USA  
Board Member

Mr. D. Banks  
Acting Canadian  
Board Member

Mr. Y. Yatskiv  
Ukrainian  
Board Member

Ambassador N. Jousten  
Acting EU Board Member  
(for the European Commission)


Ambassador P. Goumas  
EU Board Member  
(for the EU Presidency)

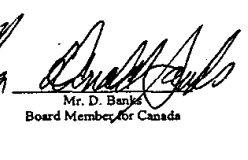
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4. Other - See Comments
5. Approved with Funding

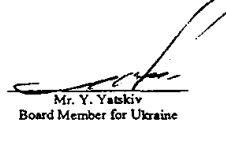
STCU SUPPLEMENTAL BUDGET  
15th Governing Board Meeting, December 12, 2002

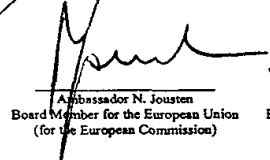
12.12.02 1:57

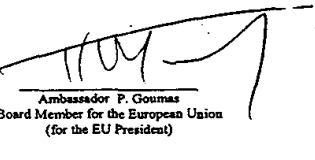
| #                                 | Full Title   | USA<br>(US \$)   | Canada<br>(US \$) | European<br>Union<br>(EURO) | Other<br>(US \$) | Total Funding<br>(US \$) | Total Funding<br>(US \$ + EURO)  |
|-----------------------------------|--|------------------|-------------------|-----------------------------|------------------|--------------------------|----------------------------------|
| <b>Supplemental Budget:</b>       |  |                  |                   |                             |                  |                          |                                  |
| <b>Activity:</b>                  |  |                  |                   |                             |                  |                          |                                  |
| 01                                | Technical, Collaborator, and Contractor Travel Support (Project Related) | \$15 000         | -                 | -                           | -                | \$15 000                 | \$15 000                         |
| 02                                | Information Technology Support   | -                | -                 | -                           | -                | -                        | -                                |
| 03                                | Communications Support   | -                | -                 | -                           | -                | -                        | -                                |
| 04                                | Business Training/Sustainability Support                                 | \$33 990         | \$4 130           | 12 000                      | -                | \$38 120                 | \$ 38120<br>EURO12000            |
| 05                                | Patent Support   | \$27 192         | \$3 304           | 10 000                      | -                | \$30 496                 | \$ 30496<br>EURO10000            |
| 06                                | Travel and Mobility Support  | \$125 586        | \$5 782           | 19 500                      | \$475 322        | \$606 690                | \$ 606690<br>EURO19500           |
| 07                                | Expert Contract (Program Related)  | -                | -                 | -                           | -                | -                        | -                                |
| 08                                | Expert Review and Advisors   | -                | -                 | -                           | -                | -                        | -                                |
| 09                                | Seminars/Workshops Support   | \$23 114         | \$2 808           | 8 500                       | -                | \$25 922                 | \$ 25922<br>EURO8500             |
| 10                                | Service Contracts  | \$550 000        | -                 | 250 000                     | -                | \$550 000                | \$ 550000<br>EURO250000          |
| <b>Total Supplemental Budget:</b> |  | <b>\$774 882</b> | <b>\$16 024</b>   | <b>300 000</b>              | <b>\$475 322</b> | <b>\$1 266 228</b>       | <b>\$ 1266228<br/>EURO300000</b> |

  
Mr. S. Engelken  
Acting Board Member for USA

  
Mr. D. Banks  
Board Member for Canada

  
Mr. Y. Yatskiv  
Board Member for Ukraine

  
Ambassador N. Jousten  
Board Member for the European Union  
(for the European Commission)

  
Ambassador P. Goumas  
Board Member for the European Union  
(for the EU President)