



PRESIDIUM OF THE NATIONAL ACADEMY OF SCIENCES OF UKRAINE

ORDER № 411

the City of Kyiv

25.07.2018 p.

On Approval of the List
of R&D Projects
of the NAS of Ukraine
to be Implemented in 2018

To fulfill the Order of the Presidium of the NAS of Ukraine of 26.12.2017 No. 717 on Competition of R&D Projects of R&D Institutes of the NAS of Ukraine in 2018, pursuant to the order of the Presidium of the NAS of Ukraine of 20.07.2018 No. 403 on Approval of Assignment of Budget Funding of the NAS of Ukraine within the framework of budget program KPIK BK 6541230 *Support of Development of Priority R&D Works* for 2018:

1. To approve the list of R&D projects of the NAS of Ukraine and the amount of funding for 2018, as per annex hereto.

2. The R&D institutes of the NAS of Ukraine, which are implementing organizations shall:

2.1. Prepare and submit to the Presidium of the NAS of Ukraine the respective works contracts for the projects in 2018 within two weeks;

2.2. Pursuant to contracts signed, within two weeks:

– revise their working plans for 2018 accordingly;

– submit to the respective section of the NAS of Ukraine a copy of works contract signed for 2018 and a copy of project registration cards;

– submit to the section for Financial and Economic Management of the NAS of Ukraine a copy of works contract signed for 2018 and a copy of project registration cards;

2.3. Ensure submission of project implementation reports for 2018 to the respective sections of the NAS of Ukraine till 31.12.2018.

3. For coordinating the respective works and supervision over the project implementation to charge the chairmen of the sections of the NAS of Ukraine with the following tasks:

3.1. signing works contracts with the implementing organizations of the projects within two weeks;

3.2. ensuring ongoing supervision over the project implementation and targeted use of project funds allocated from the national budget.

4. The Department for Financial and Economic Management of the NAS of Ukraine shall revise the cost estimates for 2018 of the R&D institutes implementing the projects accordingly.

5. To charge A.G. Naumovets, the First Vice President of the NAS of Ukraine, with supervision over the fulfillment of this Order.

Acting President of the NAS of Ukraine

A.G. NAUMOVETS

Acting Chief Scientific Secretary
of the NAS of Ukraine

V.O. TSYBAN

**LIST
of R&D Projects of the NAS of Ukraine
and Amount of Funding for 2018**

№	Project	Applicant
1	Creation of A Gas Sensor Based on Matrix (4x4) Nanopowder Cells with an Algorithm for Analysis of Their Glow for Recording Gaseous Mixes	Pidstrygach Institute for Applied Problems of Mechanics and Mathematics of the NAS of Ukraine
2	Development of Mathematical Models and Software for Heavy Machines to Raise Precision of Manufacturing Large Machine Parts and Equipment	Institute of Applied Mathematics and Mechanics of the NAS of Ukraine
3	Development of Software and Hardware for Quarterly Assessment of Efficiency and Targeted Structure of Exports of Regions of Ukraine	Glushkov Institute of Cybernetics of the NAS of Ukraine
4	Development of Mass Consumption Software and Hardware Complex for Restoring Speech Skills	International Research and Training Center of Information Technology and System of the NAS and the MES of Ukraine
5	System of Presentation of Air and Ground Situation for the Situation Center of Antiterrorist Operations Coordination	Glushkov Institute of Cybernetics of the NAS of Ukraine
6	Development of Optimal in Terms of Strength and Highly Reliable Metallic Composite Structure for Advanced Aviation Equipment	Pisarenko Institute for Problems of Strength of the NAS of Ukraine
7	Development of Structural Scheme and Choice of Parameters of Aerodynamic System for Deorbiting Spacecraft Designed by Pivdenne Design Office	Institute of Engineering Mechanics of the NAS of Ukraine and the State Space Agency of Ukraine
8	Raising Biocompatibility of Implants Made of Titanium and Zirconium Alloys by Laser Nanostructuring of Their Surface	Institute of Physics of the NAS of Ukraine
9	Development of Technology for Manufacturing THz UHF-Components Based on Gallium Arsenide and Implementation in Industrial Manufacture	Lashkariyov Institute for Semiconductor Physics of the NAS of Ukraine
10	Development of Effective Thermal Interface Functional Materials and Structures for Electronic Devices with a High Heat Release	Kurdiumov Institute of Physics of Metals of the NAS of Ukraine
11	Testing and Implementing Software for Measuring the Parameters of Motion of Spacecraft and Small Celestial Bodies for Controlling Cosmic Space and Near-Earth Astronomy	Main Astronomic Observatory of the NAS of Ukraine
12	Creation and Implementation of Vibroresistant Optical Connector for Wideband Optic Fiber Systems for Digital Data Transfer	Institute of Applied Optics of the NAS of Ukraine, International Center
13	Creation of Software and Hardware Complex for Solving Fundamental and Applied Problems of Geophysics	Subbotin Institute of Geophysics of the NAS of Ukraine

№	Project	Applicant
14	Creation of Laboratory Plants Operating Based on New Principles in order to Manufacture High-Quality Concentrated Iron Ore from Fine Raw Iron Ore	Semenenko Institute of Geochemistry, Mineralogy, and Ore Formation of the NAS of Ukraine
15	Development of System for Warning about Dangerous Meteorological Phenomena and Its Implementation in the Armed Forces of Ukraine	Ukrainian Hydro-Meteorological Institute of the State Emergency Situations Service of Ukraine and the NAS of Ukraine
16	Improvement and Implementation of Integrated Technology for Structural Thermo-Atmo-Geochemical Studies for exploring Oil and Gas Deposits in the Sula River Basin	Institute of Geological Science of the NAS of Ukraine
17	Design of Mobile Complex for Contact Butt Welding of Long Strings Using the Tension Method with Computation of Temperature Range for Their Fixation While Constructing and Repairing the Continuous Welded Railways of Ukraine	Paton Electric Welding Institute of the NAS of Ukraine
18	Development of Technology for Deep Purification from Heavy Metals Impurities of Cesium Iodide Obtained from Monocrystalline Waste	Institute of Scintillation Materials of the NAS of Ukraine
19	Development and Manufacture of Polarization Potential Meter for Controlling the Quality of Protection of Pipelines and Steel Structures from Corrosion in Electroconductive Environment	Karpenko Physical and Mechanical Institute of the NAS of Ukraine
20	Development of Manufacturing Technology and Implementation a New Class Tool of CVD-Diamond for Polishing High-Precision Gear Wheels of Special Gearboxes	Bakul Institute of Superhard Materials of the NAS of Ukraine
21	Creation of Automated Technological Complex for Laser Welding and Building-Up of Rocket Engine Elements	Paton Electric Welding Institute of the NAS of Ukraine
22	Development of process for Manufacturing the Hip Joint Endoprosthesis Using New Biocompatible Materials and Technologies	Frantsevych Institute for Problems of Materials Science of the NAS of Ukraine
23	Development of Energy-Saving Technology for Manufacturing Tubes of Steels 18Г2МФБТ and 18Г2 with Enhanced Mechanical Properties	Nekrasov Institute of Ferrous Metallurgy of the NAS of Ukraine
24	Software and Hardware Complex for diagnosing the Networks for Signalizing, Centralizing, and Blocking Railway Transport	Institute of Electrodynamics of the NAS of Ukraine
25	Implementation of Engineering Solutions for Modernizing ННІСТУ-5 Boiler to Ensure Material Saving of Natural Gas	Institute of Gas of the NAS of Ukraine
26	Development and Implementation of System for Monitoring Heat Resistance of Fencing Structures of Buildings	Institute of Engineering Thermophysics of the NAS of Ukraine
27	Study of Energy Efficiency and Environment Safety of Technology for Hydro-Cavitation Activation of Hydrocarbons for Production and Combustion of Composite Fuel Based on Activated Sludge of Municipal WWTP	Pidgorny Institute for Problems of Machine-Building of the NAS of Ukraine
28	Creation of Complex for Providing Social Settlements with Electric and Heat Energy Using Renewable Energy Sources	Institute for Renewable Energy of the NAS of Ukraine

№	Project	Applicant
29	Software and Modelling System for Analysis and Forecasting of Atmospheric Air Pollution by Power Engineering Plants	Institute of Environment Geochemistry of the NAS of Ukraine
30	Diamond Detecting Dosimeter for Beam Therapy	Institute for Nuclear Research of the NAS of Ukraine
31	Development of Carbon-Carbon Composite Material for Ram Jet Throat Inserts	National Research Center
32	Development of System for Fast Response Radiation Control Based on Airborne Vehicle	Institute of Environment Geochemistry of the NAS of Ukraine
33	Development of Software and Methodology for R&D and Design Works in the Sphere of Geophysical Instrument Making	Institute for Telecommunications and Global Information Space of the NAS of Ukraine
34	Update of Software for <i>Rada-IV</i> System of Information Support of Parliament members in the Plenary Session Hall	Institute for Problems of Mathematical Machines and Mechanisms of the NAS of Ukraine
35	Development of Economic Institutional Mechanisms for Facilitating Cooperation of Academic Science with Hi-Tech Sector of Economy	Dobrov Institute for Study of R&D Potential and History of Science of the NAS of Ukraine
36	Development and maintenance of subsystems for keeping a register of IPR objects of the NAS of Ukraine, support of competition and supervision over implementation of targeted R&D projects within targeted programs of R&D works of the NAS of Ukraine, as well as information and software components of distributed information technology for support of research and organizational activities of the NAS of Ukraine	Glushkov Institute of Cybernetics of the NAS of Ukraine
37	Development of Technology for Manufacturing, Commissioning, and Introducing for Chemical Indicator of Leakage Through Defects of Industrial Structures	Pisarzhevskiy Institute for Physical Chemistry of the NAS of Ukraine
38	Development and Implementation of Dielectric Materials and Disc Lock Capacitors Made of Them for Integrated UHF Devices of Radiolocation Stations	Vernadsky Institute for General and Inorganic Chemistry of the NAS of Ukraine
39	Organization of Production Site, Creation of Technological Procedure and Manufacture of Trial Batch of Antitumor Preparation <i>Ferroplat</i> for Clinical Studies	Chuiko Institute of Surface Chemistry of the NAS of Ukraine
40	Preparation for Reducing Homocysteine Content and Improving Cognitive Functions	Palladin Institute of Biochemistry of the NAS of Ukraine
41	Development of Technological Framework for Manufacturing Microbial Antiherpetic Preparation Existing Manufacturing Conditions	Zabolotnyi Institute of Microbiology and Virology of the NAS of Ukraine
42	Development and Manufacture of Trial Batch of <i>Argisens</i> Sensor System for Analysis of Arginine in Clinical Samples	Institute for Molecular Biology and genetics of the NAS of Ukraine
43	Improvement of Modern Laboratory Methods for Diagnosing the Myelodysplastic Syndromes and Their Introduction into Practice of Oncohematologic Departments of Ukraine	Kavetskiy Institute for Experimental Pathology, Oncology, and Radiobiology of the NAS of Ukraine
44	Development of Technology for Producing Ethyl Alcohol Based on Structured Strains of Distillery Yeasts for Ethanol Overproduction	Institute of Cell Biology of the NAS of Ukraine

№	Project	Applicant
45	Production and Transfer of Bacterial Fertilizers Based on New Strains Resistant to Fungicides	Institute for Physiology and Genetics of Plants of the NAS of Ukraine
46	Development and Implementation of Methods for Microclonal Multiplication of Highbush Blueberry (<i>Vaccinium Corymbosum</i> L.)	Institute for Ecology of Carpathian Mountains of the NAS of Ukraine
47	Development and Implementation of Molecular Genetic Methods for Detecting the Genes of Resistance to Septoria Disease in Ukraine-Bred Soft Wheat Varieties	Institute for Food Biotechnology and Genomics of the NAS of Ukraine
48	Introduction of Phytomodules from Tropical Plants for Optimizing the Environment in the Premises of Health and Recreation Establishments	Hryshko National Botanical Garden of the NAS of Ukraine
49	Prospects for the Development of Transport of the 5th Generation in Ukraine	Institute for Economics and Forecasting of the NAS of Ukraine