

№ п/п	The direction of research project	Name of the project	Project manager	Period	Contacts
1	Energy and Mechanical Engineering	Formation and stabilization of efficient thin-layer perovskite solar cells with a heterojunction inverted structure	Taurbaev T.I.	2018-2020	taur@physics.kz
2	Energy and Mechanical Engineering	Development of technological basis for the separation of gas mixtures from modular flow-through devices in the context of energy efficiency and environmental impact	Kosov V.N.	2018-2020	kosov_vlad_nik@list.ru
3	Energy and Mechanical Engineering	Complex processing of solid fuels to produce energy-accumulating substances and energy gas	Ustimenko A.B.	2018-2020	ust@physics.kz
4	Energy and Mechanical Engineering	Long-term high-temperature testing of HTGR core materials	Chikhray E.V.	2018-2020	chikhray@physics.kz
5	Energy and Mechanical Engineering	Introduction of OFA-Technology (technology of "acute" blast) with the aim of minimizing harm and gas-dust emissions from Shakhtar TPPs using high-grade coal	Askarova A.S.	2018-2020	Aliya.Askarova@kaznu.kz
6	Energy and Mechanical Engineering	Influence of radiation and heat loads on intracamerar materials and dust formation in the presence of a plasma cord in a nuclear fusion energy reactor	Ramazanov T.S.	2018-2020	ramazan@physics.kz
7	Information, telecommunication and space technologies, research in the natural sciences	Special modes and the emergence of space-timeconvective formations of diffusion in multicomponent gas mixtures	Kosov V.N., Mukhamedenkyzy V.	2018-2020	kosov_vlad_nik@list.ru
8	Information, telecommunication and space technologies, research in the natural sciences	Investigation of radiation capture and peripheral nuclear reactions of proton transfer to energies near the Coulomb barrier caused by heavy ions for astrophysical and thermonuclear applications	Burtebaev N.	2018-2020	burteb@inp.kz
9	Information, telecommunication and space technologies, research in the natural sciences	Investigation of the structure of partially collective states of atomic nuclei, based on the microscope-fermion theory and its application to real multi-nucleon systems	Baktybaev K.	2018-2020	zhkulyana@mail.ru

10	Information, telecommunication and space technologies, research in the natural sciences	Direct determination of the dynamic properties of non-ideal plasma	Arkhipov Yu.V.	2018-2020	Yuriy.Arkhipov@kaznu.kz
11	Information, telecommunication and space technologies, research in the natural sciences	Investigations of excited states of light nuclei	N.Takibaev	2018-2020	takibayev@gmail.com
12	Information, telecommunication and space technologies, research in the natural sciences	Study of dust-sound solitons in a magnetoactive plasma of complex composition	Dzhumagulova K.	2018-2020	dzhumagulova.karlygash@gmail.com
13	Information, telecommunication and space technologies, research in the natural sciences	Chemical model of dusty plasma	Davletov A.E.	2018-2020	Askar.Davletov@kaznu.kz
14	Information, telecommunication and space technologies, research in the natural sciences	Cluster, multicluster inuklone degrees of freedom in light atomic nuclei	Zhusupov M.A.	2018-2020	zhkulyana@mail.ru
15	Information, telecommunication and space technologies, research in the natural sciences	Investigation of the properties of low-temperature complex plasma in an external magnetic field	Kodanova S.A.	2018-2020	kodanova@mail.ru
16	Information, telecommunication and space technologies, research in the natural sciences	Investigation of the fundamental properties of a nonideal complex plasma based on particle interaction models	Ramazanov T.S.	2018-2020	ramazan@physics.kz
17	Information, telecommunication and space technologies, research in the natural sciences	Numerical study of the dynamics of test bodies in the field of extended bodies with an internal structure in GR	Abishev M.E.	2018-2020	abishevme@mail.ru
18	Information, telecommunication and space technologies, research in the natural sciences	Creation of new computer technologies for 3D modeling of heat and mass transfer processes in high-temperature physicochemical-reactive environments	Askarova A.S.	2018-2020	Aliya.Askarova@kaznu.kz
1	Energy and Mechanical Engineering	Plasma technology for production of syngas for power generation from carbon-containing waste (CCW).	Ustimenko A.B.	2015-2017	ust@physics.kz
2	Energy and Mechanical Engineering	Development of fast neutron detectors based on high-purity VPE GaAs epitaxial layers and study their characteristics	Burtebaev N.	2015-2017	burteb@inp.kz

3	Energy and Mechanical Engineering	Studying of formation of chemically active gases at accidents on high-temperature gas-cooled reactor (HTGR)	Shestakov V.P.	2015-2017	chikhray@physics.kz
4	Energy and Mechanical Engineering	Elementary processes and optical properties of the complex plasma of inertial confinement fusion	Dzhumagulova K.N.	2015-2017	dzhumagulova.karlygash@gmail.com
5	Energy and Mechanical Engineering	Influence of dust formation and properties of the edge plasma with dust particles on operation regimes of thermonuclear fusion power reactors	Ramazanov T.S.	2015-2017	ramazan@physics.kz
6	Energy and Mechanical Engineering	Theoretical and experimental study of formation processes of methane clathrate hydrates in the condensed water environment at low temperatures	Drobyshev A.S.	2015-2017	Andrei.Drobyshev@kaznu.kz
7	Energy and Mechanical Engineering	Creation of the independent 1 kW peak power cascade solar generator of thermal and electric energy	Lavrishchev O.A.	2015-2017	lavr@physics.kz
8	Energy and Mechanical Engineering	Development of device for separating the hydrocarbon gas mixture into components with specified properties by convective diffusion method	Kosov V.N.	2015-2017	kosov_vlad_nik@list.ru
9	Energy and Mechanical Engineering	Development of energy saving technologies for efficient and cleaner burning low-grade coal in the Kazakh energy boilers of TPP	Askarova A.S.	2015-2017	Aliya.Askarova@kaznu.kz
10	Energy and Mechanical Engineering	Preparation and Investigation of Novel Highly Efficient Solar Cells based on Organometal Perovskites	Taurbayev T.I.	2012-2014	taur@physics.kz
11	Rational use of natural resources, processing of raw materials and products	Theme name of the project. Technology of production of superhard and protective coatings on structural materials.	Gabdullina A.T.	2015-2017	a_gabdullina@mail.ru
12	Rational use of natural resources, processing of raw materials and products	The development of the technology of obtaining multi-purpose nanocarbon materials and composites	Chikhray E.V.	2015-2017	chikhray@physics.kz
13	Rational use of natural resources, processing of raw materials and products	Development of cost-effective technology for production of nanostructured composite coatings	Yar-Mukhamedova G.	2015-2017	gulmira-alma-ata@mail.ru

		chromed-white carbon with improved anticorrosion properties.			
14	Rational use of natural resources, processing of raw materials and products	Studying of soil moisture, water stock in the snow and ice ablation using neutrons and cosmic-ray muons	Oskomov V.V.	2015-2017	lvcl@mail.ru
15	Information and communication technologies	Design of wideband fractal antenna for UWB communication systems	Imanbayeva A.K.	2015-2017	akmaral@physics.kz
16	Information and communication technologies	Software development for the processing of experimental data and results of computer simulations based on modern mathematical methods	Askaruly A.	2015-2017	adil1_1@mail.ru
17	Information and communication technologies	Development of informational-program package for modeling and visualization of dense plasma properties in inertial confinement fusion	Kodanova S.K.	2015-2017	kodanova@mail.ru
18	Information and communication technologies	Creating of neural networks with self-organizing electronic element	Zhanabaev Z.Zh.	2015-2017	sayataktanov@mail.ru
19	Information and communication technologies	Create an intelligent and robotic system for vacuum technological installation	Zhukeshov A.M.	2015-2017	zhukeshov@physics.kz
20	Information and communication technologies	Program-technical complex of data collection for scientific experiments, data collection	Oskomov V.V.	2015-2017	lvcl@mail.ru
21	Intellectual potential of the country	Motion of rotating extended bodies in gravitational fields	Abishev M.Ye.	2015-2017	abishevme@mail.ru
22	Intellectual potential of the country	Experimental studies and computer simulation of the spin conversion and spin-phonon interaction in thin films of methane cryocondensates	Drobyshev A.S.	2015-2017	Andrei.Drobyshev@kaznu.kz
23	Intellectual potential of the country	Study of the nature and appearance of the halo-structure of the ground and excited states of light nuclei in nuclear processes	Zhusupov M.A.	2015-2017	zhkulyana@mail.ru
24	Intellectual potential of the country	Investigation of interaction of intermediate energy n^+ -mesons with neutron-rich $1p$ -shell nuclei in the framework of the Glauber diffraction theory	Imambekov O.	2015-2017	onlas@mail.ru

25	Intellectual potential of the country	Research of heat transfer and heat exchange in complex streamflows	Isatayev S.I.	2015-2017	Muhtar.Isataev@kaznu.kz
26	Intellectual potential of the country	Study of Nuclear Reactions and Processes in Stellar Matter	Takibayev N.Zh.	2015-2017	takibayev@gmail.com
27	Intellectual potential of the country	Investigation of dynamic and optical properties of dense Coulomb systems	Arkhipov Yu.V.	2015-2017	Yuriy.Arkhipov@kaznu.kz
28	Intellectual potential of the country	Self-consistent model of the static properties of dusty plasmas with particles of finite size	Davletov A.E.	2015-2017	Askar.Davletov@kaznu.kz
29	Intellectual potential of the country	Computer simulation of the properties of magnetized complex plasma	Dzhumagulova K.N.	2015-2017	dzhumagulova.karlygash@gmail.com
30	Intellectual potential of the country	The investigation of the simplest molecules to build precision optical molecular clocks operating in the terahertz and radio bands	Zhaugasheva S.A.	2015-2017	sazh_74@mail.ru
31	Intellectual potential of the country	Interaction models and fundamental properties of non-ideal plasmas	Ramazanov T.S.	2015-2017	gabdullin@physics.kz
32	Intellectual potential of the country	Development of motivation system of university teachers to innovate	Murzagaliyeva A.G.	2015-2017	altair.73@mail.ru
33	Intellectual potential of the country	Fundamental physical bases of controlling electric memory effect in nanodimensional chalcogenide semiconductors	Prikhod'ko O.Yu.	2015-2017	Oleg.Prikhodko@kaznu.kz
34	Intellectual potential of the country	Investigation of white dwarfs taking into account temperature and rotation in general relativity	Boshkayev K.A.	2015-2017	kuantay@mail.ru
35	Intellectual potential of the country	A study of nonlinear effects in a cluster of self-oscillating systems	Medetov B.	2015-2017	bm02@mail.ru
36	Intellectual potential of the country	Investigation of low temperature plasma properties for realization of micro and nano size dust particles manipulation	Kodanova S.K.	2015-2017	kodanova@mail.ru
37	Intellectual potential of the country	Multiquark states and their decays in the covariant quark model	Nurbakova G.	2015-2017	bekbaev-askhat@mail.ru

38	Intellectual potential of the country	The study of the main characteristics of rare decays of baryons and properties of dibaryon systems	Nurbakova G.	2015-2018	bekbaev-askhat@mail.ru
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Nº	The direction of research project	Name of the project	Project manager	Period	Contacts
1	Energetics	Technology of synthesis of fullerenes and their hydrogenation for hydrogen storage.	Gabdullin M. T.	2013-2015	gabdullin@physics.kz
2	Energetics	Development and research of stable silicon solar cells with efficiency of 16-17% with an oxide nanoporous silicon	Dihanbayev K.K.	2013-2015	dkadyrjan@mail.ru
3	Energetics	Creation of technological foundations of heteroepitaxial carbon films in the presence of external fields.	Aliyev B.A.	2013-2015	aliyevb72@mail.ru
4	Life Science	MicroRNA expression in the regulation of genes involved in the development of lung cancer.	Ivashenko A.T.	2013-2015	a_ivashchenko@mail.ru
5	Intellectual potential of the country	Linear and nonlinear optical phenomena in ensembles of semiconductor nanocrystals	Taurbayev T.I.	2013-2015 rr.	taur@physics.kz
6	Intellectual potential of the country	Nonlinear phenomena in composite nanostructured metamaterials.	Davletov A.E.	2013-2015 rr.	askar.davletov@kaznu.kz
7	Information and communication technologies	Adaptation of algorithms of quantum computing to the analysis of multidimensional data and time series of different nature.	Kusainov A.S.	2013-2015 rr.	arman.kussainov@gmail.com
8	International scientific and technical programs and projects for 2013-2015	Obtaining and hydrogen absorption of nanostructured materials for hydrogen	Gabdullin M. T.	2013-2015 rr.	gabdullin@physics.kz

		accumulators and chemical power sources			
9	International scientific and technical programs and projects for 2013-2015	Investigation of physical and technological processes of formation of light-emitting structures on the basis of SiO ₂ / Si with quantum dots of semiconductors A ₂ B ₆ for systems of optoelectronics	Togambayeva A.K.	2013-2015 rr.	altynay.togambayeva@kaznu.kz
10	International scientific and technical programs and projects for 2013-2015	Obtaining and modification of nanostructured functional materials in plasma-dust environments	Ramazanov T. S.	2013-2015 rr.	ramazan@physics.kz
11	International scientific and technical programs and projects for 2013-2015	Investigation and research of new composite materials based on nanostructured polymers for micro and optoelectronics systems and protection against electromagnetic radiations	Kh.A. Abdullin	2013-2015 rr.	kh.a.abdullin@mail.ru