full name	Kakimov Ulan Kadyrhanuly			
position	Head of Department, Associate	epartment. Associate Professor		
Academic career	Initial academic appointment Habilitation [German doctoral qualification] (subject) Doctorate degree (Pressure treatment	MMI MMI Candidate of Technical Sciences.	2004 2022 2007	
	technologies and machines) Bachelor's degree (Metallurgical Machinery and Equipment)	Master of Metallurgy Candidate of Technical Sciences	2012	
Employment	Head of Department	Satbayev University	2021-2022	
Research and development projects over the past 5 years	-			
Industry cooperation	-			
over the past 5 years Patents and property rights	Copyright certificate "Rolling Mill"		2006	
Important publications over the last 5 years	Selected recent publications from (7): Kuandykov T., Nauryzbayeva I. U., Kolga A. Development and justification of ore permeability in conditions News of the National Academy Series of Geology and Technical	D., Yelemessov K., K of a hydro-impulse n of uranium borehole of Sciences of the R	armanov T., Kakimov nethod for increasing production	
Activities in specialized bodies over the past 5 years	Programs inde	nber of the pendent mission	2019-2022	

full name	Smagulov Dauletkhan Uyalovid	ch	
position	Professor		
Academic career	Assistant Docent Doctor of Technical Sciences Professor)	Satbayev University Satbayev University Satbayev University	1975 1987 2000 2002
Employment	Teacher	Satbayev University	From 1975 to the present
Research and development projects over the past 5 years	1. Scientific and technical project 747.MON.GF.12.18 - "Creation cells (Solar Cells) for the convergence of	of nanostructured of rsion of solar energy oject on grant financement of theoretical for and functional man N.11 - "Development ents and nanocomposit No. 100-GC-16 - " um alloys from dom	organic, polymer solar winto electrical cing, topic No. coundations for the terials with a given at of technology for the osite materials based accreation of pilot estic raw materials
Industry cooperation over the past 5 years	Commercialization Project No. of innovative aluminum alloys fi products from them with nanost 2017-2019. Mechanics LLC - NUST MISIS (om domestic raw m ructured protective o	aterials and finished ceramic coating",
Patents and property rights	Heat-resistant aluminum alloy and a method for	Application for a patent of the Republic of Kazakhstan. No. 2020/042.2020	,
Important publications over the last 5 years	Selected recent publications from (specify the total number): more Akhmetova, D.U. Smagulov. Cimage processing of pipe steels Akhmetova G. E., Kozha E., of electrolyte-plasma treatment and Heat Treatment of Metals, I. A.V. Kudrya, E. A. Sokolovsk Measurement of characteristics Metallurg 62 (11-12), 1225-123 Aliya Amenova, Dauletkhan phase diagram of Al - Ni - Fe - I.	than 175 scientific promputerized procedures, Steel, 55-Vyatkina A. K., Smayon the structure of 4 No. 11 (773), Novembaya, V. Yu. Perezho of banded microstru 1,2019. Smagulov. Quantitat	lures for quantitative 59, 2019. gulov D. U. The effect 5G steel Metallology ber 2019. gin, D.Yu. Smagulov, acture in sheet steels. tive analysis of the

cast aluminum alloys of a new generation. IX International Scientific and Practical Conference "News of scientific progress - 2013". Byal GRAD-BG (Sofia, Bulgaria). ISBN 978-966-8736-05-6. Aliya Amenova, Nikolay Belov, Dauletkhan Smagulov, Ainagul Toleuova. A scientifically based choice of heat-resistant cast aluminum alloys of a new generation. 2013 2nd International Conference on Advanced Materials Design and Mechanics. Kuala Lumpur, Malaysia. International Journal of Applied Mechanics and Materials [ISSN:1660-9336, Trans Tech Publications]. Indexing: EI Compendex, Scopus, Cambridge Scientific Abstracts, Google Scholar. Amenova A.A., Smagulov D.U., Dostaeva A.M. - Optimization of the composition of new industrial economically alloyed heat-resistant aluminum alloys. IX International Scientific and Practical Conference "Modern scientific achievements-2013". Publishing house "Education and Science" s.r.o. (Czech Republic, Prague). Amenova A.A., Belov N.A., Smagulov D.U. Computational analysis of the effect of iron, manganese and silicon on the nonequilibrium crystallization of aluminum alloys containing 2% nickel. Journal of Metal Science and Heat treatment of Metals, Russia, Moscow. Journal of Metal Science and Heat Treatment, Springer Publishing House. Zharkynai Kuanyshbekova, Dauletkhan Smagulov, Anyar Zahidov. Lightweight dye-sensitized solar cells with charge collectors made of doped carbon nanotubes. The Second International Symposium on Nanotechnology, Energy and Space, Chernogolovka, Moscow Region, Russia, August 3-5, 2011. Deputy Chairman for the last 10 years Activities in Member of the specialized bodies over Dissertation Council for the past 5 years the defense of doctoral dissertations

full name	Baytimbetova Bagila Abdisamatovna		
position	associate professor		
Academic career	Initial academic appointment Habilitation [German doctoral qualification] (subject)	KazNU named after al-Farabi,	1996г
	Doctoral degree (Condensed Matter Physics) Academic title of DCNo.0000135, 18.04.2016	Candidate of Physical and Mathematical Sciences	2007
	Education (Physicist. Physics teacher)	Associate	2016
		Professor	1997
Employment	Associate Professor	Satbayev University	from 2005 to the present
Research and	Leading researcher under the PC	F program Develor	oment of scientific
development projects over the past 5 years	foundations for the creation of n analysis for obtaining films with (PCF BR05236404) for the period	ew nanomaterials as specified useful pro	nd methods of their
Industry cooperation	-		
over the past 5 years			
Patents and property rights	Copyright certificate" Method of obtaining graphene"		2013/0559.1
	Author's certificate "Method of obtaining carbon nanostructures by magnetron reactive sputtering of graphite in sublimated vapors of aromatic hydrocarbons"		2013/0803.1
Important publications over the last 5 years			Imosphere of vapors of Vol. 58, No. 3, July, 4-398 DOI Ige, Thomson Reuters, For producing graphene matic hydrocarbons. Is of graphene in pure graphite in urnal . ISI Web of erikkanov A.S. Studying earbon film on quartz,

	Republic of Kazakhstan. Gorenje and плазмохимия. – 2019. –№17. – С. 184-188. IF=0.093 http://cpc.icp.kz/index.php/cpc/issue/view/34 D O Murzalinov, A A Shaikenova, A G Umirzakov, A I Fedosimova*, B A Baitimbetova, Increasing the photoluminescence intensity of silicon nitride by forming K and N radioactive centres Journal of Physics: Conference Series 2155 (2022) 012008 IOP Publishing doi:10.1088/1742-6596/2155/1/012008
Activities in specialized bodies over the past 5 years	-

full name	Азат Сейтхан			
position	Профессор			
Academic career	Bachelor's degree Master's degree Doctoral studies Associate Professor,	Faculty of Chemistry and Chemical Technology, Department of Chemical Physics and Materials Science. Al-Farabi Kazakh National University,	2004-2008 2008-2010 2012-2015 2019	
Employment	Position	Employer	Period	
	Professor	Department of Materials Science, Nanotechnology and Engineering Physics, Satbayev University	2021-22 academic year	
	Scientific Editor	Of The Journal Bulletin Of Satbayev University	Since July 2021.	
	Head of LIP (Laboratory of Engineering Profile)	Satbayev University.	Since March 01, 2021.	
	Associate Professor	Department of "Chemical Processes and Industrial Ecology"	2020-21 academic year	

	Satbayev university	
Deputy Director for Scientific and Educational Activities	Institute of Chemistry and Biological Technology, Satbayev University	From June 15, 2020 – June 15, 2021.
Acting Head of the laboratory	Laboratories of Carbon Nanomaterials and Nanotechnologies, RSE on PCV Institute of Gorenje Problems	From March 02, 2020 – June 09, 2021.
Head of Production	"SINGO"filters with replaceable cartridge for water	From January 05, 2020.
Instructor of school projects	Nazarbayev Intellectual School, Almaty	October, 2017 – May, 2019
Methodist	Republican Educational and Methodological Center of Civil Protection	June – October, 2017
Post Doctor	Nazarbayev University, School of Engineering (Environmental Science & Technology Group), Astana, Kazakhstan	November, 2015 – August 2019.
Researcher, Leading Researcher	LLP "NPTC "ZHALYN"	2012-2014
Translator (Kazakh, Russian, Chinese)	LLC "CONCERN NURZHAS", Astana, Kazakhstan	
Teacher Senior Lecturer,	Al-Farabi Kazakh National University, Faculty of Chemistry and	January, 2011

		Chemical Technology	
	Leading Researcher	RSE "Institute of Problems of Combustion"	2010 . – 2021
	Engineer	RSE "Institute of Problems of Combustion"	01.06.2010 - 01.09.2010
Research and development projects over the past 5 years	Projects The NATO Project: 1. Valorization of biomass was protection. 2019-2022 (responsible	_	materials for CBRN
	International: 1. Development of modified car (Kazakhstan-Belgium, 2015-2017). Kazakh: 1. IRNAR09058425 "Development from vegetable raw materia for cattle" (GF of Young scientists 2. IRN AR88857007"Synthetic of coal to solve water and environ 2020-2022); (performer) 3. IRN OR11465430 Development for the development of the innovat (PCF out of competition of the Republic of Kazakhstan 2021-23); Commercialization: 1. Development and production of the produ	(responsible executor) nent of innovative technols to improve the protein (2021-2023). (head) magnetic composites of mental problems of mental problems of mental problems of the Repulsion industry of the Repulsion (performer) new highly effective sor	nology for obtaining n value of local feed btained from fly ash reury pollution" (GF d structural materials public of Kazakhstan and Science of the bents and filters for
Industry cooperation over the past 5 years	water purification (2017-2022). (ex Development of modified carbon m (Kazakhstan-Belgium, 2015-2017). The NATO Project: 1. Valorization of biomass wa	naterials for the sorption (responsible executor)	of toxic gases
Patents and	protection. 2019-2022 (responsible Name	executor) Year	
property rights	Enterosorbent "Ingo-2" of plant origin.	<u> </u>	2015
	Method of chromatographic separation of biologically active substances.		2015
	Methods of obtaining a composite		2016
	sorbent.		2010

	Method for obtaining high-purity 2020
	amorphous silicon dioxide from
	rice husks
Immontont	1 Hang Thong Hang Chang Southhan Aget Zullsheim A Mangungu
Important publications over	1. Heng Zhang, Hang Chena, Seytkhan Azat, Zulkhair A. Mansurov, Xueming Liua, Jide Wang, Xintai Sua, Ronglan Wu. Super adsorption capability
the last 5 years	of rhombic dodecahedral Ca-Al layered double oxides for Congo Red removal,
last to yours	Journal of alloys and compounds, Journal of alloys and compound. 2018.
	(IF:4.175). https://doi.org/10.1016/j.jallcom.2018.07.241
	2. S.Azat, A.V.Korobeinyk, K.Moustakas, V.J.Inglezakis. Sustainable
	production of pure silica from rice husk waste in Kazakhstan, Journal of cleaner production (IF:7.2), https://doi.org/10.1016/j.jclepro.2019.01.142
	3. Almagul R.Kerimkulova, Seitkhan Azat, Leticia Velasco, Zulkhair A.
	Mansurov, Peter Lodewyckx, Marat I.Tulepov, Makpal R.Kerimkulova, Inna
	Berezovskaya, Aldan Imangazy. Granular rice husk-based sorbents for sorption
	of vapors of organic and inorganic matters. Journal of Chemical Technology and
	Metallurgy,54,3,2019,pp.578-584(IF:0.6).
	https://dl.uctm.edu/journal/node/j2019-3/16_18-55_p_578-584.pdf
	4. Askaruly, K., Azat, S., Sartova, Z., Yeleuov, M., Kerimkulova, A., & Bekseitova, K. (2020). Obtaining and characterization of amorphous silica from
	rice husk. Journal of Chemical Technology and Metallurgy, 55(1), 88–97. (IF:
	0.6).
	5. Azat, S., Sartova, Z., Bekseitova, K., & Askaruly, K. (2019). Extraction of
	high-purity silica from rice husk via hydrochloric acid leaching treatment.
	Turkish Journal of Chemistry, 43(5), 1258–1269. https://doi.org/10.3906/kim-
	1903-53 (IF: 1.0).
	6. Azat, S., Arkhangelsky, E., Papathanasiou, T., Zorpas, A. A., Abirov, A., & Inglezakis, V. J. (2020). Synthesis of biosourced silica-Ag nanocomposites
	and amalgamation reaction with mercury in aqueous solutions. Comptes Rendus
	Chimie, 23(1), 77–92. https://doi.org/10.5802/crchim.19 (IF: 2.38).
	7. Zhandos Tauanov, Seitkhan Azat & Aknur Baibatyrova (2020) A mini-
	review on coal fly ash properties, utilization and synthesis of zeolites,
	International Journal of Coal Preparation and Utilization,
	https://doi.org/10.1080/19392699.2020.1788545 (IF: 2.18). 8. Baimenov A, Berillo D, Azat S, Nurgozhin T, Inglezakis V. Removal of
	Cd ²⁺ from Water by Use of Super-Macroporous Cryogels and Comparison to
	Commercial Adsorbents. <i>Polymers</i> . 2020; 12(10):2405.
	https://doi.org/10.3390/polym12102405 (IF: 3.4).
	9. Sultanov F, Daulbayev C, Azat S, Kuterbekov K, Bekmyrza K, Bakbolat
	B, Bigaj M, Mansurov Z. Influence of Metal Oxide Particles on Bandgap of 1D
	Photocatalysts Based on SrTiO ₃ /PAN Fibers. <i>Nanomaterials</i> . 2020; 10(9):1734.
	https://doi.org/10.3390/nano10091734 (IF: 4.03). 10. O. Kapizov, Azat S. "Perspectives of the Silicon Dioxide Production from
	Rice Husk in Kazakhstan: an Overview", <i>ECTJ</i> , vol. 22, no. 4, p. 285–293, Dec.
	2020. (IF: 0.8).
	11. Chingis Daulbayev, Fail Sultanov, Alina V. Korobeinyk, Mukhtar
	Yeleuov, Seitkhan Azat, Baglan Bakbolat, Arman Umirzakov, Zulkhair
	Mansurov, Bio-waste-derived few-layered graphene/SrTiO3/PAN as efficient
	photocatalytic system for water splitting, Applied Surface Science, Volume 549, 2021,149176, ISSN 0169-4332,
	https://doi.org/10.1016/j.apsusc.2021.149176. (IF: 6.18).
	12. Karaca, F, Kumisbek, A, Inglezakis, VJ, SeitkhanAzat et al. DiMIZA: A
	dispersion modeling based impact zone assessment of mercury (Hg) emissions
	from coal-fired power plants and risk evaluation for inhalation
	exposure. EngineeringReports. 2020; e12357. https://doi.org/10.1002/eng2.12357.
	612337. https://doi.org/10.1002/eng2.12337.

	13. Vassilis J. Inglezakis, Seitkhan Azat, Zhandos Tauanov, Sergey Mikhalovsky, Functionalization of biosourced silica and surface reactions wi mercury in aqueous solutions, Chemical Engineering Journal, 2021, ISSN 138 8947, https://doi.org/10.1016/j.cej.2021.129745 (IF: 10.652). 14. Beisenbayeva, Massymzhan, Ainur Seilkhan, Dossymbek Sydyk, Aig Zhapparova, Sagynbai Kaldybayev, Seitkhan Azat, and Zhandos Bassygaraye "Soybean productivity as influenced by irrigation regime and fertilizer rates the South Kazakhstan conditions." <i>Research on Crops</i> 22, no. 3 (2021): 526-53 15. Toshtay, K., Auyezov, A., Korkembay, Z., Toktassynov, S., Seytkha A., & Nurakyshev, A. (2021). <i>Partial hydrogenation of sunflower oil of platinum catalysts: Influence of process conditions on the mass content geometric isomers. Molecular Catalysis, 513, 11181 doi:10.1016/j.mcat.2021.111819</i>	gul ev. in 35. an, on of
Activities in specialized bodies over the past 5 years	Organization Role Period Membership: - Member of the editorial board of Nanotechnology and nanomaterials research ISSN-885X. https://www.scholarsliterature.com/journals/nanotechnology-annanomaterials-research/editorial-board - member of the editorial board of the Bulletin of Satbayev University, IS 2709-4766 (Online), ISSN 2709-4758 (Prinhttps://vestnik.satbayev.university/index.php/journal/editorialteam - Member of the Academic Council of A.Baitursynuly Education academy. No 022.	SO nt).

full name	Telesheva Assel Bolatovna		
position	Lecturer, PhD		
Academic career	Initial academic appointment Bachelor of Engineering and Technology	Satbayev university	year 2005 – 2009
	Master of Technical Sciences	Satbayev university	2010-2012
	PhD student	Satbayev university	2012-2015
Employment	assistant	Satbayev university	2013 – Until now
Research and development projects over the past 5 years	-		
Industry cooperation	-		
over the past 5 years			
Patents and property rights	-		
Important publications over the last 5 years	Method of calculation of corros of durability of load-bearing str Bulletin of KazNTU, Almaty, 2 Arapov K. K.Seitkazinova, G.T. Shokobae Chamber for testing steel sampl temperature and pressure ISSN Bulletin of the National Acader Kazakhstan 2017, Vol. 5, No. 369, pp.87-93 G.T. Shokobaeva Mechanical properties of alumin International Multidisciplinary Section Micro and Nano Techn pp.281-286 A.S.Degtyareva, G.T. Shokobaeva	les in a corrosive en 1991-3494 my of Sciences of the B.R. Arapov, K.F. num alloys crystalis Scientific GeoComologies	SSN 1609-1817 . 3, pp.19-24 B.R. nvironment of high he Republic of K.Seitkazinova ized in the centrifuge 18 ference SGEM 2018,
Activities in specialized bodies over the past 5 years	-		

full name	Ybyraiymkul Darkhan Torekhanuly			
position	Assistant of the Department of Materials Science, Nanotechnology and Engineering Physics			
Academic career	Master's degree (Materials science and technology of new materials)	K.I.Satpayev Kazakh National Technical University	2008-2010	
	Bachelor's degree (Materials science and technology of new materials)	K.I.Satpayev Kazakh National Technical University	2004-2008	
full name	Engineer of the highest qualification level	Kazakh National Technical University named after K.I.Satpayev, Department of "Metallology and Heat Treatment of Metals"	10.2010- 09.2011	
	Junior Researcher	Kazakh National Technical University named after K.I.Satpayev, On the topic No.747MON GF12.18 "Creation of nanotructured organic, polymer solar cells for the conversion of solar energy into electrical energy"	2011-2014	
	Junior Researcher	Kazakh National Technical University named after K.I.Satpayev, On the topic No. 757.MON. GF.15RIPR.25 "Development of new theoretical methods for calculating phase transformations in metallic materials and scientifically based control systems for their	2016-2017	

		phase composition, structure and properties"	
	Tutor	NAO "KazNITU named after K.I.Satpayev", Institute of Industrial Engineering, Department "SMiTMP"	14.08.2017- 31.05.2018
	Engineer	NAO "KazNITU named after K.I.Satpayev", Institute of Industrial Engineering (Institute of Metallurgy and Industrial Engineering), Department of Engineering Physics	27.08.2018- 31.12.2021
	Assistant	NAO "KazNITU named after K.I.Satpayev", Institute Institute of Metallurgy and Industrial Engineering (Mining and Metallurgical Institute named after O.A.Baikonurov), Department of "Materials Science, Nanotechnology and Engineering Physics"	From 01.09.2021 to the present
Research and development projects over the past 5 years	innovative aluminum a products from them wi for commercialization of technical activities date	e No. 100-GC-16 "Creation of pilot p lloys from domestic raw materials are the ananostructured protective cerami- of the results of scientific and (or) seed and December 23, 2016 (2017-2019) J portner of Alakol Plant LLP. Grant for	nd finished ic coating", grant ientific and SC "Science
Industry cooperation over the past 5 years	innovative aluminum a	ject No. 100-GC-16 - "Creation of p lloys from domestic raw materials ar th nanostructured protective ceramic	nd finished
Patents and property rights	Heat-resistant aluminum alloy and a method for obtaining deformed semi-finished products from it	Application for a patent of the Republic of Kazakhstan. No. 2020/042.2020	
Important publications over the last 5 years	-		
Activities in specialized bodies over the past 5 years	-		

full name	Beisenova Erkezhan Erdauletovna			
position	Senior Lecturer, PhD			
Academic career	Initial academic appointment	Satbayev university	year	
career	Bachelor of Engineering and Technology	university	2004 – 2008	
	Master of Technical Sciences	Satbayev university	2008-2010	
	PhD student	Satbayev university	2010-2013	
Employmen t	Senior lecturer	Satbayev university	2019 – Until now	
	Researcher, engineer	RSE "Institute of Nuclear Physics"	2010-2019	
Research and developmen t projects over the past 5 years Industry cooperation over the past 5 years Patents and property rights Important publications over the last 5 years	evolution application: Prepara Science in Semiconductor Proce 2. Investigation by neutron radiogr ion battery during its discharg "NUCLEAR SCIENCE AND TE	CoTiO3 photocatalysts for hydrogen ration and properties study", Materials cessing, Volume #21, (2021), 105360. Graphy of lithium distribution in a lithiumarge, III International Scientific Forum TECHNOLOGIES" dedicated to the 30th of the Republic of Kazakhstan, 20-14		
Activities in specialized bodies over the past 5 years	-			

full name	Kemelbekova Ainagul Yerzhanovna				
position	assistant				
Academic career	Initial academic appointment	Institution	year		
	Bachelor of Engineering and Technology	Kazakh National University named after. Al-Farabi	2010 – 2014		
	Master of Technical Sciences	Kazakh National University named after. Al-Farabi	2014-2016		
	PhD student	Satbayev university	2018-2021		
Employment	Teacher	JSC "Academy of Civil Aviation"	2016 – 2019		
	junior researcher	LLP "Physico- Technical Institute"	2019-2021		
	assistant	Satbayev university	2019 – Until now		
development projects over the past 5 years	nanomaterials and methods for their analysis to obtain films with desired useful properties of the RC" (PCF BR05236404) for the period 2018-2020. "Optimization of the structure of thin films for the manufacture of solar cells on a flexible substrate" (GF AP09260940) for the period 2021-2023.				
Industry cooperation over the past 5 years	-				
Patents and property rights	-				
Important publications over the last 5 years	1.Synthesis of highly dispersed forms of zinc oxide doped with rare-earth elements (review) Complex Use of Mineral Raw Materials. No. 4.2019, Almaty, pp. 12-18, ISSN 2224-5243, https://kims-imio.kz/wp-content/uploads/2019/04/%E2%84%964-2019-12-18.pdf 2 Review of modern methods for obtaining thin ZnO:Eu films, VESTNIK KazNITU No. 6.2019, Almaty, pp. 824-829, ISSN 1680-9211 3 Aerosol synthesis of finely dispersed YAG:Ce3+ phosphor with strong photoluminescence, Physics of the Solid State, October 2019, Volume 61, Issue 10, pp 1840–1845. 4 Aerosol synthesis of highly dispersed Y3AL5O12:Ce3+ phosphor with intense photoluminescence, Physics of the Solid State, 2019, vol. 61, no. 10, pp. 1184-1889. 5Preparation of zinc oxide films doped with europium oxide by the sol-gel method, RDRZ-19, V-All-Russian conference with international participation, "V-Russian Day of Rare Earths", February 13-14, 2019, p.78.				
Activities in specialized bodies over the past 5 years	-				

full name	Yerbol Talshyn			
position	engineer			
Academic career	Initial academic appointment	Institution	year	
	Bachelor of Engineering and Technology	Satbayev university	2015 – 2019	
	Master of Technical Sciences	Satbayev university	2019-2021	
Employment	Teacher	Satbayev university	2021 – Until now	
Research and development projects over the past 5 years	-			
Industry cooperation over the past 5 years	-			
Patents and property rights	-			
Important publications over the last 5 years	-			
Activities in specialized bodies over the past 5 years	-			

full name	Ill name Eshmanova Gaukhar Bauyrzhankyzy			
position	engineer			
Academic career	Initial academic appointment	Institution	year	
	Bachelor of Engineering and Technology	Kazakh National University named after. Al-Farabi	2008 – 2012	
	Master of Technical Sciences	Satbayev university	2013-2015	
	PhD student	Satbayev university	2020-2023	
Employment	Engineer	Satbayev university	2021 – Until now	
	Laboratory technician	LLP "KazFerroStal"	2017-2019	
	Quality Control Specialist	LLP "Galaxy"	2015-2017	
Research and development projects over the past 5 years	-			
Industry cooperation over the past 5 years	-			
Patents and property rights	Patents and property -			
Important publications over the last 5 years	Eshmanova G.B., Smagulov D.U., Blavert K. Plasma electrolytic oxidation technology for obtaining protective coatings of aluminum alloys / KIMS. – 2021. – 2 P. 78-93			
Activities in specialized bodies over the past 5 years	-			