Amerkhanova Shamshiya
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Education, academic degree and title:
1971 - graduated from the Chemistry Department of S.M. Kirov Kazakh State University (now Al-Farabi KazNU). Specialty: “Chemistry. Analytical chemistry”, qualification - “Chemist. Teacher of Chemistry”.
2013 - graduated from the Foreign Languages Faculty of Ye.A. Buketov Karaganda State University. Specialty: “5B011900-Foreign language: two foreign languages”, academic degree of “Bachelor of Education”.
2005 - Degree of Doctor of Chemical Sciences in the specialty "02.00.04-Physical Chemistry".
2008 – Awarded the Professor in Chemical Sciences (02.00.00).

Research fields: physical chemistry of solutions; ion-selective electrodes; electrochemistry and electrode processes; thermodynamics of complexation processes, enrichment of polymetallic ores and flotation, water-soluble polymers, composite materials, carbon-modified sorbents.

Research grants for fundamental research programs:
1) Scientifically-based selection of domestic known and artificially synthesized flotation agents for flotation enrichment of polymetallic ores (2013-2015),
2) Development and chemical/physical modification of heat-accumulating materials on the basis of physicochemical modeling of phase diagrams in two- and three-component mixtures (2014-2016),
3) The directed formation of the surface properties of ores through the use of mixtures of different polarity collectors for the purpose of collective- selective separation of non-ferrous metals (2015-2017).

Courses: Sorption processes in analytical chemistry (SPAC 5205) (the course is taught in Russian, Kazakh), Advanced problems of physical chemistry of solutions (APPChS 6209) (the course is taught in Kazakh), Quantitative analysis with the use of control and measuring devices (QAWCMD 3307) (the course is taught in Russian), Modern problems of physical chemistry (MPPC 7201) (the course is taught in Kazakh), Structure fluids and solvents autotrophic (SFSA 7302) (the course is taught in Kazakh), The kinetic and mechanisms of reactions of complex compounds (KMRCC 7305) (the course is taught in Kazakh), Methodology and advanced teaching technology of analytical chemistry (MATTAC 5206) (the course is taught in Russian, Kazakh), Advanced physical and chemical education of substances and materials (APCCM 7308) (the course is taught in Kazakh), Advanced problems of physical chemistry of solutions (APPChS 6209) (the course is taught in Russian), Methodological teaching aspects of physical chemistry (MTAPCh 6309) (the course is taught in Russian), Theories and problems of physical chemistry (TPPhCh5203) (the course is taught in Kazakh), Methodological teaching aspects of Analitical chemistry (MTACECh 5205) (the course is taught in Russian, Kazakh, English), Methodological teaching aspects of Physical and colloidal chemistry (MTAPCCh 5303) (the course is taught in Russian), Analytical chemistry (AC 2204) (the course is taught in English), Theoretical bases of Inorganic Chemistry (TBIH 1201) (the course is taught in English), Chemistry of elements (CE 1203) (the course is taught in English), Modern solid state physical chemistry (MPSSC 6314) (the course is taught in Kazakh), Modern technologies in chemical education (MTChE 5203) (the course is taught in English), Methodologies for the development of teaching educational and methodical complexes in chemistry (MDEMCCh 5304) (the course is taught in English)

Professional activity:
The professional experience of 50 years, the manufacturing experience is 3 years of them. 1971-1974 researcher of Central Plant Laboratory, Pavlodar Tractor Plant. Since 1974 researcher in the chemical faculty of Buketov KarSU, since 1989 - senior researcher.
1991-2017 - a teacher, senior lecturer, associate professor, professor of the Department of Physical and Analytical Chemistry of the KSU. Since 2017, Professor of the Chemistry Department of L.N. Gumilyov ENU.
Awards: The State Grant and title "The Best Teacher of the University" (2007, 2012), the Prize of Ye.A. Buketov Karaganda State University (2015), the State Scientific Scholarship for scientists and professionals who have made

Handbooks: Analytical chemistry [Текст]: Handbook/Sh.K. Amerkhanova.-Astana: Foliant, 2015. - 208 p.

Main publications:
The publication list includes more than 400 publications, including 3 monographs, 3 copyright certificates of the USSR, 2 prepatents of RK, 7 patents of RK, 1 patent of RF and 1 patent of the Republic of Ukraine, more than 32 articles in journals with impact factor (Thomson Reuters, Scopus), 10 electronic textbooks, 4 manuals, 5 methodical instructions, and 1 handbook recommended by the Ministry of Education and Science of the Republic of Kazakhstan.

1. Amerkhanova, S., Shlyapov, R., Uali, A., & Belgibaeva, D. (2021). Prospects of application of iron-containing carbon-paste electrode in electrochemical analysis. Materials Today: Proceedings. doi:10.1016/j.matpr.2021.05.437
2. Amerkhanova Sh.K., Uali A., Shlyapov R. The active carbons modified by industrial wastes in process of sorption concentration of toxic organic compounds and heavy metals ions//Colloids and Surfaces A: Physicochemical and Engineering Aspects.-Available online 8 July 2017.
3. Amerkhanova Sh.K., Uali A., Shlyapov R. The Role of sorption processes of collectors in the enrichment of polymetallic ores//30th Conference of the European Colloid and Interface Society: book of abstracts (4-9 Sept. 2016, Italy),-P.188.
4. Amerkhanova Sh.K., Shlyapov R., Uali A.S. On the interaction of electrochemical and physicochemical indicators of d metal complexes with sulfur-containing ligands//R.J. Non-Ferrous Metals.-2014.-Vol.55.-№4.-P.318-322.
5. Amerkhanova Sh.K., Shlyapov Sh. K., Uali A.S. Thermodynamic Aspects of the Selection of Sulfur-Containing Collectors during Flotation of Sulfide Ores//R.J. Non-Ferrous

outstanding contributions to the development of science and technology (2017). **Scientific internships:** M. Lomonosov Moscow State University, Russia (1980), A.V. Nikolaev Institute of Inorganic Chemistry of SB RAS, Novosibirsk, Russia (2008), National Research Tomsk State University, Russia (2013), Universiti Kebangsaan Malaysia (UKM), Malaysia (2013). **Membership in scientific and academic organizations:** Royal Society of Chemistry, UK (2008-2021), European Colloids and Interface Society, Netherlands (2009-2021), Materials Research Society of USA (2013-2021).	Metals.-2014.-Vol.55.-№3.-P.219–224. 6. Amerkhanova Sh.K., Nurkenov O.A., Fazylov S.D. Complexing Ability of N-[2-(2-Morpholinoacetyl)hydrazinocarbothioyl]benzamide Toward Iron(II) Ions// R.J. General chemistry.-2013.-Vol.83.-№5.-P.983-985. 7. Baikenov M.I., Amerkhanova Sh.K., Baikenova G.G. Catalytic Hydrogenation of a Three-Component Mixture of Polyaromatic Hydrocarbons in the Presence of Iron-Containing Additives. Solid fuel chemistry. 2013. Vol.47. No2. P. 107-113. 8. Baikenov M.I., Amerkhanova Sh.K., Baikenova G.G. Cavitation extraction of phenols form coal tar. Solid fuel chemistry. 2013. Vol. 47. No1. P. 27-33. 9. Amerkhanova Sh.K., Nurkenov O.A., Fazylov S.D., et al. Synthesis and complexing ability of N-[2-(2-morpholinoacetyl)hydrazinocarbothioyl]benzamide. Russian journal of general chemistry. 2012. Vol.82. No11. P. 1815-1818. 10. Amerkhanova Sh., Belgibaeva D., Shlyapov R. Nanotechnology. 2012. VOL. 1: Advanced materials, cnts, particles, films and composites. P. 401-404. 11. Fengyun Ma, Baikenov M.I., Amerkhanova Sh.K. Effect of Cavitation Treatment on the Chemical Composition of Coal Tar. Solid fuel chemistry. 2011. Vol. 45. No5. P. 353-358. 12. Baikenov M.I., Omarbekov T.B., Ma Fengyun, Amerkhanova Sh.K. Development of a technology for coal conversion in the presence of coal tar. Solid fuel chemistry. 2011. Vol.45. No4. P. 267-269. 13. Amerkhanova Sh.K., Sal'keeva L.K., Shlyapov R.M. Synthesis and complex-forming properties of thiazolyl-containing organophosphorus complexone. Russian journal of general chemistry. 2010. Vol.80. No6. P.1196-1201.