

EDUCATION

Al-Farabi Kazakh National University , Almaty, Kazakhstan	2023 - 2025
<ul style="list-style-type: none">• Master of Science, Chemistry• GPA: 3.5/4.0	
Babes-Bolyai University , Cluj-Napoca, Romania	Mar – Apr 2025
Faculty of Chemistry and Chemical Engineering, scientific internship	
Al-Farabi Kazakh National University , Almaty, Kazakhstan	2019 – 2023
<ul style="list-style-type: none">• Bachelor of Science, Chemistry• GPA: 3.5/4.0	
Adam Mickiewicz University , Poznan, Poland	Oct 2022 – Feb 2023
<i>Exchange Student</i>	
<i>Coursework:</i> Spectroscopy, Scanning Electron Microscopy: Principles, Techniques & Applications, Introduction to 3D Modelling.	

PROFESSIONAL EXPERIENCE

Lab Assistant , School of Computer Science and Mathematics, KIMEP University	June 2025 - present
Chemical Engineer , Laboratory Ecology and Biosphere, Center for Physical and Chemical Methods of Research and Analysis	Aug 2024 – May 2025
<i>IRN AP23484339 "Identification of new potentially hazardous volatile and semi-volatile organic pollutants of the environment in Almaty and its suburbs using solid-phase microextraction"</i>	
<ul style="list-style-type: none">• Contributed the development of methodologies for identifying volatile and semi-volatile organic compounds in water using SPME and GC-MS, as part of a research team.• Assisted in creating methods for estimating extraction efficiency of VOCs/SVOCs from water.• Collected water samples from rivers and lakes for environmental analysis;• Maintained a sample registry for efficient tracking and analysis.• Prepared analytical sheets and protocol.• Performed literature reviews to support research findings and methodologies.	
Lab technician , Laboratory Ecology and Biosphere, Center for Physical and Chemical Methods of Research and Analysis	Jan – Dec 2024
<i>IRN AP14871374 Development of accurate methods for on-site gas chromatographic determination of volatile organic compounds in environmental objects using solid-phase microextraction</i>	
<ul style="list-style-type: none">• Analyzed air and soil samples by GC-MS.• Collected soil samples.	
Chemical Engineering Intern , Laboratory Quality and Control, Efes Kazakhstan	July – Aug 2022
<ul style="list-style-type: none">• Conducted different techno-chemical quality analyses of beer per day three times, including input control of incoming raw materials and calibration.• Recorded results of quality audits, completed appropriate documentation.	

- Conducted electrochemical measurements to study the properties of anode materials for Mg-ion batteries;
- Synthesized anode materials using the hydrothermal method under various conditions.

PUBLICATIONS & CONFERENCES

Kurmanbayeva T., Bukenov B., Imangabassov A., Rymzhanova Z., **Yermakhan M.**, Karimkyzy N., Smail A., Kenessov B. On-site gas chromatographic quantitation of transformation products of unsymmetrical dimethylhydrazine in soil using vacuum-assisted headspace solid-phase microextraction. *Microchemical Journal*, 215, 114492. (IF=5.4, Q1), 2025.

Rustemova M., Kenessov B., “Determination of benzene, toluene, ethylbenzene and xylene on site in ambient air of Almaty”, VIII Kazakhstan Student Scientific and Practical Conference “Chemical Physics and nanomaterials” devoted to the 110th anniversary of the birth of the Thrice Hero of Socialist Labor, academician Ya.B. Zeldovich – Almaty, Kazakhstan, 15 March 2024.

Rustemova M. E., Dzhumanova R.Zh., Argimbaeva A.M. “Possibility of using TiO₂ as an anode material for MIB”, Mediterranean Geosciences Union (MedGU23), poster presentation – Istanbul, Turkey, 26-30 November 2023.

Rustemova M. E., Dzhumanova R.Zh., Argimbaeva A.M. “Hydrothermal treatment of titanium oxide and its analysis,” Scientific research works of students of higher educational institutions of the Republic of Kazakhstan” *1st place* – Almaty, Kazakhstan, 2023.

Rustemova M. E., Dzhumanova R.Zh., Argimbaeva A.M. “Perspectives of using TiO₂ - based anodes for high performance magnesium-ion batteries”, Republican scientific-practical conference of young scientists with international teachers dedicated to the 105th anniversary of the National University of Uzbekistan "Modern Solutions of Analytical Chemistry", *2nd place* – Tashkent, Uzbekistan, 11-12 May 2023.

Rustemova M. E., Dzhumanova R.Zh., Argimbaeva A.M. “Hydrothermal treatment of titanium oxide and its analysis,” International conference of students and young scientists “Farabi Alemi-2022” *1st place* – Almaty, Kazakhstan, 8-11 April 2022.

HONORS & AWARDS

State Scholarship for master’s degree for academic achievement Aug 2023

Student Employer Brand Ambassador (EBA) Efes Kazakhstan: 2nd place and scholarship Apr – Oct 2022

- Represented the Efes Kazakhstan Company initiatives and internship opportunities to students at KazNU through social media platforms;
- Organized online meetings with 60+ students to discuss the company's opportunities.

Dean’s list, Al-Farabi Kazakh National University July 2021

State Scholarship for bachelor's degree for academic achievement Aug 2019

SKILLS

- Languages: Kazakh – Native Speaker, Russian – C2, English – B2
- Technical: MS Office 365, Chemix, Photoshop, COMSOL Multiphysics, Canva, Video editing
- Others: yoga, photography, solo travelling, running, cycling, hiking