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Doctor PhD, Director of the Research Institute "Eurasian Institute of Physical and Energy Research and High Technologies", Senior Lecturer, Department of Standardization, Certification and Metrology.

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Education :

2017-2020 Postgraduate scientific and pedagogical, doctoral studies, Eurasian National University. L.N. Gumilyov, Faculty: Physical and Technical, Department of "Technical Physics" with a degree in "6D072300 - Technical Physics".

2013-2015 Postgraduate scientific and pedagogical, magistracy, Eurasian National University. L.N. Gumilyov, Faculty: Physics and Technology, Department of International Nuclear Physics, New Materials and Technology, specialty "6M074000- Nanotechnology and Nanomaterials", Qualification: Master of Technical Sciences.

2008-2012 Higher technical, bachelor's degree, Karaganda State University named after Academician E.A. Buketova, Faculty: Physical and technical, Qualification: bachelor of engineering and technology, specialty "050617 - Instrumentation".

Professional experience:

2012-2014 laboratory assistant of the department "Technical physics", L.N. L.N. Gumilyov

2015-2016 Lecturer at the Department of Nuclear Physics, L.N. L.N. Gumilyov

From 2012 to the present, Kubenova M.M. takes an active part in the implementation of research projects of grant financing (GF) and Targeted Financing Programs (PTF) of the Science Committee of the Ministry of Science and Higher Education of the Republic of Kazakhstan:

- GF: "Production, purification and storage of hydrogen fuel for autonomous power plants" (2015-2017);

- GF: "Development and creation of new nanocrystalline and nanocomposite chalcogenide materials to improve the efficiency of thermoelectric generators" (2015-2017);

- GF: AP09261208 "Development of a microtubular solid oxide fuel cell with high specific characteristics" (2021-2023).

- GF: AP08856636 "Development of high-energy electrode materials for sodium-ion batteries" (2020-2022).

PCF: "Development of hydrogen energy and technology in the Republic of Kazakhstan" (2015-2017);

PCF: "Development of hydrogen energy technology in the Republic of Kazakhstan" (2018-2020);

GF management experience (name, terms):

- Head of the GF project AP14871197 "Fundamental and applied research of the physical properties of nanocomposite materials based on superionic copper chalcogenides, promising for the creation of high-performance thermoelectric generators" (2022-2024).

- Co-Head, responsible executor of the Project AP08856636 "Development of high-energy electrode materials for sodium-ion batteries" (2020-2022) - the final project);

- Co-Head, responsible executor of the Project "Development and creation of new nanocrystalline and nanocomposite chalcogenide materials to improve the efficiency of thermoelectric generators", (2015-2017).

- Head of the scientific group, which (from 2012 to the present) conducts research and experiments on thermoelectric materials and batteries. In the group: 1- PhD- doctor, 2- doctoral students, 2- undergraduates.

- Supervisor of two doctoral students of the 1st, 2nd year of study - at the ENU. L.N. Gumilyov.

- is the executive secretary of the Eurasian Journal of Physics and Functional Materials, which is indexed in the Scopus database, (Percentile 20) and COXON RK.

2020-2021 Senior Lecturer, Department of RET, L.N. L.N. Gumilyov.

2021 from November 1 to the present Director of the Scientific Research Institute "Eurasian Institute of Physical and Energy Research and High Technologies" at L.N. L.N. Gumilyov.

From 2021 from September 1 to the present Senior Lecturer of the Department of Standardization, Certification and Metrology, L.N. L.N. Gumilyov

Research interests: Physical and energy research; Alternative energy; Hydrogen and nuclear energy technologies; Nuclear physics; Functional materials and high technologies.

Refresher courses:

Development and implementation of new pedagogical technologies experience of leading European higher educational institutions // Eurasian Academy of Technology and Communications. - 2022. - 72 hours.

Publications: more than 40 publications in scientific journals.

1 **Kubenova M.M.**, Balapanov M.K., Kuterbekov K.A., Ishembetov R.K., Bekmyrza K.Z., Kabyshev A.M. Some Thermoelectric Phenomena in Copper Chalcogenides Re-placed by Lithium and Sodium Alkaline Metals // *Nanomaterials*. – 2021. – Vol. 11(9). – P. 2238. DOI:10.3390/nano11092238 ; WoS Q1, IF=5.076, Percentile Scopus 79

2 K.A. Kuterbekov, M.Kh. Balapanov, **M.M. Kubenova**, R.Kh. Ishembetov, M.Kh. Zeleev, R.A. Yakshibaev, A.M. Kabyshev, R.A. Alina, K.Zh. Bekmyrza, B.U. Baikhozaeva, E.T. Abseitov and Taimuratova L.U. Chemical diffusion and ionic conductivity in nonstoichiometric nanocrystalline superionic $\text{NaxCu}_{1.75}\text{S}$ ($x = 0.1, 0.15, 0.2, 0.25$) materials // *Ionics*. – 2022. – Vol. 28. –P. 4311-4319. (WOS Q3 IF=2.289, Percentile Scopus 83). DOI: 10.1007/s11581-022-04651-y

3 K.A. Kuterbekov, M.Kh. Balapanov, **M.M. Kubenova**, R. Sh. Palymbetov, R.Kh. Ishembetov, S.M. Sakhabayeva, A.M. Kabyshev, B.M. Akhmetgaliev, K.Zh. Bekmyrza, E.T. Abseitov, Sh.G. Giniyatova Thermal properties of nanocrystalline copper sulfides $\text{KxCu}_{1.85}\text{S}$ ($0 < x < 0.05$) // *Letters on Materials*. – 2022. – Vol. 12 (3). – P. 191-196. (WOS, Percentile Scopus 32). DOI: 10.22226/2410-3535-2022-3-191-196.

4 K.A. Kuterbekov, Nikonov, A.V., Bekmyrza K.Zh., Pavzderin N. B., Kabyshev A.M., **Kubenova M.M.** et.al. Classification of Solid Oxide Fuel Cells // *Nanomaterials*. – 2022. – Vol. 12(7). – Number of article 1059. (IF=5.076, Percentile Scopus 79) doi: 10.3390/nano12071059

5 **Kubenova M.M.**, Balapanov M.K., Kuterbekov K.A., Ishembetov R.K. et.al. Synthesis, X-ray phase analysis and differential thermal analysis of nanocrystalline superionic $\text{KxCu}_{1.85}\text{S}$ ($x < 0.05$) copper sulfides // *Eurasian Journal of Physics and Functional Materials*. – 2022. – Vol. 6 (1). – P. 71-84. DOI: 10.32523/ejpfm.2022060107

6 Balapanov M.Kh., **Kubenova M.M.**, Ishembetov R.Kh., Kuterbekov K.A., Almukhametov R.F., Yakshibaev R.A. Transport phenomena in superionic $\text{NaxCu}_{2-x}\text{S}$ ($x = 0.05; 0.1; 0.15; 0.2$) compounds // *Ionics*. – 2018. – Vol. 24(5). – P. 1349-1356. (WOS Q2 IF=2.289, Percentile Scopus 83). DOI:10.1007/s11581-017-2299-z

7 **M.M. Kubenova**, M.Kh. Balapanov, K.A. Kuterbekov, R.Kh. Ishembetov, A.M. Kabyshev, Y.Kh. Yulaeva. Phase composition and thermoelectric properties of the nanocomposite alloys $\text{NaxCu}_{2-x-y}\text{S}$ // *Eurasian Journal of Physics and Functional Materials*. – 2020. – Vol. 4 (1). – P. 67-85. Percentile Scopus 14 DOI: 10.29317/ejpfm.2020040108 <https://clck.ru/Z655h>

8 Balapanov M.K., Ishembetov R.K., Kuterbekov K.A., **Kubenova M.M.**, Yakshibaev R.A. Electrical and thermal properties of superionic $\text{KxCu}_{2-x}\text{S}$ ($x = 0.1, 0.2, 0.25$) alloys // *Letters on Materials*, 2020, 10(4), стр. 439-444. Percentile Scopus 36

9 **Kubenova M.M.**, Kuterbekov K.A., Abseitov E.T., Ishembetov R.K., Balapanov M.K. Electrophysical and thermal properties of $\text{Na}_x\text{Cu}_{2-x}\text{S}$ ($x = 0.05, 0.075, 0.10$) and $\text{Na}_{0.125}\text{Cu}_{1.75}\text{S}$ semiconductor alloys // Open school-conference of nis countries ultrafine grained and nanostructured materials. IOP Conference Series-Materials Science and Engineering. – 2018. – Vol. 447. – Article Number 012031. – P. 1-6. DOI 10.1088/1757-899X/447/1/012031

10 Balapanov M.K., **Kubenova M.M.**, Kuterbekov K.A., Ishembetov R.K., Yakshibaev R.A. Phase analysis, thermal and thermoelectric properties of nanocrystalline $\text{Na}_{0.15}\text{Cu}_{1.85}\text{S}$, $\text{Na}_{0.17}\text{Cu}_{1.80}\text{S}$, $\text{Na}_{0.20}\text{Cu}_{1.77}\text{S}$ alloys // *Eurasian Journal of Physics and Functional Materials*. –2018. – Vol. 2.–P.231-241. Percentile Scopus 14

Patents:

1 Balapanov M.Kh., Kuterbekov K.A., Ishembetov R.Kh., Kubenova M.M., Kabyshev A.M., Bekmyrza K.Zh., Yakshibaev R.A. New thermoelectric material – $\text{Li}_{0.15}\text{Cu}_{1.85}\text{S}$ // *Eurasian Patent (EAPV)*. (Moscow, 2018. - No. 030605).

2 Balapanov M.Kh., Kuterbekov K.A., Ishembetov R.Kh., Kubenova M.M., Kabyshev A.M., Bekmyrza K.Zh., Yakshibaev R.A. New thermoelectric material – $\text{Li}_{0.15}\text{Cu}_{1.85}\text{S}$ // *Utility model patent*. – 2017. – 20170025.2.

Monograph: Kuterbekov K.A., Kubenova M.M., Balapanov M.Kh., Bekmyrza K. Zh., Kabyshev A.M. Thermoelectric properties of copper chalcogenides // *Monograph*. Astana: ENU im. L.N. Gumilyov - 2022. - 121 p. ISBN 978-601-337-755-1.