



Kozlovsky Artem Leonidovich
Teacher-researcher of department of nuclear physics, new materials and technologies, the Eurasian National University L.N.Gumilyov
Contact details:
Artem88sddt@mail.ru
Kozlovskiy.a@inp.kz

Scientific degree, Scientific School:
PhD in profile «6D060500 – Nuclear physics»

Research interests: Radiation physics of solids, particle physics, condensed matter physics, accelerator physics, nanotechnology

Research Grants: Ans. Performer of research projects on the themes:
Scientific grants:

Head:

1) Project within the framework of grant funding for young scientists for 2020-2022. AR08051975 "Study of radiation resistance and assessment of the applicability of nitride ceramics as structural materials for nuclear power".

Responsible executor:

1) Joint project with the Brookhaven national laboratory and the Institute of Nuclear Physics of the MINT RK "Development of scientific principles of track-etched membranes application in modern materials science" under the funding program of the International Science and Technology Center (Project K-2051). 2013-2015

2) "Development of new functional materials based on polyethylene terephthalate and polycarbonate track membranes, carrying out fundamental and experimental research on the use of new types and types of membranes." 2015-2017

3) 055 "Scientific and / or scientific and technical activities", subprogram 101 "Grant financing of scientific research" on the priority Rational use of natural resources, processing of raw materials and products on the topic "Obtaining magnetic nanomaterials based on polymer track membranes", 2015-2017.

4) 055 "Scientific and / or scientific and technical activities", subprogram 101 "Grant financing of scientific research" on the priority Rational use of natural resources, processing of raw materials and products on the topic "Development of technology for obtaining iron nanopowders by surface oxidation of unalloyed steel", 2015 - 2017

5) Scientific and technical program: "NU-Berkeley strategic research program for the critical state of matter, promising materials and energy sources (2014-2018)"

6) Program of targeted financing of the Ministry of Education and Science of the Republic of Kazakhstan BR05235921 "Creation of radiation-resistant nanostructured materials for modern materials science, alternative energy, nano and microelectronics" 2018-2020.

7) Grant financing of scientific projects: AP05133578 "Development of methods for the synthesis of metal nanostructures based on Fe_xNi_{100-x} for flexible electronics", 2018-2020.

8) Grant financing of research projects: AP05134068 "Development of radiation-resistant nanostructured composite materials based on flexible polymer matrices"

Professional experience:

2008-2010 – Alliancetroinvest LLP, engineer.

2011-2013 – LLP «Mercury and K», engineer.

2013-2014 – «KazTrackTechnology» LLP, Astana, position - engineer.

2013-2016 – Astana branch of RSE on PVC INP RK, position – engineer.

2015 - present – Eurasian National University named after L.N. Gumilyov, Laboratory of engineering profile, position - engineer (part-time).

2016 - present – Astana branch of RSE on PVC INP RK, position - head of the laboratory of solid state physics.

2017-2019 – Eurasian National University named after L.N. Gumilyov, Department of

Delivered courses:

Nuclear Physics Experiment Technique

Certifications:

1. Certificate of participation in the second international summer school «Modern Problems of Nuclear Physics and Medicine, Particle Physics and Nanotechnologies», June 10 - 23, 2012. Astana (2012)

2. Participation in the workshop «Fundamentals of Commercialization Technology» held by Center for the Commercialization of Technologies LLP in Karaganda, May 12-13, 2014. Certificate

3. Certificate of participation in the scientific and practical seminar «Modern laboratory analytical equipment», Distri Lab, May 22-24, 2013. Astana, (2013)

4. Certificate of participation in the seminar «Modern analytical equipment for research and quality control of various materials», April 15-16, 2014. Astana city (2014)

5. Certificate of training at the sixth international scientific school «Instruments and methods of experimental nuclear physics. Electronics and automation of experimental facilities» (2015)

6. Certificate of professional development under the program «Innovative

<p>Nuclear Physics, New Materials and Technologies, Senior Lecturer (guidance on the implementation of the theses of bachelors, undergraduates, part-time). 2019-2020 – Eurasian National University named after L.N. Gumilyov, Department of Nuclear Physics, New Materials and Technologies, acting Associate Professor (guidance on the implementation of the thesis of bachelors, doctoral students, part-time).</p>	<p>cooperation of the CIS member states» from September 1, 2015 to October 10, 2015 (license 90JI01 № 0000820 reg. № 0764 dated June 14, 2013) 7. Certificate of training in the framework of the educational program «International Stream» of the International Forum of Young Power Engineers and Industrialists «Fast and the Furious 2015», June 12-18, 2015. (2015) 8. Certificate of internship at the State Scientific and Production Association «Scientific and Practical Center of the National Academy of Sciences of Belarus for Materials Science» on the topic «Magnetic properties of nanostructures» from May 18 to 21, 2015. 9. Certificate for participation in The XX International Scientific Conference of Young Scientists and Specialists (2016). 10. Certificate of internship at the State Scientific and Production Association «Scientific and Practical Center of the National Academy of Sciences of Belarus for Materials Science» on the topic «Magnetic properties of nanostructures» from 02/27/2016 to 04/24/2016. (2016) 11. Certificate of completion of a training course organized by the US Department of Energy, NNSA and the Atomic and Energy Supervision and Control Committee of the Department of Energy of the Republic of Kazakhstan «Information Seminar on the Implementation of the Additional Protocol», Astana, September 14, 2016. (2016) 12. Certificate of training at the seventh international scientific school «Instruments and methods of experimental nuclear physics. Electronics and automation of experimental facilities» (2016). 13. Certificate of completion of the course «D8 ADVANCE ECO diffractometer software» (40 hours), Bruker AXS GmbH (Certificate № 44, 2017). 14. Certificate of attendance at the lecture course of the FCC School - 2017 (24 hours), St. Petersburg, 2017. 15. Certificate of internship in the framework of the XIII Winter School DIAS - TH Heavy Ion Physics: from LHC to NICA (Dubna, Russian Federation, 2017).</p>
<p>Awards:</p> <ul style="list-style-type: none"> • Winner of the Competition of young scientists among the scientific and educational institutions of the CIS «Best Young Scientist - 2020» (2020) • Laureate of the State Prize named after Kunaev for young scientists for the best work in the field of natural sciences (2019) • Award in the nomination Autors from Kazakhstan of a highly cited article (Science Leader Web of Science Awards - 2019), 2019 • Laureate of the People's Award «Public Recognition» in the nomination «Science Worker» (Certificate № KZ0400073), 2019 • Award in the Top Researcher in Natural Sciences nomination according to the ELSEVER publishing house (Scopus Award - 2018), 2018. • Winner of the international exhibition of 100 ideas for the CIS in the nomination «Industry of Nanosystems» (2018). • Winner of the International Competition of Grants IISCT CIS for research (2018). • Laureate of the Republican Competition of 	<p>Publications (selection):</p> <ol style="list-style-type: none"> 1. Fadeev, M., Kozlovskiy, A., Korolkov, I., Egizbek, K., Nazarova, A., Chudoba, D., Rusakov, V., Zdorovets, M. Iron oxide @ gold nanoparticles: Synthesis, properties and potential use as anode materials for lithium-ion batteries (2020) Colloids and Surfaces A: Physicochemical and Engineering Aspects, 603, 125178. • 2. Korolkov, I.V., Ludzik, K., Kozlovskiy, A.L., Fadeev, M.S., Shumskaya, A.E., Gorin, Y.G., Jazdzewska, M., Anisovich, M., Rusakov, V.S., Zdorovets, M.V. Immobilization of carboranes on Fe₃O₄-polymer nanocomposites for potential application in boron neutron cancer therapy (2020) Colloids and Surfaces A: Physicochemical and Engineering Aspects, 601, 125035. • 3. Korolkov, I.V., Ludzik, K., Kozlovskiy, A.L., Fadeev, M.S., Shumskaya, A.E., Gorin, Y.G., Marciniak, B., Jazdzewska, M., Chudoba, D., Kontek, R., Nazarova, A., Rusakov, V.S., Zdorovets, M.V. Carboranes immobilization on Fe₃O₄ nanocomposites for targeted delivery (2020) Materials Today Communications, 24, 101247. • 4. Omarova, A., Kadyrzhanov, K.K., Giniyatova, S.G., Kozlovskiy, A.L., Zdorovets, M.V. • Study of structural and morphological features of nanostructured coatings based on CoCdSe (2020) Solid State Sciences, 106, 106339. • 5. Zdorovets, M.V., Kozlovskiy, A.L. The effect of lithium doping on the ferroelectric properties of LST ceramics (2020) Ceramics International, 46 (10), pp. 14548-14557. • 6. Zdorovets, M., Kozlovskiy, A., Arbuz, A., Tishkevich, D., Zubar, T., Trukhanov, A. Phase transformations and changes in the dielectric properties of nanostructured perovskite-like LBZ composites as a result of thermal annealing (2020) Ceramics International, 46 (10), pp. 14460-14468. • 7. Mashentseva, A.A., Ibragimova, M.A., Akhmetova, S.B., Kozlovskiy, A.L., Zdorovets, M.V., Amirkhanova, Z.T. Synthesis, radical scavenging, and antimicrobial activities of core-shell Au/Ni microtubes (2020) Chemical Papers, 74 (7), pp. 2189-2199. • 8. Egizbek, K., Kozlovskiy, A.L., Ludzik, K., Zdorovets, M.V., Korolkov, I.V., Marciniak, B., M, J., Chudoba, D., Nazarova, A., Kontek, R. Stability and cytotoxicity study of NiFe₂O₄ nanocomposites synthesized by co-precipitation

the National Engineering Academy of the Republic of Kazakhstan «Engineer of the Year 2017». in 2017

- Award in the nomination Springer Nature Top Author in the nomination «Natural Sciences», in 2017.

- Laureate of the State Youth Prize «Daryn» in the Science category in 2016. for developing methods for the synthesis and modification of nanostructured materials used for targeted drug delivery.

- Award in the Top-10 Springer Author nomination «Young Scientists» in the field of radiation materials science and magnetic nanostructures in 2016.

- 1st place for the best report in the materials science section of the XII International Scientific Conference of Young Scientists «Youth in Science - 2105», Minsk, Belarus. December 1-4 (2015)

- 1st place for the best report at the I Eurasian Forum of Young Scientists YES - forum Minsk Belarus. December 1-4 (2015)

- First degree diploma for the best scientific work among young scientists of the competition «The best scientific work» (2016)

- 1st degree diploma of the II competition of innovative projects among students, undergraduates and doctoral students, young scientists under 35 years old, 2017.

- 2nd degree diploma of the II competition of innovative projects among students, undergraduates and doctoral students, young scientists under 35 years old, 2017.

- Diploma for fruitful cooperation in teaching the younger generation (School - Lyceum № 60, Astana), 2016.

and subsequent thermal annealing (2020) *Ceramics International*, 46 (10), pp. 16548-16555.

- 9. Kozlovskiy, A.L., Zdorovets, M.V. The study of the structural characteristics and catalytic activity of Co/CoCo₂O₄ nanowires (2020) *Composites Part B: Engineering*, 191, 107968.

- 10. Zdorovets, M.V., Shlimas, D.I., Shumskaya, A.E., Kozlovskiy, A.L. Study of the radiation resistance of Ni nanotubes to irradiation with Xe²²⁺ ions with an energy equal to fission fragments (2020) *Surface and Coatings Technology*, 391, 125719, .

- 11. Zdorovets, M.V., Kozlovskiy, A.L., Fadeev, M.S., Egizbek, K.B., Rusakov, V.S., Gubaidulina, T.V., Kadyrzhanov, K.K. The effect of electron irradiation on the structure and properties of α -Fe₂O₃ nanoparticles as cathode material (2020) *Ceramics International*, 46 (9), pp. 13580-13587.

- 12. Kozlovskiy, A.L., Kenzhina, I.E., Zdorovets, M.V. FeCo–Fe₂CoO₄/Co₃O₄ nanocomposites: Phase transformations as a result of thermal annealing and practical application in catalysis (2020) *Ceramics International*, 46 (8), pp. 10262-10269.

- 13. Tuleushev, A.Z., Zdorovets, M.V., Kozlovskiy, A.L., Harrison, F.E. Ion charge influence on the molecular structure of polyethylene terephthalate films after irradiation with swift heavy ions (2020) *Crystals*, 10 (6), 479.

- 14. Tuleushev, A.Z., Zdorovets, M.V., Kozlovskiy, A.L., Harrison, F.E. Induced spirals in polyethylene terephthalate films irradiated with ar ions with an energy of 70 MeV (2020) *Crystals*, 10 (6), 427.

- 15. Zdorovets, M.V., Kenzhina, I.E., Kudryashov, V., Kozlovskiy, A.L. Helium swelling in WO₃ microcomposites (2020) *Ceramics International*, 46 (8), pp. 10521-10529.

- 16. Egizbek, K., Kozlovskiy, A.L., Ludzik, K., Zdorovets, M.V., Ibragimova, M.A., Marciniak, B., Jazdzewska, M., Chudoba, D., Nazarova, A., Kontek, R. Application of Fe₂O₃/CeO₂ nanocomposites for the purification of aqueous media (2020) *Applied Physics A: Materials Science and Processing*, 126 (6), 477.

- 17. Vinnik, D.A., Zhivulin, V.E., Starikov, A.Y., Gudkova, S.A., Trofimov, E.A., Trukhanov, A.V., Trukhanov, S.V., Turchenko, V.A., Matveev, V.V., Lahderanta, E., Fadeev, E., Zubar, T.I., Zdorovets, M.V., Kozlovsky, A.L. Corrigendum to “Influence of titanium substitution on structure, magnetic and electric properties of barium hexaferrites BaFe_{12-x}Ti_xO₁₉” (*Journal of Magnetism and Magnetic Materials* (2020) 498, (S0304885319334584), (10.1016/j.jmmm.2019.166117)) (2020) *Journal of Magnetism and Magnetic Materials*, 503, 166544.

- 18. Zubar, T., Fedosyuk, V., Tishkevich, D., Kanafyev, O., Astapovich, K., Kozlovskiy, A., Zdorovets, M., Vinnik, D., Gudkova, S., Kaniukov, E., Sombra, A.S.B., Zhou, D., Jotania, R.B., Singh, C., Trukhanov, S., Trukhanov, A. The effect of heat treatment on the microstructure and mechanical properties of 2d nanostructured au/nife system (2020) *Nanomaterials*, 10 (6), 1077.

- 19. Borgekov, D.B., Balaubayev, M., Zdorovets, M.V., Shumskaya, A.E., Kozlovskiy, A.L. Study of the rate of degradation of permalloy nanowires (2020) *Surface and Coatings Technology*, 389, 125621.

- 20. Trukhanov, A.V., Astapovich, K.A., Almessiere, M.A., Turchenko, V.A., Trukhanova, E.L., Korovushkin, V.V., Amirov, A.A., Darwish, M.A., Karpinsky, D.V., Vinnik, D.A., Klygach, D.S., Vakhitov, M.G., Zdorovets, M.V., Kozlovskiy, A.L., Trukhanov, S.V. Peculiarities of the magnetic structure and microwave properties in Ba(Fe_{1-x}Sc_x)₁₂O₁₉ (x<0.1) hexaferrites (2020) *Journal of Alloys and Compounds*, 822, 153575.

- 21. Zhumatayeva, I.Z., Kenzhina, I.E., Kozlovskiy, A.L., Zdorovets, M.V. The study of the prospects for the use of Li_{0.15}Sr_{0.85}TiO₃ ceramics (2020) *Journal of Materials Science: Materials in Electronics*, 31 (9), pp. 6764-6772.

- 22. Kozlovskiy, A.L., Abdigaliyev, M.B., Akhtanova, G., Zdorovets, M.V. Radiation resistance of thin TiN films as a result of irradiation with low-energy Kr¹⁴⁺ ions (2020) *Ceramics International*, 46 (6), pp. 7970-7976.

- 23. Zdorovets, M.V., Arbuz, A., Kozlovskiy, A.L. Synthesis of LiBaZrO_x ceramics with a core-shell structure (2020) *Ceramics International*, 46 (5), pp. 6217-6221.

- 24. Borgekov, D.B., Zdorovets, M.V., Shlimas, D.I., Kozlovskiy, A.L. Investigation of the structural changes and catalytic properties of feni

	<p>nanostructures as a result of exposure to gamma radiation (2020) Crystals, 10 (4), 254.</p> <p>25. Kozlovskiy, A.L., Zhumatayeva, I.Z., Mustahieva, D., Zdorovets, M.V. Phase transformations and photocatalytic activity of nanostructured Y₂O₃/TiO₂-Y₂TiO₅ ceramic such as doped with carbon nanotubes (2020) Molecules, 25 (8), 1943.</p>
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------