OKSANA V. NIPRUK

University	National Research Lobachevsky State University of Nizhny Novgorod
Level of English proficiency	Advanced
Educational program and field of the educational program for which the applicant will be accepted	1.4. Chemical Sciences 1.4.1 Inorganic chemistry
List of research projects of the potential supervisor (participation/leadership)	1. Fundamental problems of creating new materials based on inorganic, organic and high-molecular compounds, 4.5706.2017/БЧ (state assignment, 2017-2019, leader). 2. Chemical foundations for creating new-generation functional materials for modern innovative technologies, No. 0729-2020-0039 (state assignment, 2020-2022, executor). 3. Fundamental scientific foundations for creating new polyfunctional materials for modern innovative technologies, FSWR-2023-0025 (state assignment, 2023-2025, executor).
List of the topics offered for the prospective scientific research	Synthesis and study of materials for binding heavy radioactive elements Modern methods of analysis in monitoring radioactive contamination of the environment Modeling of hydrolytic stability of compounds of heavy radioactive elements X-ray fluorescence determination of various elements in aqueous solutions and solid phases Voltammetric determination of various inorganic and organic compounds
 Research supervisor: Oksana V. Nipruk Doctor of Chemical Sciences, Professor (Lobachevsky State University of Nizhny Novgorod)	**Inorganic and Nuclear Chemistry**
	Supervisor's research interests • synthesis of crystalline compounds of uranium with various elements of the Periodic Table; • study of the composition, structure and properties of the obtained compounds using modern methods such as X-ray diffraction, X-ray fluorescence spectrometry, spectrophotometry, differential thermal analysis, IR spectroscopy, etc.; • modeling the behavior of uranium in the environment and various technological conditions.
	Research highlights The postgraduate student's work will be performed using the following equipment: 1. LabX XRD-6100 X-ray powder diffractometer (Shimadzu, Japan) 2. EDX-900HS Shimadzu energy-dispersive X-ray fluorescence spectrometer 3. liquid analyzer (spectrofluorimeter) 4. TA-Lab voltammetric analyzer 5. UVmini-1240 Shimadzu spectrophotometer 6. UV-VIS spectrophotometer UV-1650 Shimadzu.
	Supervisor's specific requirements • knowledge of physical research methods, • knowledge of methods for synthesizing inorganic compounds and materials, • good command of English/Russian.
	Supervisor's main publications

	Total number of publications in journals in 2021-2025 indexed by Web of Science: 5 Scopus: 6 RSCI: 7 1. Nipruk O.V., Chernorukov N.G., Klinyshova K.A., 1. Nipruk O.V., Chernorukov N.G., Klinyshova K.A., Bakhmetyev M.O., Tumaeva O.N., Udalov I.D. Chemical stability of alkali elements' uranyl vanadates in aqueous solutions // Journal of Radioanalytical and Nuclear Chemistry. № 332. 2023. P. 355-367. 2. Chernorukov N.G., Nipruk O.V., Klinyshova K.A., Chernorukov G.N., Tumaeva O.N. Synthesis and study of urinates of rare-elements of compositions $LnU_3O_{10.5}•6H_2O$ (Ln = La, Ce, Pr, Nd, Sm), $LnU_6O_{19.5}•10H_2O$ (Ln = Nd, Sm, Eu, Gd, Tb, Dy) and $LnU_2O_{7.5}$ (Ln = Dy, Ho, Er, Tm, Yb, Lu). // Radiochemistry. № 2. V. 63. 2021. P. 141-150. 3. Nipruk O.V., Chernorukov N.G., Klinyshova K.A., Bakhmetyev M.O., Tumaeva O.N. Chemical stability of rare-earth elements' uranyl arsenates with general formula $M^{III}(AsUO_6)·16H_2O$ (M^{III}-La-Lu) in aqueous solution // Journal of Radioanalytical and Nuclear Chemistry. № 2. V. 328. 2021. P. 739-751. 4. Chernorukov N.G., Nipruk O.V., Klinyshova K.A., Tumaeva O.N., Sokolov D.V. A family of uranyl oxide hydrate phases with bivalent cations $[M^{II}(H_2O)_4][(UO_2)_3O_3(OH)_2]·H_2O$ (M^{II} - Mn, Co, Ni, Zn): synthesis, characterization and chemical stability in aqueous solutions // New Journal of Chemistry. № 22. V. 45. 2021. P. 9922-9935. 5. Araslankin S. V., Shchankin M. V., Golovina E. N., Nipruk O.V., Gubina A. A. Evaluation of the Degree of Starch Pyrodextrinization Using Binary Digital Image Colorimetry // Inorganic Materials. № 1. V. 60. 2024. P. S101–S108. 6. Nipruk O.V., Chernorukov N.G., Elipasheva E.V., Klinyshova K.A., Bakhmetyev M.O. State of uranyl arsenates $MAsUO_6·nH_2O$ (M^I - H^+, Li^+, Na^+, K^+, Rb^+, Cs^+, NH_4^+) in aqueous solution // Journal of Radioanalytical and Nuclear Chemistry. № 1. V. 324. 2020. P. 233-244.
	Results of intellectual activity -