OKSANA V. NIPRUK

University	National Research Lobachevsky State University of Nizhny
Level of English profisionay	Novgorod C1
Educational program and field of	14 Chemical Sciences
the educational program for	1.4.1 Inorganic chemistry
which the applicant will be	6 5
accepted	
List of research projects of the	1. Fundamental problems of creating new materials based on
potential supervisor	inorganic, organic and high-molecular compounds,
(participation/leadership)	4.5706.2017/b4 (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	Synthesis and study of materials for binding heavy radioactive
prospective scientific research	elements Modern methods of analysis in monitoring radioactive
	contamination of the environment Modeling of hydrolytic
	fluorescence determination of various elements in aqueous
	solutions and solid phases Voltammetric determination of various
	inorganic and organic compounds
Sen Contraction	Chemistry and Materials Sciences
	Supervisor's research interests
	• synthesis of crystalline compounds of uranium with various
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Research supervisor: Oksana V. Nipruk	 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: LabX XRD-6100 X-ray powder diffractometer (Shimadzu, Japan) EDX-900HS Shimadzu energy-dispersive X-ray fluorescence
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Image: Constraint of the systemResearch supervisor:Oksana V. NiprukDoctor of Chemical Sciences,Professor(Lobachevsky State University of Nizhny Novgorod)	 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: LabX XRD-6100 X-ray powder diffractometer (Shimadzu, Japan) EDX-900HS Shimadzu energy-dispersive X-ray fluorescence spectrometer liquid analyzer (spectrofluorimeter) TA-Lab voltammetric analyzer UVmini-1240 Shimadzu spectrophotometer 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 Englich/Ruscian
Image: Constraint of the systemResearch supervisor:Oksana V. NiprukDoctor of Chemical Sciences,Professor(Lobachevsky State University of Nizhny Novgorod)	 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: LabX XRD-6100 X-ray powder diffractometer (Shimadzu, Japan) EDX-900HS Shimadzu energy-dispersive X-ray fluorescence spectrometer liquid analyzer (spectrofluorimeter) TA-Lab voltammetric analyzer UVmini-1240 Shimadzu spectrophotometer 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.

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 $LnU_3O_{10.5}\bullet 6H_2O$ (Ln = La, Ce, Pr, Nd, Sm), $LnU_6O_{19.5}\bullet 10H_2O$ (Ln = Nd, Sm, Eu, Gd, Tb, Dy) and $LnU_2O_{7.5}$ (Ln = Dy, Ho, Er, Tm, Yb, Lu). // Radiochemistry. No 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 ₂ O (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 ₂ O) ₄][(UO ₂) ₃ O ₃ (OH) ₂]·H ₂ O (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. Nipruk O.V., Chernorukov N.G., Elipasheva E.V., Klinyshova K.A., Bakhmetyev M.O. State of uranyl arsenates MAsUO ₆ ·nH ₂ O (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