Scientific profile structure (portfolio) of potential research supervisor as participant of the International Olympiad in the Association "Global universities" on the postgraduate studies track in 2025-2026.

На английском языке:

<table>
<tr><td>University</td><td>Samara National Research University</td></tr>
<tr><td>Level of English proficiency</td><td>Fluent</td></tr>
<tr><td>Educational program and field of the educational program for which the applicant will be accepted</td><td>1.4.1. Inorganic chemistry (chemical sciences)</td></tr>
<tr><td>List of research projects of the potential supervisor (participation/leadership)</td><td>Leader of the RSF project 20-73-10250 ‘Development of methods for the analysis of interatomic interactions in crystal structures’ (2020-2025).</td></tr>
<tr><td>List of the topics offered for the prospective scientific research</td><td>• Study of the features of interatomic interactions in the structures of individual forms of crystals with a large number of studied polymorphs.
• Synthesis of new coordination compounds, study of their structure and physicochemical properties, registration of IR and UV spectra, study of thermal decomposition.
• Application of methods of crystal chemical analysis using Voronoi–Dirichlet polyhedra to any samples of chemical compounds in order to establish correlations between the composition, structure and properties of crystals.</td></tr>
<tr><td rowspan="4"> 
Research supervisor:
Anton V. Savchenkov,
Doctor of Science (chemistry), Samara National Research University</td><td>Inorganic and nuclear chemistry</td></tr>
<tr><td>Supervisor’s research interests
Synthesis, structure elucidation and relationship among composition/structure/properties of coordination compounds.
Implementation of stereoatomic model and Voronoi–Dirichlet tessellation for analysis of crystal structures, including noncovalent interactions, polymorphism, actinide contraction and more.</td></tr>
<tr><td>Research highlights
In the course of the research work, a modern method of analyzing crystal structures using Voronoi–Dirichlet polyhedra, which is traditionally developed in our scientific school, will be used. Interaction with foreign scientists is possible.</td></tr>
<tr><td>Supervisor’s specific requirements:
Chemical education required.</td></tr>
<tr><td colspan="2">Supervisor’s main publications
Total amount of scientific articles published in journals, indexed in Web of Science, Scopus, RSCI, for the last 5 years: 19.
List of 5 most recent and most important articles:
1. Savchenkov, A. V.; Uhanov, A. S.; Grigoriev, M. S.; Fedoseev, A. M.; Pushkin, D. V.; Serezhkina, L. B.; Serezhkin, V. N. Halogen Bonding in Uranyl and Neptunyl Trichloroacetates with Alkali Metals and Improved Crystal Chemical Formulae for Coordination Compounds. Dalton Trans. 2021, 50 (12), 4210–4218.</td></tr>
</table>

	2. *Serezhkin, V. N.; Savchenkov, A. V. Advancing the Use of Voronoi–Dirichlet Polyhedra to Describe Interactions in Organic Molecular Crystal Structures by the Example of Galunisertib Polymorphs. CrystEngComm 2021, 23 (3), 562–568.* 3. *Uhanov, A. S.; Sokolova, M. N.; Fedoseev, A. M.; Bessonov, A. A.; Nechaeva, O. N.; Savchenkov, A. V.; Pushkin, D. V. New Complexes of Actinides with Monobromoacetate Ions: Synthesis and Structures. ACS Omega 2021, 6 (33), 21485–21490.* 4. *Serezhkin, V. N.; Yu, L.; Savchenkov, A. V ROY: Using the Method of Molecular Voronoi-Dirichlet Polyhedra to Examine the Fine Features of Conformational Polymorphism. Cryst. Growth Des. 2022, 22 (11), 6717–6725.* 5. *Savchenkov, A.V.; Ahmed, E.; Karothu, D.P.; Naumov, P. Voronoi-Dirichlet Analysis of Elastic and Plastic Molecular Crystals. Cryst. Growth Des. 2023, 23 (9), 6484–6490.*
	Results of intellectual activity 1. *Savchenkov, A. V.; Uhanov, A. S.; Grigoriev, M. S.; Fedoseev, A. M.; Pushkin, D. V.; Serezhkina, L. B.; Serezhkin, V. N. Halogen Bonding in Uranyl and Neptunyl Trichloroacetates with Alkali Metals and Improved Crystal Chemical Formulae for Coordination Compounds. Dalton Trans. 2021, 50 (12), 4210–4218.* 2. *Serezhkin, V. N.; Savchenkov, A. V. Advancing the Use of Voronoi–Dirichlet Polyhedra to Describe Interactions in Organic Molecular Crystal Structures by the Example of Galunisertib Polymorphs. CrystEngComm 2021, 23 (3), 562–568.* 3. *Uhanov, A. S.; Sokolova, M. N.; Fedoseev, A. M.; Bessonov, A. A.; Nechaeva, O. N.; Savchenkov, A. V.; Pushkin, D. V. New Complexes of Actinides with Monobromoacetate Ions: Synthesis and Structures. ACS Omega 2021, 6 (33), 21485–21490.* 4. *Serezhkin, V. N.; Yu, L.; Savchenkov, A. V ROY: Using the Method of Molecular Voronoi-Dirichlet Polyhedra to Examine the Fine Features of Conformational Polymorphism. Cryst. Growth Des. 2022, 22 (11), 6717–6725.* 5. *Savchenkov, A.V.; Ahmed, E.; Karothu, D.P.; Naumov, P. Voronoi-Dirichlet Analysis of Elastic and Plastic Molecular Crystals. Cryst. Growth Des. 2023, 23 (9), 6484–6490.*