

Researcher profile (portfolio) form for potential research supervisors of postgraduate track participants in the Global Universities Association International Olympiad for graduate and postgraduate applicants 2023-2024.

University	Tomsk Polytechnic University
English Proficiency	A2.2
PhD Program in	Electrical and heat engineering High voltage equipment
List of Research Projects	<ol style="list-style-type: none"> 1) RFBR Project of Organizing the Second Russian Youth Scientific School-Conference on Energy, Electromechanics and energy Efficient Technologies Through the Eyes of Youth, 2014 – project manager. 2) RFBR Project on Obtaining an Ultrafine Powder of Copper Oxide – Component of Materials with High-Temperature Superconductivity, 2014, No. 14-08-31122 – project member. 3) RFBR Project on Investigation of the Structure and Mechanical Properties of Materials Based on Nickel Aluminide, Obtained by SPS-technology, 2015, No. 15-33-50845 – project manager. 4) RFBR Project on Development of Plasmodynamic Method Based on Unique High-Power Sputtering System to Ensure Synthesis of Multifunctional Titanium-based Coatings, 2015-2017, No.15-19-00049 – coordinator. 5) RSF Project on Development of Plasm dynamic Method for Synthesis of High-Purity Cubic Tungsten Carbide WC_{1-x} in Dispersed and Bulk Forms and Study of its Structural, Catalytic, Physicomechanical, Thermal and Electrophysical Properties, 2019-2021, No. 19-13-00120 – coordinator. 6) RSF Project on Development of Scientific Foundations for Synthesis of Gradient Ceramic Materials Based on MAX-phases derived from Pre-ceramic Papers Obtained by SPS-technology, 2019-2021, No. 19-19-00192 – coordinator. 7) RSF Project on Development of scientific and technical foundations for obtaining metal-ceramic laminated composites Me/MAX from pre-ceramic papers and refractory metals with controlled structure and properties, 2023-2025, No. 23-19-00109 – project member.
List of Possible Research Topics	<ol style="list-style-type: none"> 1) SPS-technology. 2) Magnetic-pulse pressing of nanopowders. 3) Nanomaterials 4) High voltage equipment
	Supervisor’s research interests: Nanomaterials and nanotechnologies: synthesis of dispersed materials and production of bulk products.
	Supervisor’s research interests: <u>Spark plasma sintering of nanostructured ceramics, cermets and metals.</u>
	Research highlights: Experience of working with unique equipment
	Supervisor’s specific requirements: <ul style="list-style-type: none"> • Knowledge of the procedure for conducting and processing the X-ray structural results

	<ul style="list-style-type: none"> • Knowledge of the procedure for conducting and processing the electron microscopy results • Knowledge of the procedure for conducting and processing the metallographic results
<p style="text-align: center;">Фото</p> 	<p>Supervisor's main publications:</p> <ul style="list-style-type: none"> • 1) Sivkov, A., Nikitin, D., Shanenkov, I., Ivashutenko, A., Rahmatullin, I., Nassyrbayev, A. Optimization of plasma dynamic synthesis of ultradispersed silicon carbide and obtaining SPS ceramics on its basis // International Journal of Refractory Metals and Hard Materials 79, 2019, c. 123-130 (IF = 2.806, Q1) DOI: 10.1016/j.ijrmhm.2018.11.016 • 2) Ivashutenko, A.S., Nikulina, A.A., Smirnov, A.I., Bataev, A.A. Features of heterophase structure formation at spark plasma sintering of high-carbon and chromium-nickel steels // Materials Characterization (IF = 2,892, Q1) Volume 129, 1 July 2017, Pages 252-259. https://www.scopus.com/record/display.uri?eid=2-s2.0-85027331958&origin=resultslist&sort=plf-f&src=s&sid=3f794e2f757272df1ee1605cf983eaa9&sot=autdocs&sdt=autdocs&sl=17&s=AU-ID%286603933306%29&relpos=17&citeCnt=1&searchTerm=#references • 3) Kornienko, E.E., Ivashutenko, A.S., Saigash, A.S., Drobyaz, E.A., Tutunkova, M.K. Research of structure and properties of niocrsib sintered materials additionally alloyed with Nb // Materials Performance and Characterization 7(3), 2018 (IF = 0.35, Q3) DOI: 10.1520/MPC20170061 • 4) Ivashutenko, A.S., Ionov, I.V., Maznoy, A.S., Sivkov, A.A., Solovyev, A.A. Comparative Evaluation of Spark Plasma and Conventional Sintering of NiO/YSZ Layers for Metal-Supported Solid Oxide Fuel Cells // High Temperature Materials and Processes, 37(4), 2018, (IF = 0.44, Q3) DOI: 10.1515/htmp-2016-0193 • 5) Ivashutenko, A., Nikitina, L., Laptev, R., Abzaev, Y., Lider, A., Positron spectroscopy of nanodiamonds after hydrogen sorption // Nanomaterials (IF = 3.504, Q1), Volume 8, Issue 1, 1 January 2018, N 36. https://www.scopus.com/record/display.uri?eid=2-s2.0-85040835169&origin=resultslist&sort=plf-f&src=s&sid=5bd0010d32d0ee335edb21465eccccd3&sot=autdocs&sdt=autdocs&sl=18&s=AU-ID%2826532854600%29&relpos=4&citeCnt=0&searchTerm= • 6) Sivkov A., Shanenkov I., Vympina Y., Ivashutenko A., Rakhmatullin I., Shanenkova Y., Nikitin D. Ceramics International. 2022. DOI: 10.1016/j.ceramint.2021.12.303 • 7) EXPANDING THE SCOPE OF SIC CERAMICS THROUGH ITS SURFACE MODIFICATION BY DIFFERENT METHODS Feoktistov D.V., Kuznetsov G.V., Sivkov A.A., Ivashutenko A.S., Nikitin D.S., Shanenkov I.I., Abdelmagid A.M., Orlova E.G. Surface and Coatings Technology. 2022. T. 435. C. 128263. DOI: 10.1016/j.surfcoat.2022.128263
<p>Research supervisor: Alexander S. Ivashutenko, Candidate of Science/PhD</p> <p>WoS ResearcherID - A-3886-2014</p> <p>Scopus AuthorID - 26532854600</p>	
	<p>Results of intellectual activity:</p> <ol style="list-style-type: none"> 1) Monograph. Ivashutenko A. S. Technology of Obtaining Oxide Nanoceramics by High-Intensity Exposure. – Tomsk: TPU Publishing House, 2014 - 103 p. 2) Patent No. 2701017 Method for Recycling Garnet Sand Waste from Waterjet Cutting.