




С И Б И Р С К И Й  
Ф Е Д Е Р А Л Ь Н Ы Й  
У Н И В Е Р С И Т Е Т

S I B E R I A N  
F E D E R A L  
U N I V E R S I T Y

## Portfolio of scientific supervisors of the participants of the postgraduate track of the International Olympiad of the Global Universities Association

University	Siberian Federal University
Level of English proficiency	B1
Educational program and field of the educational program for which the applicant will be accepted	1.4.12 Petroleum chemistry
List of research projects of the potential supervisor (participation/leadership)	<p>Comprehensive study of the physicochemical, technical and operational characteristics of catalysts, head of the project, customer – Achinsk Oil Refinery of the Eastern Oil Company JSC, 2013-2017</p> <p>Selection of the acid composition for the pilot production factory at Kuyumba field and the selection of chemical compositions to change the wettability of the rock, head of the project, customer Slavneft - Krasnoyarskneftegaz, 2018-2020</p> <p>Development of methods for improving the quality of petroleum coke for effective use in the metallurgical industry, head of the project, customer –Engineering and Technology Centre, RUSAL LLC, 2013-2019</p> <p>Selection of demulsifiers for the destruction of water-fuel emulsions, head of the project, customer – the Ministry of Ecology and Environmental Management of Krasnoyarsk Territory, 2020.</p> <p>FTP Development of equipment for the elimination of leaks in the production strings of oil and gas wells, head of the project, customer – the Ministry of Education and Science of the Russian Federation, 2017-2019</p> <p>Determination of the initial data for calculating the throughput of the reactors r-1, r-2, r-3 of the isomerization plant лси-200, customer – Novokuibyshevsk Oil Refinery JSC, 2021-2022</p> <p>Development of a method for detecting organochlorine compounds in oil under field conditions, customer – Rosneft Oil Company PJSC, 2021.</p>
List of the topics offered for the prospective scientific research	Improvement of technologies for deep oil refining, improvement of the operational properties of motor fuels, oilfield chemistry, chemical methods for increasing oil recovery.

	<b>Chemistry and materials science</b>
	<b>Supervisor's research interests:</b>
	Development of new technologies for chemical methods of enhanced oil recovery, industrial catalysis in the production of motor fuels, implementation of solutions to improve technologies for deep oil refining.
<b>Research highlights:</b>	We use research equipment of Oil and Oil Products laboratory and Research and Testing of Catalysts Laboratory. The implementation of the obtained scientific results at oil and gas enterprises. Internship in oil and gas enterprises.
Research supervisor: Fedor A. Buryukin, Candidate of Science (Physical chemistry, Inorganic chemistry)	<b>Supervisor's main publications:</b>
	Web of Science – 13 Scopus – 18 <ol style="list-style-type: none"> <li>1. Ensuring safe and reliable cleaning of asphaltene deposits inside tanks at fuel-oriented petroleum refineries. Bukhtoyarov V.V., Ananyev K.M., Tynchenko V.S., Petrovskiy E.A., Buryukin F.A. International Review on Modelling and Simulations. 2017. T. 10. № 6. C. 423-431.</li> <li>2. Bukhtoyarov, V.V., Tynchenko, V.S., Petrovskiy, E.A., Buryukin, F.A. Development of models for recognition of technological situations in the operation of electric centrifugal pumps for oil production // Journal of Applied Engineering Science. 2019. Vol. 17(4), pp. 541-549.</li> <li>3. Minakov, A.V., Zhigarev, V.A., Mikhienkova, E.I., (...), Buryukin, F.A., Guzei, D.V. The effect of nanoparticles additives in the drilling fluid on pressure loss and cutting transport efficiency in the vertical boreholes // Journal of Petroleum Science and Engineering. 2018. Vol. 171, pp. 1149-1158.</li> <li>4. Kuznetsov, P.N., Kamenskii, E.S., Kolesnikova, S.M., (...), Pavlenko, N.I., Fetisova, O.Y. Temperature Effect on the Thermal Dissolution of Coal // Solid Fuel Chemistry. 2018. Vol. 52(3), pp. 163-168.</li> <li>5. Kuznetsov, P.N., Marakushina, E.N., Kazbanova, A.V., (...), Buryukin, F.A., Kositcyna, S.S. Getting an alternative pitch binder by thermal dissolution of coal // American Journal of Applied Sciences. 2016. Vol. 13(1), 7.13, pp. 7-13.</li> </ol>
	<b>Results of intellectual activity:</b>
	“Vibration mounts with spherical elastic damping elements”, utility patent 181210, Russia “A software simulator for oil production settings by electric centrifugal pump installations”, computer software, certificate registration 2018665114, Russia

“Parametric identification and process control of oil production”, computer software, certificate registration 2019610406

“A software simulator to study the parameters of an autonomous packer system”, computer software certificate registration 2019663791, application 2019662400 as of 08.10.2018

Frisorger V.K., Pingin V.V., Marakushina E.N., Krak M.I., Dovzhenko N.N., Buryukin F.A. “Method for producing coal pitch - binder for producing anode mass of carbon electrodes”, Russian patent 2614445, application 2015157285 as of 30.12.2015