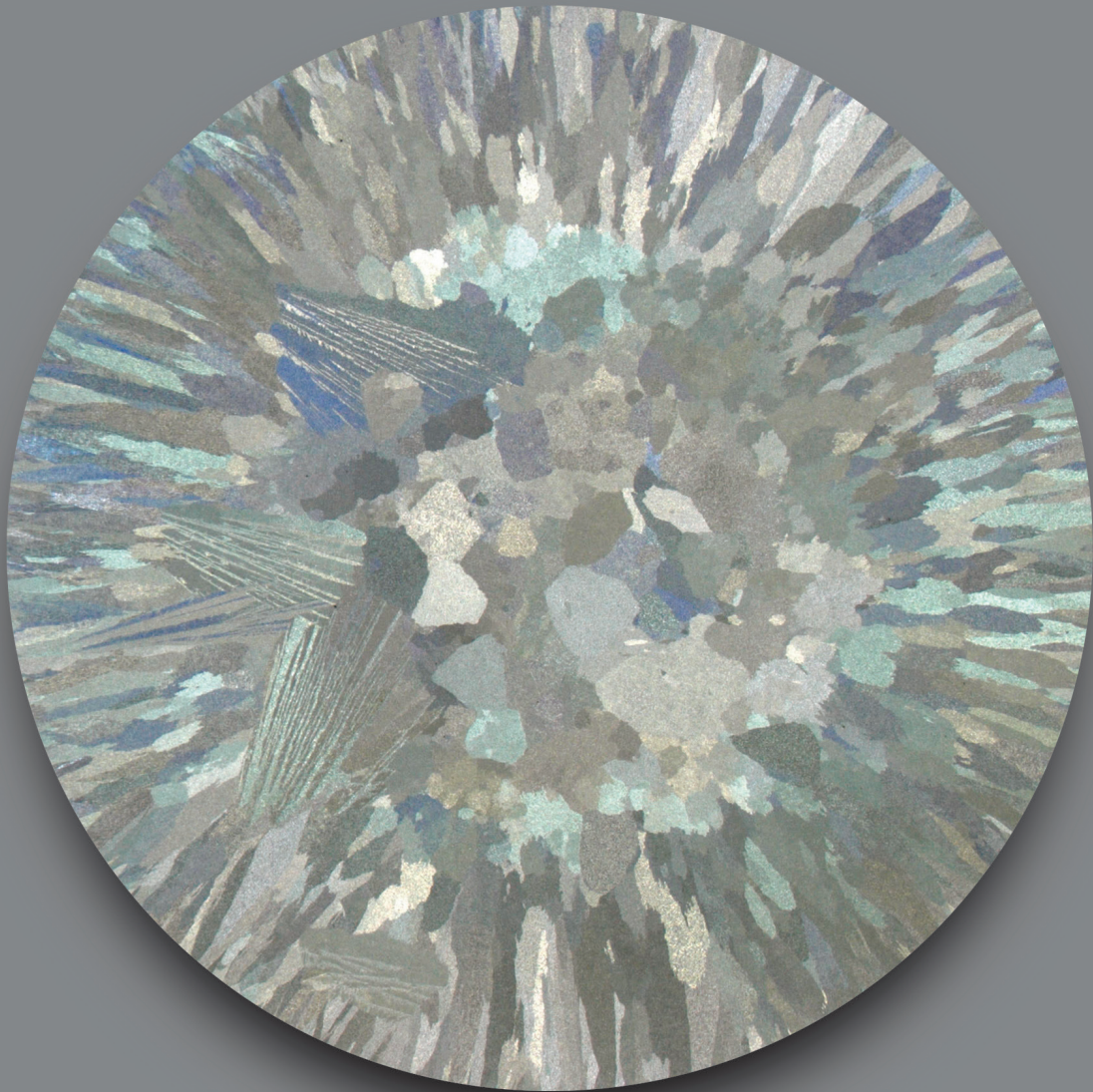




СИБИРСКИЙ ФЕДЕРАЛЬНЫЙ УНИВЕРСИТЕТ
SIBERIAN FEDERAL UNIVERSITY



PhD

Metallurgy of Non-Ferrous Metals

Key Information

Duration:

4 years (this period can be shorter depending on the availability of a PhD thesis)

Language:

English

Entry Requirements:

Master's degree in Chemistry, Physics, Material Science or Metallurgy (transcript of records), an adequate level of English proficiency (certificate or another document)

Tuition fees (2015/2016):

€ 1 850 (the cost does not include accommodation and living expenses).

Accommodation:

on-campus accommodation is available.

Costs (2015/2016):

single ensuite room: € 45 per month,

twin ensuite room: € 30 per month.

Practicalities:

airport transfer, an invitation letter to apply for a Russian study visa and an optional survival course of Russian as a foreign language are provided by Siberian Federal University.

Further details:

SibFU's Graduate School

aspirantura@sfu-kras.ru,

tel.: +7 391 291-28-31

Programme Leader

Professor Petr Polyakov's research interests are high-temperature electrochemical processes, electrometallurgy of aluminium and electrolyzer design.

Overview

Doctoral students do research at the Laboratory of Metallurgy of the Light Metals under the supervision of Professor Petr Polyakov. Their research focuses on studying high-temperature electrochemical processes and designing new types of environmentally friendly and energy efficient electrolyzers.

Contacts

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Publications

Vinogradov, A.M., Vasyunina, I.P., Mikhalev, Y.G., Polyakov, P.V. An investigation of the effect of the electrolyte composition on the consumption of fired anodes during electrolytic aluminum production. Russ. J. Non-Ferrous Metals, 2008, v. 49, issue 5.

Isaeva, L.A., Braslavskii, A.B., Polyakov, P.V. Dusting and fluidity of alumina with different physicochemical properties. Russ. J. Non-Ferrous Metals, 2008, V. 49, Issue 6.

Isaeva, L.A., Braslavskii, A.B., Polyakov, P.V. Effect of the content of the α -phase and granulometric composition on the dissolution rate of alumina in cryolite-alumina melts. Russ. J. Non-Ferrous Metals, 2009, v. 50, issue 6.

Pogodaev, A.M., Proshkin, A.V., Polyakov, P.V. et al. Processes in refractory materials of the cathode assembly of electrolysis cells for aluminum production. Russ. J. Non-Ferrous Metals, 2010, v. 51, issue 4.

Arkhipov, A.G., Polyakov, P.V., Arkhipov, G.V. Effect of technological and constructive parameters on the integrity of the bottom of aluminum reduction cells during flame preheating. Russ. J. Non-Ferrous Metals, 2010, v. 51, issue 3.

Vasyunina, N.V., Vasyunina, I.P., Mikhalev, Yu.G., Polyakov, P.V. Solubility of aluminum in cryolite-alumina electrolytes. Russ. J. Non-Ferrous Metals, 2011, v. 52, issue 4.

Mikhalev, Yu. G., Proshkin, A. V., Isaeva, L. A., Polyakov, P. V., Filonenko, A. A. Modification of a method for testing SiC blocks. 31st Int. Conf. ICSOBA «Bauxite, Alumina, Aluminium industry in Russia and new global developments» Travaux ICSOBA - Krasnoyarsk, 2013, Vol. 38. No. 42. – P. 1040.

Polyakov, P.V., Arkhipov, A.G. A modelling based study of technological and design parameters impact on cathode lining integrity during electrical and flame preheat. 11th Australasian Aluminium Smelting Technology Conference, Dubai, UAE, 6-11 December 2014.

Other research areas

Autoclave processes with participation of precious metals;
Recycling spent automotive and industrial catalysts;
Extractive metallurgy of non-ferrous metals.

Publications

Belousov, O.V, Belousova, N.V., Burlo, A.V. Formation of bimetal powders on reaction of nanocrystal palladium with chlorocomplexes of gold (III) in hydrothermal conditions. *Smart Nanocomposites*. – 2010. – V. 1. – P. 91-97.

Belousov, O.V., Belousova, N.V., Siroтина, A.V. et al. Formation of bimetallic Au-Pd and Au-Pt nanoparticles under hydrothermal conditions and microwave irradiation. *Langmuir*. – 2011. – 27. – 11697-11703.

Belousova, N.V., Arkhipova, E.O., Parfenov, V.A. Oxidation of liquid alloys of the Bi-Pb system. *Russ. J. Non-Ferrous Metals*, 2011, V. 52, Issue 1. – P. 12-15

Belousov, O.V., Siroтина, A.V., Belousova, N.V. et al. Formation of nanomaterials based on non-ferrous and noble metals in autoclaves. *Proc. 3th Int. Cong. "Non-ferrous metals – 2011"* – Krasnoyarsk, 2011. – P. 290-294.

Selina, E.A., Kalyakin, S.N., Belousov, O.V., Belousova, N.V. Low-temperature alkaline melts for breakdown of mineral objects. *Proc. 3th Int. Cong. "Non-ferrous metals – 2011"* – Krasnoyarsk, 2011. – P. 301-303.

University

Siberian Federal University (SibFU) with over 35 000 students is one of the most vibrant Russian universities. Annually, more than 200 visiting professors – leading researchers from the UK, Germany, Spain and USA – visit SibFU to give lectures and attend conferences.

Siberian Federal University receives funding from the RF Government that supports research projects developed under the supervision of prominent Russian scientists and international researchers.

One of the research projects is carried out at the laboratory created in 2014 and supervised by Professor Ari Laptev (Imperial College London, KTH, Director of Institut Mittag-Leffler). The laboratory staff includes SibFU's professors August Tsikh, Alexander Kytmanov, and Sergey Tsarev.