Petr Gorelkin

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EDUCATION

- Lomonosov Moscow State University (MSU) Doctor of Philosophy (Ph.D.), Physics (2007 – 2011)
- Lomonosov Moscow State University (MSU) Master's degree, Polymer Chemistry (2005 – 2007)
- Lomonosov Moscow State University (MSU) Bachelor's degree, Chemistry (2002 – 2005)

CO-FOUNDER

- ICAPPIC Limited, 71 Queen Victoria Street, London EC4V 4AY, United Kingdom (est. 2015)
- Medical Nanotechnology, Russia, 121205, Moscow, Skolkovo Innovation Centre Territory, Bolshoy bulvar, 42, building 1, office 502 (est. 2011)

EMPLOYMENT

- Co-founder and Chief Executive Officer of Medical Nanotechnologies (Company is a resident of Skolkovo Innovation Center) LLC 2011 – present
- Senior Research Fellow in Lomonosov Moscow State University 2014 – 2015
- Project manager in LG Electronics – MSU Joint Laboratory 2013 - 2015
- Business development manager in Advanced Technologies Center 2010 – 2012
- Business development manager in Biosensor Academy LLC 2004 – 2011
- Invited scientist in Korea Institute of Science and Technology (Seoul, South Korea) 2011

PUBLICATIONS

- Erofeev, A.; Gorelkin, P.; Garanina, A.; Alova, A.; Efremova, M.; Vorobyeva, N.; Edwards, C.; Korchev, Y.; Majouga, A. Novel method for rapid toxicity screening of magnetic nanoparticles // Scientific Reports, 2018, 8:7462
- Vaneev, A.N.; Alova, A.V.; Erofeev, A.S.; Gorelkin, P.V.; Aleksashkin, A. D.; Beznos, O.V.; Chesnokova, N. B.; Kost, O.A.; Majouga, A.M.; Korchev, Y.; Klyachko, N.L., Detecting reactive oxygen species in biological fluids by platinum nanoelectrode applying amperometric method // Bulletin of Russian State Medical University, 2018, 6, P. 157-163
- Nikitin, Aleksey; Fedorova, Mariia; Naumenko, Victor; Shchetinin, Igor; Abakumov, Maksim; Erofeev, Alexander ; Gorelkin, Petr; Meshkov, Georgy; Beloglazkina, Elena; Ivanenkov, Yan; Klyachko, Natalya; Golovin, Yuriy ;

Savchenko, Alexander; Majouga, Alexander, Synthesis, characterization and MRI application of magnetite water-soluble cubic nanoparticles // Journal of Magnetism and Magnetic Materials, Vol. 441, 2017, P. 6-13

- Gorelkin, Petr V.; Erofeev, Alexander S.; Kiselev, Gleb A.; Kolesov, Dmitry V. ; Gambaryan, Alexandra S.; Yaminsky, Igor V.; Lee, Jeong Soo; Lee, Chaedeok; Kim, Gyoung Soo; Song, Kyu Ho; Han, Jungsun; Choi, Eun Hwa; Kwak, Keumcheol; Borodina, Irina, Cantilever Sensors Based on Sialylglycopolymer Virus Receptor with Different Readout Systems // IEEE Sensors, 2015, P. 579-582
- Gorelkin, P. V.; Erofeev, A. S.; Kiselev, G. A.; Kolesov, D. V.; Dubrovin, E. V.; Yaminsky, I.V., Synthetic sialylglycopolymer receptor for virus detection using cantilever-based sensors // Analyst, 2015,140, 6131-6137
- Actis, P.; Tokar, S.; Clausmeyer, J.; Babakinejad, B.; Mikhaleva, S.; Cornut, R.; Takahashi, Y.; Cordoba, A.L.; Novak, P.; Shevchuck, A.I.; Dougan, J.A.; Kazarian, S.G.; Gorelkin, P.V.; Erofeev, A.S.; Yaminsky, I.V.; Unwin, P.R.; Schuhmann, W.; Klenerman, D.; Rusakov, D.A.; Sviderskaya, E.V.; Korchev, Y.E., Electrochemical Nanoprobes for Single-Cell Analysis// ACS Nano, Vol 8, №1, P. 875-884
- I.V. Yaminskii, P.V. Gorelkin, E.V. Dubrovin. Nanoanalytics for medicine. Biophysics, 2011, 56, 905-909.
- Gorelkin P.V., Mukhin D.S., Majouga A.G., Romashkina R.B., Beloglazkina E.K., Yaminsky I.V., Zyk N.V. New self assembled coated cantilever for histidine protein immobilization // Mendeleev commun., 2010, Vol. 20, P. 329 – 331.
- Gorelkin, P.; Kiselev, G.; Mukhin, D.; Kim, T.; Kim, S.; Lee, S.; Yaminskii, I. Use of biospecific reactions for the design of high-sensitivity biosensors based on nanomechanical cantilever systems // Polymer Science Series A, 2010, Vol. 52, No 10, P. 1023-1033.
- Beloglazkina E.K., Majouga A.G., Zyk N.V., Rakhimov R.D., Yaminsky I.V., Gorelkin P.V., Kiselev G.A., Kutateladze A.G. Bis-(4-(2-pyridylmethyleneiminophenyl))disulfide — A chelating ligand capable of self assembly on gold surface and its complexes with M(BF4)2 and M(ClO4)2; M – Co, Cu and Ni. Experimental and theoretical study // Thin solid films, 2007, Vol.515, No.11, P.4649–4661.
- Yaminsky I.V, Gorelkin P.V., Kiselev G.A. Concurrence of Intermolecular Forces in Monolayers // Japanese Journal of Applied Physics, 2006, Vol. 45, No. 3B, P. 2316-2318.

PATENTS

- RU2647464 – METHOD FOR SUBSTANCES CYTOTOXICITY DETERMINATION
- WO2017116267 – A NANOELECTRODE FOR DETECTING CU(II) IONS AND A METHOD OF PRODUCING AND USING THEREOF
- KR20160114412 – Sensor for Influenza Detection
- RU2013143677 – METHOD OF CONTROLLED SUBSTANCE INJECTION TO MICRO OBJECTS
- RU2012153386 – METHOD OF NANO AND MICRO OBJECT STUDY BY PROBE MICROSCOPY
- RU2012125571 – METHOD OF IDENTIFYING PROSTATE-SPECIFIC ANTIGEN IN LIQUID MEDIUM

PARTICIPATION IN PROJECTS

PI of the projects:

- Preclinical studies of a magnetic fluid-based drug from nanoparticles of complex metal oxides for controlled hyperthermia of tumors. Ministry of Education and Science of Russian Federation (State contract No 14.N08.11.0150 dated June 02, 2017)
- Preclinical studies of the drug based on recombinant superoxide dismutase in the composition of the nanoparticles. Ministry of Education and Science of Russian Federation (State contract No 14.N08.11.0079 dated June 17, 2016)

- Preclinical studies of a drug for the treatment of cancer based on the inhibitor tankyrases that regulate the Wnt signaling pathway and the level of energy exchange in the tumor. Ministry of Education and Science of Russian Federation (State contract No 14.N08.11.0056 dated November 10, 2015)
- Nanopipette electrochemical biosensors. Skoltech Innovation Program (Agreement № 401-ISP CEI dated March 25, 2014)
- Electrochemical sensors based on nanocapillaries with integrated electrodes for creation of new devices for laboratory and rapid diagnostic of melanoma". Ministry of Education and Science of Russian Federation (State contract No 14.512.11.0084 dated June 20, 2013).
- Development of e-learning educational program for scanning probe microscopy. Rusnano Foundation for Infrastructure and Educational Programmes (Agreement №2012/05 dated August 06, 2012).
- Creation of portable microconsole sensors for biomedical applications. Foundation of Assistance for Small Innovation Enterprises (State contract No10037p/17013 dated February 01, 2012).

Project management:

- LG Electronics – M.V. Lomonosov Moscow State University Joint Laboratory (Agreement JM-02/2013 dated March 4, 2013) 2013 – 2015.
- Development of portable analyser based on cantilever biochips for express diagnostic of prostate cancer (State contract № 16.512.11.2265) 2011 – 2012.
- Development of micromechanical cantilever system for biochemical analysis (State contract № 16.513.11.3021) 2011 – 2012.
- Sensors with Remote Operation for Chemical and Biological protection. NATO Science for Peace project (CBR.NR.NRSFPP 983204) 2008 – 2011.
- Microcantilever sensors for chemical and biological applications. Joint project between MSU (Russia) and KIST (South Korea) 2009 – 2010.
- Development of methods for multyparameter sensor nanosystems creation based on mechanical, electronic and optical transducers. Russian Ministry of Education and Science (Contrat No 02.513.11.3406) 2008.