**Personal information**

**Anatolii Otroshchenko**

614520 6 Zemlyanichnaya Street, Mokino,
Permskiy kray, Russia

Married

08th Dec 1983

a.otroshchenko@metalab.ifmo.ru,

winzip2014@gmail.com,

**Education**

Perm State University (Russia), Faculty of Physics, direction: physics (2003-2010)

**Research**Microfluidics, Microfluidics device fabrication, Lab\_on\_a\_chip, 3d prototyping, biosenors

**EMPLOYMENT**

**2021 – present. Research Engineer.**

[**ITMO University. St Petersburg**](https://physics.itmo.ru/ru)**, Russia**

**2012 - 2021** [**Perm state University**](http://www.psu.ru/)**. Perm, Russia**

I am a Head of the laboratory of Microfluidics at the Department of General Physics. My responsibilities at Physics Department include:

1. Setting up equipment and maintaining the performance of laboratory equipment. Only 70 items, the most interesting are: 3d nanoprinter *Photonic Professional*, plasma processing system *Diener Electronic*, magnetron sputtering *VSM-100*, mask aligner system *MDA400*, developing machine *Colenta IL35NG*, photoplotter *Miva 1624E-T3*, 3d microscope *Keyence vk-x200*, tensiometers *Sigma 700* series and other equipment.
2. Ensure the functioning of the clean room. (6 class R ISO 14644-1-2000).
3. Paperwork related to the purchase and supply of consumables for the laboratory and for the performance of research work.
4. Research work consists in fulfilling orders coming to the university from third-party firms, enterprises, laboratories and paramilitary enterprises. In total, from 2015 to 2020, I completed 12 research projects and now carry out two projects. Some of the most significant projects I've done:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2014-2015 within the framework of the Federal Target Program "Research and Development in Priority Areas of Development of the Scientific and Technological Complex of Russia for 2014 - 2020" (Agreement No. 14.574.21.0028). The theme is "*Creation of a biosensor for the detection and monitoring of persistent organic pollutants (polychlorinated biphenyls) in environmental components using bacterial cells and a microfluidic chip.*" The work was carried out under the guidance of Professor E.G. Plotnikova. The work was patented. In this work, my task was to develop a microfluidic platform and a method for detecting a contaminant.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Research work on the theme: "*Investigation of the morphological features of nanostructured compounds based on transition metal oxides.*" Customer - INSTITUTE OF SOLID STATE CHEMISTRY ([IHTT UB RAS](http://eng.ihim.uran.ru)).

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
Federal Target Program "Pharma - 2020" State contract No. 14.N08.11.0093, a civil law contract for the performance of research work has been concluded and executed. Development of a system for obtaining monodisperse emulsion “*glytifene”* based on a microfluidic chip. Conditions, parameters of the system. Development of a production cycle for obtaining a monodisperse emulsion “*glytifene”*.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Civil law contract for the implementation of applied and experimental developments. Mission: *development of synthesis technology and laboratory regulations for obtaining a pharmaceutical substance, a finished dosage form; carrying out standard control of the developed laboratory regulations; preparation of regulations "Information materials", "Recycling and disposal of waste", "Safety, fire safety and sanitary standards", "Environmental protection"*. It is a Federal target program "Development of the pharmaceutical and medical industry of the Russian Federation for the period up to 2020 and beyond".

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Research work on *measuring fractograms of weld metal fractures in accordance with the requirements (Appendix No. 1).* Customer - Federal State Autonomous Institution "Research and Training Center" Welding and Control "at MSTU named after N.E. Bauman "([FGAU" NUTSK at the Bauman Moscow State Technical University](https://sertink.ru/))

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Also, I am an assistant at the Department of General Physics. 1/10 of the assistant's rate. Responsibilities include teaching IV year students of the Faculty of Physics practical skills in working with laboratory equipment. I teach students of I-III courses in laboratory studies in mechanics, electricity, molecular physics.

 **2009-2011 г. Public Joint Stock Company** [***Proton-PM***](http://www.protonpm.ru/corporate/). **Perm, Russia**

Post - "Production site foreman". This position of the head of the department, our team consisted of 13 employees. I have directed the production of over 1500 different parts for Liquid-Propellant Rocket Engines. The main production task was to manufacture "*protection*" (it is engine protection elements) for the [RD-270](http://protonpm.com/creator/production/produce_and_services/pg1/282/) series.

**2008-2009** [**Perm state University**](http://www.psu.ru/)**. Perm, Russia**

Post - Engineer at the Department of General Physics. My responsibilities included setting up and maintaining high technology equipment.

**Publications**

Several articles co-authored:

1. Vaisberg L. A., Baldaeva T. M., Ivanov K. S., Otroshchenko A. A. Screening efficiency with circular and rectilinear vibrations. *Obogashchenie Rud.* 2016, Vol. 1, pp 3-9
DOI 10.17580/or.2016.01.01
2. Baldaeva T. M., Gladkova V. V., Otroshchenko A. A., Ustinov I. D. Mineral coal thermal modification effect upon its vibratory screening efficiency*. Obogashchenie Rud.* 2017, Vol. 1, pp 3-7DOI 10.17580/or.2017.01.01
3. Baldaeva T. M., Otroshchenko A. A., Vibrating screening of thermally modified coal // Collection of reports at the All-Russian scientific and technical conference of young scientists dedicated to the Year of Ecology "Combined and low-water processes of processing natural and anthropogenic raw materials." St. Petersburg. 2017. pp. 4-14
4. OtroshchenkoA.A., MakarikhinI.Yu. Laser 3D lithography, applications (review). *Bulletin of Perm University*. Physics, 2017, no. 2(36), pp. 9–19. doi: 10.17072/1994-3598-2017-2-9-19
5. Gladkova V. V., Kazakov S. V., Karapetyan K. G., Otroshchenko A. A. Vibratory treatment of a particularly brittle mineral material. *Obogashchenie Rud.* 2018, Vol. 2, pp 8-12
DOI 10.17580/or.2018.02.02
6. A.A. Otroshchenko, N.V. Kolchanov, E.A. Kolchanova. Isothermal flow of a magnetic fluid in rectangular microchannels // Reports of the VI Russian conference "Multiphase systems: models, experiment, applications", and schools of young scientists. "Gas hydrates - energy of the future" - Ufa, Russia, Publishing house "Oil and Gas Business", 2017. P. 83

**Personal qualities**

Reliable, disciplined, energetic, punctual.

### References

Dean of the Faculty of Physics at [Perm state University](http://www.psu.ru/fakultety/fizicheskij-fakultet/dekanat)

Konstantin Gavrilov

dean.phys@psu.ru