**Curriculum Vitae**

Svetlan Sushkova

**Office Address:**

Academy of Biology and Biotechnology behalf D.I. Ivanovskiy, Southern Federal University,
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**Languages:** English, Russian

**Education:**

2013 – to present
Dr. of Soil Science, Lomonosov Moscow State University, Faculty of Soil Science, PhD Thesis "Evaluation of benzo[a]pyrene content in soil and plants of Novocherkassk Power Station emission zone".
2008–2012
Southern Federal University, Department of Biology, Postgraduate student.
Direction/speciality – 03.00.27. Soil science. Specialization – the Ecological-economic estimation of the soils.
2003–2008
B.Sc.-M.Sc. Southern Federal University, Department of Biology, graduate student.
Direction/speciality – Soil science. Specialization – Ecological-Economic Estimation of the Soils.

**1. TOTAL SCIENTIFIC PUBLICATIONS:** 612 (342 in English)
**Monographs:** 5
**Putents, IPO: 12**
**SCOPUS - 149, the number of citations - 1131, h-index - 17.**
**WEB OF SCIENCE - 102, the number of citations - 685, h-index - 15.**

**2. Professional Experience:**

2014-present – Academy of Biology and Biotechnology Southern Federal University, Assoc.Prof.Dr., Head of laboratory "Ecological Soil Monitoring", Leading Scientist; Deputy-Director on International Collaboration.
2009-2014 – Department of Biology Southern Federal University, Scientific Research Institute of Biology, Junior Scientist.
2009-present – Technology Transfer Office Southern Federal University "Technopark Rostov State University", Director of Small Enterprise "SCF-Rostov-on-Don".
2008-2009 – Department of Chemistry Southern Federal University, Scientific Research Institute of Physics and Organic Chemistry, Junior Researcher.
2005-2006 – Department of Chemistry Southern Federal University, Ecologically-Analytical Center of the South of Russia, Senior Laboratory Assistant.

**3. Membership:**

2003 – to present Member of Dokuchaev Society of Soil Scientists.
2014 – to present Member of Eurasian Soil Science Societies.
Member of organizing committee 9th International Soil Science Congress on "The Soul of Soil and

Civilization" Antalya-Turkey, October 14-16, 2014; The Member of the Russian Society of soil scientists of V. V. Dokuchayev;
Member of editorial board of the international scientific journal Eurasian Journal of Soil Science, www.fesss.org

**Area of expertise**: Biogeochemistry of Organic Pollutants, Environmental Soil Chemistry
**Teaching duties**: Lectures of methods of soil chemical analysis. Supervision of bachelors' projects.

## International Lectures Training course:

2018 – lectures in English on the theme «Soil-plant system under antropogenic pressure and chemical pollution» for masters of Agricultural Faculty of Selcuk University (Konya, Turkey).
2018 – seminar in English about soil contamination in China University of Geoscience.
2018 – lectures in English on the theme «Supercritical extraction techniques for environmental analysis» for masters of Agricultural Faculty of Ondokuz Mayis University (Samsun, Turkey).
2017 – lectures in English on the theme «Organic and inorganic contamination under Thermal Power Station effect» for masters of Agricultural Faculty of Selcuk University (Konya, Turkey).
2017 – lectures in English «Specific features of polycyclic aromatic hydrocarbons behavior in soil-plant system» for masters of Agricultural Faculty of Erevan State University (Erevan, Armenia).
2016 – lectures in English on the theme «Subcritical water extraction for environmental analysis» for masters of Agricultural Faculty of Ondokuz Mayis University (Samsun, Turkey).
2016 – lectures in English on the theme «Polycyclic aromatic hydrocarbons in soils of technogenically transformed areas» for masters of Agricultural Faculty of Selcuk University (Konya, Turkey).
2015 – lectures in English on the theme «Innovation techniques in soil science» for masters of Agricultural Faculty of Selcuk University (Konya, Turkey).
2014 – lectures in English on the theme «Using of subcritical technologies and techniques in soil science» for Master's of Soil science and plant nutrition department at Agricultural faculty of Ondokuz Mayis University (Samsun, Turkey).
2014 – Lectures in English of the theme «Soil Pollution by Heavy Metals: Determination and Measurement» masters 1 and 2 years of training of Department of soil science and plant nutrition, Faculty of Agriculture of ORDU university (Ordu, Turkey).
2011 – Lectures in English of the theme «Subcritical water extraction of quercetinum» during CRDF commercialization travel grant, Babson College (USA, Boston).

## Awards and Grants

Vice-Director of Academy of Biology and Biotechnology on International Collaboration since 2015. Institutional coordinator of exchange mobility programs for Academic staff and students with University of Zagreb (Zagreb, Croatia); University of Saarlander (Saarbrücken, Germany); Ondokuz Mayis University, Turkey (Erasmus+ associated partner, Mevlana exchanges programs); Selcuk University, Konya, Turkey (Mevlana, Tubitak project); Saarland University, Saarbrucken, Germany (Erasmus+ exchange program); Erevan State University, Erevan, Armenia (bilateral project Russian Foundation for Basic Research №18-55- 05023 and Ministry of Education and Science of Armenia); Geoscience University, Beijing, China ("Belt and Road Project", State Department of Foreign Experts of China); International Plant Nutrition Institute, Saskatoon, Canada (Project "Improving the mineral nutrition of corn and chickpea on ordinary chernozem carbonate", financed by Ministry of Agriculture, Canada); Hunan University of Humanities, Science and Technology, Loudi Hunan, China ("Overseas talent and intelligence introduction project", Ministry of Education and Science China), USA, Department of Food Science, School of Environmental and Biological Sciences, Rutgers State University; USA, New York Institute of Urban Soils.

The winner of the international program of scientific and academic exchanges Erasmus+

(European Union), Mevlana (Turkish Ministry of Education and Science) for 2013-2014, 2015-2016, 2016-2018, 2017-2018, 2018-2019 Academic years. Award of the Government of the Rostov region for “100 young scientists of Southern Federal University” involved in research and innovation activities in 2014, 2015, 2016. Diploma of the Southern Federal University Rector for "International and national recognition" Rostov-on-Don, 2015, 2017, 2018. The winner of competitions for the President of the Russian Federation state support of young Russian scientists in 2015 and 2017. Soil Science museum organization project of Southern Federal University, 2019. Winner of Russian Foundation of Basic Researches in projects carried out by leading youth teams in 2015. Winner Russian Foundation of Basic Researches in projects for young scientists - doctors and candidates of sciences in research organizations of the Russian Federation in 2014. The winner of the workshop on technology commercialization, conducted by the American Fund for Civil Research and Development Foundation (CRDF) at the Southern Federal University in October 2010. In 2011 passed training in the leading educational institutions of Boston (USA) on training in commercialization models of scientific and technical products and questions of patenting of intellectual property in the USA. Represented innovative development of Southern Federal University at the International Venture exhibition TechConnectWorld 2011. The project manager START-UP of Fund of Assistance to Development of Small Forms of the Enterprises in the Scientific and Technical Sphere. Has an experience in the management of the small enterprises which is engaged in commercialization and implementation of the scientific and technical products results received within scientific researches. Was the performer in 26 grants of the Ministry of Education and Science of the Russian Federation, the Russian Federal Property Foundation, the Civilian Research and Development Foundation (CRDF), Council for the Russian President's projects.

In December, 2012, successfully defended the PhD thesis at Lomonosov Moscow State University.

The member of the Organizing Committee II International Scientific Conference “Current State of Chernozems” and International School-Seminar for Young Scientists «Soil science and global challenges of our time: climate change, the problems of geo- and biomedicine, forensic-pedological expertise», Rostov-on-Don, September 24-28, 2018; Organizing Committee of the 9th International Soil Science Congress on "The Soul of Soil and Civilization" Antalya-Turkey, October 14-16, 2014; A member of the Russian Society of Soil Scientists them. VV Dokuchaeva; Member of the Organizing Committee of the 10th International Soil Science Congress on “Soil Science in International Year of Soil” Sochi, October 19-23, 2015; Member of the editorial board of the international peer-reviewed scientific journal Eurasian Journal of Soil Science, www.fesss.org

Included in the "Russian Leading Scientific Schools" supported by Project of the President of Russian Federation (NSH-9072.2016.11 and NSH-5548.2014.5).

**Projects**: The scientific leader of 11 scientific projects of Russian Foundation of Basic Research, the Foundation of President of Russian Federation, Civilian Research and Development Foundation (USA) and Ministry of Education and Science of the Russian Federation and 8 Russian and International traveling grants.

**The project leader**:

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| 2019–2022 | Russian Science Foundation project no. 19-74-10046 “Theoretical foundations, experimental methods of soil control and remediation in case of combined contamination with polycyclic aromatic hydrocarbons and heavy metals” |
| 2019–2020 | Grant of the President of Russian Federation project no. MK-2973.2019.4 "Development of methods for the control and restoration of soils in case of combined pollution with polycyclic aromatic hydrocarbons and heavy metals" |
| 2017–2018 | President of Russian Federation project no. MK-3476.2017.5 "Development of methods for sorption bioremediation of soils contaminated with polycyclic aromatic hydrocarbons" |

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| 2016–2018 | Russian Foundation for Basic Research project no. 16-35-60051 "The study of the mechanisms of accumulation, transformation and the inactivation of polycyclic aromatic hydrocarbons in soils and sediments technogenic contaminated territories Lower Don" |
| 2015–2016 | Russian Foundation for Basic Research project no. "Biogeochemical features of the behavior of polycyclic aromatic hydrocarbons in the soils of the south and north-east of European Russia" 2015-2016 RFBR Grant Agreement number 15-35-21134NC\15 from 22.04.2015. (Contest of research projects carried out by leading youth groups in) |
| 2015–2016 | President of Russian Federation Contract project no. 14.Y30.15.6827-MC "The patterns of accumulation, migration and transformation of polycyclic aromatic hydrocarbons in the soil - plant antropogenous areas of Northern Azov" |
| 2014 | Russian Foundation for Basic Research project no. 14-35-50864_mol_nr “Features of accumulation, migration and transformation benzo(a)pyrene in the soil-plant system using new methods of analysis " |
| 2013 | Southern Federal University project no. 213.01-24 / 2013-51 dated April 30, 2013Sub- and supercritical fluid extraction of polycyclic aromatic Hydrocarbons from Plants |
| 2010–2012 | Foundation for Assistance of Innovations "START." Grant from the Fund for Assistance in Small Business Development enterprises in the scientific and technical sphere project no. № 10382p/18365. |
| 2011 | CRDF Global, travel grant, 2011, American Civilian Foundation Grant research and development BP9M04. |
| 2009–2011 | Foundation for Assistance of Innovations "UMNIK." Foundation for Assistance to the Development of Small Forms of Enterprises in the Primary Technical Sphere, "Development and Research of Environmentally Friendly terpene alcohols " project no. 9653r/9. |

**Area of research interests**: Soil Science, Polycyclic aromatic hydrocarbons contamination, Environmental Impact Assessment, Sustainable Agriculture, Soil Chemistry, New Methods of contaminants Extraction, Green Chemistry, Soil Analysis, Soil Fertility, Adsorption, Environmental Science, Heavy Metals, Organic Farming, Biogeochemistry, Soil Biology, Flavonoids, Soil Ecology, Soil Characterization, Salinity, Clay, Hydrochemistry.

## List of basic publications indexed in Web of Science and Scopus databases:


1. Sushkova S, Minkina T, Tarigholizadeh S, Antonenko E, Konstantinova E, Gülser C, Dudnikova T, Barbashev A, Kızılkaya R. Pahs accumulation in soil-plant system of phragmites australis cav. in soil under long-term chemical contamination. Eurasian J Soil Sci 2020;9(3):242-53.
2. Sushkova S, Minkina T, Deryabkina I, Antonenko E, Mandzhieva S, Zamulina I, Bauer T, Gromakova N, Vasilyeva G. Phytoaccumulation of benzo[a]pyrene by the barley in artificially contaminated soil. Polycyclic Aromat Compd 2019;39(5):395-403.
3. Gorovtsov AV, Minkina TM, Mandzhieva SS, Perelomov LV, Soja G, Zamulina IV, Rajput VD, Sushkova SN, Mohan D, Yao J. The mechanisms of biochar interactions with microorganisms in soil. Environ Geochem Health 2020;42(8):2495-518.
4. Minkina T, Sushkova S, Konstantinova E, Kumar Yadav B, Mandzhieva S, Konstantinov A, Khoroshavin V, Nazarenko O, Antonenko E. Polycyclic aromatic hydrocarbons in urban soils within the different land use: A case study of tyumen, russia. Polycyclic Aromat Compd 2020;40(4):1251-65.
5. Sushkova, S., Minkina, t., Deryabkina, I., Rajput, V., Antonenko, E., Nazarenko, O., Yadav, B.K., Hakki, E. and Mohan, D. Environmental pollution of soil with PAHs in energy producing plants zone. Science of the Total Environment, 655 (2019), pp. 232- 241.
6. Sushkova S., Deryabkina I., Antonenko E., Kizilkaya R., Rajput V., Vasilyeva G. Benzo[a]pyrene

degradation and bioaccumulation in soil-plant system under artificial contamination // Science of the Total Environment 633 (2018) 1386–1391. https://doi.org/10.1016/j.scitotenv.2018.03.287
7. Sushkova, S.N., Minkina, T., Deryabkina (Turina), I., Mandzhieva, S., Zamulina, I., Bauer, T., Vasilyeva, G., Antonenko, E., Rajput, V. Influence of PAH contamination on soil ecological status (2018) Journal of Soils and Sediments, 18 (6), pp. 2368-2378.
8. Sushkova, S., Minkina, T., Deryabkina (Turina), I., Mandzhieva, S., Zamulina, I., Bauer, T., Vasilyeva, G., Antonenko, E., Rajput, V., Kızılkaya, R. Features of accumulation, migration, and transformation of benzo[a]pyrene in soil-plant system in a model condition of soil contamination (2018) Journal of Soils and Sediments, 18 (6), pp. 2361- 2367.
9. Gorovtsov, A., Minkina, T.M., Morin, T., Zamulina, I.V., Mandzhieva, S.S., Sushkova, S.N., Rajput, V. Ecological evaluation of polymetallic soil quality: the applicability of culture-dependent methods of bacterial communities studying (2018) Journal of Soils and Sediments, pp. 1-12. Article in Press.
10. Rajput, V.D., Minkina, T.M., Behal, A., Sushkova, S.N., Mandzhieva, S., Singh, R., Gorovtsov, A., Tsitsuashvili, V.S., Purvis, W.O., Ghazaryan, K.A., Movsesyan, H.S. Effects of zinc-oxide nanoparticles on soil, plants, animals and soil organisms: A review. (2018) Environmental Nanotechnology, Monitoring and Management, 9, pp. 76-84.
11. Sushkova, S., Minkina, T., Deryabkina (Turina), I., Antonenko, E., Mandzhieva, S., Zamulina, I., Bauer, T., Gromakova, N., Vasilyeva, G. Phytoaccumulation of Benzo[a]pyrene by the Barley in Artificially Contaminated Soil (2017) Polycyclic Aromatic Compounds, pp. 1-9. Article in Press.
12. Sushkova S., Minkina T., Turina I., Mandzhieva S., Bauer T., Kizilkaya R., Zamulina I. Monitoring of benzo[a]pyrene content in soils under the effect of long-term technogenic pollution // Journal of Geochemical Exploration, SI: Remediation of Polluted Soils - Part 1, Volume 174, March 2017, Pages 100–106. DOI: 10.1016/j.gexplo.2016.02.009
13. Minkina T.M., Mandzhieva S.S., Chaplygin V.A., Bauer T.V., Burachevskaya M.V., Nevidomskaya D.G., Sushkova S.N., Sherstnev A.K., Zamulina I.V. Content and distribution of heavy metals in herbaceous plants under the effect of industrial aerosol emissions // Journal of Geochemical Exploration. Volume 174, March 2017, Pages 113– 120. DOI:10.1016/j.gexplo.2016.05.011
14. Bauer T.V., Minkina T.M., Pinskii D.L., Mandzhieva S.S., Sushkova S.N. Adsorption of copper by ordinary and southern chernozems from solutions of different salts // Journal of Geochemical Exploration. 2015. Available online 18 December 2015. DOI: 10.1016/j.gexplo.2015.12.008 GEXPLO_5676 http://www.sciencedirect.com/science/article/pii/S0375674215301072
15. Minkina T.M., Pinskii D.L., Bauer T.V., Nevidomskaya D.G., Mandzhieva S.S., Sushkova S.N. Sorption of Cu by chernozems in southern Russia // Journal of Geochemical Exploration. Volume 174, March 2017, Pages 107–112 DOI information: 10.1016/j.gexplo.2016.06.002
16. Gülser C., Minkina T.M., Sushkova S.N., Kızılkaya R. Changes of soil hydraulic properties during the decomposition of organic waste in a coarse textured soil // Journal of Geochemical Exploration. Volume 174, March 2017, Pages 66–69. DOI: 10.1016/j.gexplo.2016.05.014
17. Batukaev A.A., Endovitsky A.P., Andreev A.G., Kalinichenko V.P., Minkina T.M., Dikaev Z.S., Mandzhieva S.S., and Sushkova S.N. Ion association in water solution of soil and vadose zone of chestnut saline solonetz as a driver of terrestrial carbon sink // Solid Earth. 2016, Vol. 7, Is. 27, pp. 415-423. DOI:10.5194/se-7-415-2016 ttp://www.solid- earth.net/7/415/2016/
18. Sushkova S.N., Minkina T.M., Mandzhieva S.S., Vasilyeva G.K., Borisenko N.I., Turina I.G., Bolotova O.V., Varduni T.V., Kızılkaya R. New alternative method of benzo[a]pyrene extractionfrom soils and its approbation in soil under technogenic pressure
// Journal of Soils and Sediments, SI: Soil Pollution and Remediation. 2016, Vol. 16, Is. 4, pp. 1323-1329.
19. Sushkova S., Minkina T., Batukaev A., Turina I., Mandzhieva S., Vasilyeva G., Kizilkaya R., Zamulina I., Akca I. Analysis of Benzo[a]Pyrene Contamination from an LongTerm Contaminated Soil // American Journal of Biochemistry and Biotechnology 2015, DOI: 10.3844/ajbbsp.2015.
20. Sushkova S., Minkina T., Mandzhieva S., Turina I., Bolotova O., Vasilyeva G., Varduni T., Kizilkaya R. Solubility of benzo[a]pyrene and organic matter of chernozem in subcritical water // Croatica Chemica Acta 2015, 88(3): 247-253. DOI: 10.5562/cca2640