

CURRICULUM VITAE OF DR S. A. BLAGODATSKY



Name:	Sergey Alexandrovich Blagodatsky
Date of birth:	16th January 1961
Birth place:	Shchyolkovo, Moscow region, Russian Federation
Designation:	Research fellow, University of Hohenheim Institute for Plant Production and Agroecology in the Tropics and Subtropics Garbenstrasse 13 70593 Stuttgart, Germany
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Education:

Institution	Examination passed	Year	University	Subject
Soil biology department	PhD	1987	Moscow State University	Soil microbiology
Soil biology department	M.Sc.	1983	Moscow State University	Soil science and agricultural chemistry
Soil biology department	B.Sc.	1981	Moscow State University	Soil biology, Soil chemistry

Professional employment:

2012 -- pres	Post-Doc, Institute for Plant Production and Agroecology in the Tropics and Subtropics, University of Hohenheim
2010 – 2012	Research Fellow, Institute of Biological and Environmental Sciences School of Biological Sciences, University of Aberdeen;
2006 – pres	Leading research scientist, Institute of physico-chemical and biological problems in soil science, Russian Academy of Science;
2009-2010	Visiting scientist, Institute of Meteorology und Climate Research – Institute of Environmental Research, Research Centre Karlsruhe, Garmisch-Partenkirchen, Germany
2008-2009	Alexander von Humboldt research Fellow, University of Bayreuth, Germany;
2000 – 2005	Senior research scientist, Institute of physico-chemical and biological problems in soil science, Russian Academy of Science;
2005	Visiting scientist at Hohenheim University, Institute of soil science and land evaluation, Stuttgart, Germany

2003–2004, 2008	Visiting scientist, Institute of Meteorology und Klimate Research – Institute of Environmental Research, Research Centre Karlsruhe, Garmisch-Partenkirchen, Germany
2001 – 2002	Visiting scientist at Biosphere-2 Center, Oracle AZ, USA
2000 – 2002	Part-time lecturer (associate professor) at Pushchino State University, Soil Science and Ecology Department;
2000-2001	Visiting scientist, Institute of Agroecology, Federal Agricultural Research Center (BFAL), Braunschweig, Germany;
1997 - 2000	Research scientist, Institute of Soil Science and Photosynthesis, Russian Academy of Science;
1995-1997, 1999	Alexander von Humboldt research Fellow, Institute of Geography and Geoecology, Technical University of Carolo-Wilhelmina, Braunschweig, Germany;
1988-1995	Research scientist, Institute of Soil Science and Photosynthesis, Russian Academy of Science;
1987-1988	Junior research scientist, Institute of Soil Science and Photosynthesis, Russian Academy of Science;
1983-1986	Postgraduate student, Institute of Soil Science and Photosynthesis, Russian Academy of Science,
1978-1983	Student, Department of Soil Science, Moscow State University;

Research Experience

Publications:

Scientific work started from the year 1981. 152 scientific publications were published including 53 research articles in the national and international peer-reviewed scientific journals and 9 contributions to books. 47 of these major contributions are available in English.

Referee of scientific funds:

NWO (Netherland Research Society), Austrian Research Fund.

Referee of peer-reviewed journal:

Soil Biology & Biochemistry, Plant and Soil, Biogeochemistry, Geomicrobiology Journal, Journal of Soils and Sediments, Soil Use and Management, Eurasian Soil Science, Microbiology.

Editorial board:

European Journal of Soil Biology.

Memberships:

Russian Soil Science Society
European Geoscience Union

Field of specialization: soil microbiology and biochemistry; balance and turnover of C and N in atmosphere – plant – soil system; modeling of C and N cycling.

Present research interest:

1. The role of soil microbes in production and uptake of greenhouse gases: modelling of nitrogen oxides and CO₂ emission from soil.
2. Bacterial and fungal biomass and activity dynamics in soils of different ecosystems.

3. The theory of microbial growth and its application in ecology. In particular, the investigation of efficiency of microbial growth and effects of nitrogen on processes of microbial growth and activity in soil.

Languages: Russian (mother tongue), fluent in English, good in German

Teaching experience: Lecture course “Microbiocenoses in Agroecosystems” in Pushchino State University in 2000-2002, and teaching on Undergraduate Course BI1509 (Ecology and Environmental Science) in the University of Aberdeen in 2011. Supervising of three postgraduate students.

Fellowships and grants (PI or Co-PI):

Funding organisation	Grant/fellowship
Alexander von Humboldt Foundation (Germany)	Research fellowship: <i>Modeling of priming effects for precise description of soil organic matter dynamic</i> - University of Bayreuth, Germany, October 2008-January 2009
European Science Foundation	Research fellowship in the frame of Nitrogen in Europe initiative: <i>Modeling of greenhouse gases emission from forest soils: verification of MiCNiT model</i> - Institute of Meteorology und Climate Research – Institute of Environmental Research, Research Centre Karlsruhe, Garmisch-Partenkirchen, Germany, May – August 2008.
Russian Foundation for Basic research	Research grant: <i>Emission of nitrous oxide from soils: mechanisms and modelling</i> 2006-2008
European Union	INCO grant in 6 th framework program of EC, IP NitroEurope <i>The nitrogen cycle and its influence on the European greenhouse gas balance</i> . 2006-2011
Russian Foundation for Basic research	Research grant <i>C-turnover in rhizosphere under elevated atmospheric CO₂ concentration</i> 2002-2004
Alexander von Humboldt Foundation (Germany)	Research fellowship: <i>Efficiency of microbial growth as depend on soil prehistory</i> - Technical University of Braunschweig, Germany May-August 1999
Alexander von Humboldt Foundation (Germany)	Research fellowship: <i>Modelling of microbial biomass and nitrogen turnover in soil</i> - Technical University of Braunschweig, Germany, February 1996 - July 1997
German Research Society - DFG (Germany)	Research fellowship for participation in the collaborative research program 179 <i>Water and Matter Dynamics in Agro-Ecosystems</i> financed by the German Research Society - Technical University of Braunschweig, Germany - October-November 1993 and May-July 1994.
International Science Foundation (George Soros Fund)	Lump-sum research grant, 1993

Other research projects completed:

1. Research fellowship sponsored by Helmholtz association of National Research Centers (Germany) in 2009-2010. Application of MobiLE-DNDC model for simulation of

- ecosystem processes and greenhouse gases emission for agricultural, grassland and forest sites involved in NitroEurope project was completed (2,7^{*}).
2. Research fellowship sponsored by Helmholtz association of National Research Centers (Germany) in 2003-2004. Production of NO and N₂O by soil heterotrophic bacteria under varying conditions of oxygen saturation, temperature and pH level was studied (16, 17, 21). Based on model simulations of enzymatic kinetics of denitrification, possible mechanisms of increased nitrogen oxides production during periods of changes in oxygen supply are suggested.
 3. Short-term research fellowships sponsored by Columbia University (City of New York, USA) in 2001-2002. Soil respiration and belowground carbon balance in Biosphere 2 laboratory under elevated CO₂ was studied (6, 19, 22, 27).
 4. Project supported by Presidium of Russian Academy of Sciences: Studies on the plant-microbial competition for nitrogen. Microorganisms were studied as a source and sink of available nitrogen for plants. ¹⁵N labelling and modelling was used for the estimation of fertilizer nitrogen distribution between plants and microorganisms (38, 40).
 5. Project supported by Russian Foundation for Basic Research: Contribution to the solution of the problem of "added nitrogen interaction". Acceleration of soil organic carbon and nitrogen mineralization after addition of N fertilizer and the phenomenon of CO₂ evolution decreasing on N amended plots was studied (41).
 6. Co-operative research with Institute of Microbiology, Russian Academy of Sciences, Moscow. Modification of Wright-Hobbie heterotrophic activity method for soil studies, determination of mineralization activity parameters for microbial assemblages in soil. Both experimental technique (¹⁴C labelling) and mathematical model used for approximation and interpretation of experimental data were refined (42).
 7. PhD Thesis - "Microbiological immobilization of nitrogen in arable grey forest soil with different management" - an investigation of the microbial biomass nitrogen reserves dynamics (148). The N-flux through the microbial biomass and its relationships with crop rotation, soil treatment and rate of soil fertilization were estimated.
 8. Graduate diploma work (approx. equivalent to M.Sc. dissertation) at Moscow State University - Studies of microbial survival in permafrost for millions of years (Kolyma lowland) (50). The results of this research were listed in Guinness World Records Book in 1991.

^{*} Referenced in the List of Publications

List of publications of Dr. S.A. Blagodatsky

Papers in peer-reviewed journals

1. **Blagodatsky, S.**, Smith, P., 2012. Soil physics meets soil biology: Towards better mechanistic prediction of greenhouse gas emissions from soil. *Soil Biology and Biochemistry* 47, 78-92.
2. Chen, R., Blagodatskaya, E., Senbayram, M., **Blagodatsky, S.**, Myachina, O., Dittert, K., Kuzyakov, Y., 2012. Decomposition of biogas residues in soil and their effects on microbial growth kinetics and enzyme activities. *Biomass & Bioenergy* 45, 221-229.
3. Wutzler, T., **Blagodatsky, S.A.**, Blagodatskaya, E., Kuzyakov, Y., 2012. Soil microbial biomass and its activity estimated by kinetic respiration analysis - Statistical guidelines. *Soil Biology and Biochemistry* 45, 102-112.
4. P. Smith, F. Albanito, M. Bell, J. Bellarby, **S. Blagodatskiy**, A. Datta, M. Dondini, N. Fitton, H. Flynn, A. Hastings, J. Hillier, E.O. Jones, M. Kuhnert, D.R. Nayak, M. Pogson, M. Richards, G. Sozanska-Stanton, S. Wang, J.B. Yeluripati, E. Bottoms, C. Brown, J. Farmer, D. Feliciano, C. Hao, Hon Man Wong & J. Smith, 2012. Systems Approaches in Global Change and Biogeochemistry. *Philosophical transactions of the Royal Society B* V.367, P.311-321.
5. **Blagodatsky S**, Grote R, Kiese R, Werner C, Butterbach-Bahl K, 2011. Modelling of microbial carbon and nitrogen turnover in soil with special emphasis on N-trace gases emission. *Plant and Soil* 346:297-330.
6. Blagodatskaya E, Yuyukina T, **Blagodatsky S**, Kuzyakov Y, 2011. Three-source-partitioning of microbial biomass and of CO₂ efflux from soil to evaluate mechanisms of priming effects. *Soil Biology and Biochemistry* 43:778-786.
7. Blagodatskaya E, Yuyukina T, **Blagodatsky S**, Kuzyakov Y, 2011. Turnover of soil organic matter and of microbial biomass under C3-C4 vegetation change: Consideration of ¹³C fractionation and preferential substrate utilization. *Soil Biology and Biochemistry* 43: 159-166.
8. **Blagodatsky SA**, Blagodatskaya EV, Yuyukina TV, Kuzyakov Y. 2010. Model of apparent and real priming effects: linking microbial activity with soil organic matter decomposition. *Soil Biology and Biochemistry* 42, 1275-1283.
9. Blagodatskaya E, **Blagodatsky S**, Dorodnikov M, Kuzyakov Y. 2010. Elevated atmospheric CO₂ increases microbial growth rates in soil: results of three CO₂ enrichment experiments. *Global Change Biology* 16(2):836-848.
10. de Bruijn AMG, Butterbach-Bahl K, **Blagodatsky S**, Grote R. 2009. Model evaluation of different mechanisms driving freeze-thaw N₂O emissions. *Agriculture, Ecosystems & Environment* 133(3-4):196-207.
11. Yakushev AV, **Blagodatsky SA**, Byzov BA. 2009. The Effect of Earthworms on Physiological State of Microbial Community at Vermicomposting. *Microbiology* 78(4):510-519.
12. Blagodatskaya E, **Blagodatsky S**, Anderson TH, Kuzyakov Y. 2009. Contrasting effects

of glucose, living roots and maize straw on microbial growth kinetics and substrate availability in soil. *European Journal of Soil Science* 60:186-197.

13. Dorodnikov, M., Blagodatskaya, E., **Blagodatsky, S.**, Fangmeier, A., Kuzyakov, Y., 2009. Stimulation of r- vs. K- selected microorganisms by elevated atmospheric CO₂ depends on soil aggregate size. *FEMS Microbiology Ecology* 69, 43-52.
14. Dorodnikov M, Blagodatskaya E, **Blagodatsky S**, Marhan S, Fangmeier A, Kuzyakov Y. 2009. Stimulation of microbial extracellular enzyme activities by elevated CO₂ depends on soil aggregate size. *Global Change Biology* 15(6):1603-1614.
15. Kuzyakov Y, Blagodatskaya EV, **Blagodatsky SA**. 2009. Comments on the paper by Kemmitt et al. (2008) 'Mineralization of native soil organic matter is not regulated by the size, activity or composition of the soil microbial biomass – A new perspective' [Soil Biology & Biochemistry 40, 61–73]: The biology of the Regulatory Gate. *Soil Biology and Biochemistry* 41(2): 435-439.
16. **Blagodatskiy SA**, Avksent'ev AA, Davydova MA, Blagodatskaya EV, Kurakov AV. 2008. Nitrous Oxide Production in Soils and the Ratio of the Fungal to Bacterial Biomass. *Eurasian Soil Science* 41(13):1448-1455.
17. **Blagodatskii SA**, Bogomolova IN, Blagodatskaya EV. 2008. Microbial Biomass and Growth Kinetics of Microorganisms in Chernozem Soils under Different Land Use Modes. *Microbiology* 77: 99-106.
18. Blagodatskaya EV, **Blagodatsky SA**, Anderson TH, Kuzyakov Y. 2007. Priming effects in Chernozem induced by glucose and N in relation to microbial growth strategies. *Applied Soil Ecology* 37: 95-105.
19. **Blagodatsky SA**, Kesik M, Papen H and Butterbach-Bahl K. 2006. Production of NO and N₂O by the heterotrophic nitrifier *Alcaligenes faecalis parafaecalis* under varying conditions of oxygen saturation. *Geomicrobiology Journal* 23: 165-176.
20. Kesik M, **Blagodatsky SA**, Papen H and Butterbach-Bahl K. 2006. Effect of pH, temperature and substrate on N₂O, NO and CO₂ production by *Alcaligenes faecalis p*. *Journal of Applied Microbiology* 101: 655-667.
21. **Blagodatsky SA**, Blagodatskaya EV, Anderson T-H, Weigel H-J 2006. Kinetics of the Respiratory Response of the Soil and Rhizosphere Microbial Communities in a Field Experiment with an Elevated Concentration of Atmospheric CO₂. *Eurasian Soil Science* 39(3):290-297.
22. Kudoyarov VN, Biel K, **Blagodatsky SA**, Semenov VM, Dem'yanova EG, and Dorodnikov MV 2006. Fertilizing Effect of the Increasing CO₂ Concentration in the Atmosphere. *Eurasian Soil Science* 39: S6-S14.
23. Yevdokimov IV, Saha S, **Blagodatsky SA**, Kudoyarov VN. 2005. N immobilization by soil microorganisms depending on nitrogen application rates. *Eurasian Soil Science* 38(5):516-23.
24. **Blagodatskii SA**, Kesik M, Papen H, Butterbach-Bahl K. 2004. Nitrogen oxide and nitrous oxide production by the *Alcaligenes faecalis parafaecalis* culture: the influence of pH and aeration. *Eurasian Soil Science* 37; S107-S110.

25. Ponizovskii AA, Kudeyarov VN, **Blagodatsky SA**, Alekseev AO, Bil` KYa., Murthy R. 2003. Soil as a component of "Biosphere-2". *Priroda* (Nature) (7):46-52. (in Russian)
26. Larionova AA , Rozanova LN., Yevdokimov IV, Yermolayev AM, Kurganova IN, **Blagodatsky SA** 2003. Land use change and management effects on carbon sequestration in soils of Russia's south taiga zone. *Tellus B* 55:331-7.
27. Larionova AA , Rozanova LN, Yevdokimov IV, **Blagodatsky SA**. 2003. Carbon balance in arable grey forest soils. *Annales Universitatis Mariae Curie-Sklodowska Lublin-Polonia*, Sectio E LVIII:193-203.
28. Blagodatskaya EV, Khokhlova OS, Anderson T-H, **Blagodatskii SA**. 2003. Extractable Microbial DNA Pool and Microbial Activity in Paleosols of Southern Urals. *Microbiology* 72(6):750-755.
29. Blagodatskaya EV, **Blagodatskii SA**, Anderson T-H. 2003. Quantitative Isolation of Microbial DNA from Different Types of Soils of Natural and Agricultural Ecosystems. *Microbiology* 72(6):744-749.
30. Kudeyarov VN, Ponizovskii AA, Bil` KYa, **Blagodatsky SA**, Alekseev AO, Semenov VM, et al. 2002. Soil in the intensive forestry biome at the Biosphere 2 station, Columbia university (Arizona, United States). *Eurasian Soil Science* 35(Suppl. 1):S34-S45.
31. **Blagodatsky SA**, Demyanova EG, Kobzeva EI, Kudeyarov VN. 2002. Changes in the efficiency of microbial growth upon soil amendment with available substrates. *Eurasian Soil Science* (8):65-71
32. Larionova AA, Rozanova LN, Demkina TS, Yevdokimov IV, **Blagodatsky SA**. 2001. Annual Emission of CO₂ from Gray Forest Soils. *Eurasian Soil Science* (1):72-80.
33. Blagodatskaya EV, Bogomolova IN, **Blagodatsky SA** 2001. Changes in ecological strategy of soil microbial community upon glucose addition. *Eurasian Soil Science* 34(5):530-537.
34. **Blagodatsky SA**, Heinemeyer O, Richter J. 2000. Estimating the active and total soil microbial biomass by kinetic respiration analysis. *Biology and Fertility of Soils* 32(1):73-81.
35. Larionova AA, Yermolayev AM, **Blagodatsky SA**, Rozanova LN, Yevdokimov IV, Orlinsky DB 1998. Soil respiration and carbon balance of gray forest soils as affected by land use. *Biology and Fertility of Soils* 27(3):251-257.
36. **Blagodatsky SA**, Yevdokimov IV, Larionova AA, Richter J. 1998. Microbial growth in soil and nitrogen turnover: model calibration with laboratory data. *Soil Biology and Biochemistry* 30(13):1757-1764.
37. **Blagodatsky SA**, Yevdokimov IV. 1998. Extractability of microbial N as influenced by C:N ratio in the flush after drying or fumigation. *Biology and Fertility of Soils* 28(1):5-11.
38. **Blagodatsky SA**, Richter O. 1998. Microbial growth in soil and nitrogen turnover: a theoretical model considering the activity state of microorganisms. *Soil Biology and Biochemistry* 30(13):1743-1755.

39. **Blagodatskii SA**, Yevdokimov IV, DeLuca T. 1997. Efficiency and selectivity of two methods for determination of nitrogen in soil microbial biomass. *Eurasian Soil Science* 30(9):1015-1023.
40. **Blagodatskii SA**, Blagodatskaya YeV. 1996. Dynamics of microbial biomass and ratio of eukaryotic and prokaryotic microorganisms in a gray forest soil. *Eurasian Soil Science* 29(12):1384-1389.
41. Yevdokimov IV, **Blagodatsky SA**. 1994. Nitrogen Immobilization and Remineralization by Microorganisms and Nitrogen Uptake by Plants: Interactions and Rate Calculations. *Geomicrobiology Journal* 11(3-4):185-193.
42. **Blagodatsky SA**, Blagodatskaya Ye V, Rozanova LN. 1994. Kinetics and strategy of microbial growth in chernozemic soil affected by different long-term fertilization. *Microbiology* 63(2):165-170.
43. Yevdokimov IV, **Blagodatskiy SA**, Kudеyаrov VN 1993. Microbiological Immobilization, Remineralization and Plant Uptake of Fertilizer Nitrogen. *Eurasian Soil Science* 25(8):16-28.
44. **Blagodatskiy SA**, Larionova AA, Yevdokimov IV. 1993. Effect of mineral nitrogen on the respiration rate and growth efficiency of soil microorganisms. *Eurasian Soil Science* 25(4):85-95.
45. Panikov NS, **Blagodatsky SA**, Blagodatskaya JV, Glagolev MV. 1992. Determination of microbial mineralization activity in soil by modified Wright and Hobby method. *Biology and Fertility of Soils* 14:280-287.
46. Yevdokimov IV, **Blagodatsky SA**, Larionova AA, Rozonova LN, Orlinsky DB, Kudеyаrov VN. 1991. Turnover rate of soil microbial biomass as affected by fertilizer application rate. *Agrochimija (Agrochemistry)* (12):49-56. (in Russian)
47. Kudеyаrov VN, **Blagodatsky SA**, Larionova AA. 1990. Change of internal soil nitrogen flows under application of nitrogen fertilizers. *Agrochimija (Agrochemistry)* (11):47-53. (in Russian)
48. **Blagodatsky S.A.**, Panikov N.S., Samoilov T.I. Effect of soil management on the dynamics of microbial nitrogen reserves in gray forest soil. *Pochvovedeniye (Soviet Soil Science)* 1989;(2):52-60. (in Russian)
49. **Blagodatsky SA**, Panikov NS. 1989. Quantity assessment of nitrogen immobilization in soil microorganisms. *Biologicheskije Nauki (Biological Sciences)* (8):96-102. (in Russian)
50. Panikov NS, **Blagodatsky SA**, Blagodatskaya YeV, Gorbenko AYu. 1988. The technique for soil microbial biomass measurement. *Byull. Izobr. i Otkr. (Bulletin of Inventions and Discoveries)*;(14):201.
51. **Blagodatsky SA**, Larionova AA. 1987. Daily dynamics of microbial carbon and nitrogen in arable grey forest soil. *Vestnik Moskovskogo Universiteta. Pochvovedeniye Seria 17 (Moscow University Bulletin, Section 17 - Soil Science)* (3):63-4.
52. **Blagodatskiy SA**, Blagodatskaya YeV, Gorbenko AYu, Panikov NS. 1987. A

rehydration method of determining the biomass of microorganisms in soil. *Soviet Soil Science* 3:119-26.

53. Zvyagintsev DG, Gilichinskii DA, **Blagodatskii SA**, Vorob'eva EA, Khlebnikova GM, Arkhangelov AA, et al. 1985. Survival time of microorganisms in permanently frozen sedimentary rocks and buried soils. *Microbiology* 54(1):131-6.

Books and book chapters

54. Kudeyarov, V.N., Zavarzin, G.A., **Blagodatsky, S.A.**, Borisov, A.V., Voronin, P.Y., Demkin, V.A. et al. Stocks and flows of carbon in terrestrial ecosystems of Russia. Moscow: Nauka. 2007: 315 p. (in Russian)
55. Blagodatskaya, E.V., **Blagodatsky, S.A.** Biomass and respiratory activity of microbial communities in soil and rhizosphere in field trial with different rates of nitrogen fertilizer application. In: *Soil processes and soil structure in space and time*. Kudeyarov, V.N. (ed). Moscow, 2006: pp. 185-195. (in Russian)
56. **Blagodatsky S.A.** Blagodatskaya E.V. Determination of microbial carbon in soil using glucose induced respiration technique. In: *Methods of soil organic matter studies*, VNIPTIOU ed. Wladimir. 2005:385-400 p. (in Russian)
57. Kesik M., **Blagodatsky S.A.**, Papen H., Butterbach-Bahl K. Dynamics of N₂O and NO production by *Alcaligenes faecalis parafaecalis*: effect of pH, temperature, substrate and oxygen supply. in: Hatch D.J., Chadwick D.R., Jarvis S.C., Roker J.A. Controlling nitrogen flows and losses. Wageningen Academic Publishers, 2004: 326-8.
58. Larionova A.A., **Blagodatsky S.A.** Does the nitrogen fertilization increase humus mineralization ? In: Senesi N., Miano T.M., Eds. "Humic substances in the global environment and implications in human health", Proceedings of 6th International Meeting of International humic substances society. Amsterdam: Elsevier, 1993:975-81 The Science of the Total Environment; 84.
59. **Blagodatsky S.A.**, Larionova A.A., Yevdokimov I.V. Contribution of root respiration to the total CO₂ emission from soil. Zavarzin G.A., Kudeyarov V.N., Eds. Soil Respiration. Information department of Pushchino biological center ed. Pushchino: 1993:26-32. (in Russian)
60. Ananjeva N.D., Demkina T.S., **Blagodatsky S.A.**, Samarkin V.A., Rivkina Ye.M., Tsigankov A.A., et al. Microbiological subjects in the environment. *Experimental'naja ekologija* (Experimental ecology). Nauka ed. Moscow: 1991:48-103. (in Russian)
61. Kudeyarov V.N., **Blagodatsky S.A.**, Kuznetsova T.V., Larionova A.A. Carbon compensation of "extra-nitrogen" appeared after nitrogen fertilization. In. *Poda aprodukcia agroekosystemov*. Sbornic 1.Vol. 10. Bratislava: DK OH 22-25, 1990:140-8.
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Other publications

63. Blagodatskaya E., **Blagodatsky S.**, Anderson T.H., Kuzyakov Y. Carbon use efficiency depends on microbial growth strategies in the rhizosphere and root-free soil. Ecology of Soil Microorganisms. Prague; 2011.
64. **Blagodatsky S.**, Blagodatskaya E., Dannenmann M., Avksent'ev A., Butterbach-Bahl K. Fungi-to-bacteria ratio affects N₂O emission from soils: experimental evidence and modelling. Ecology of Soil Microorganisms. Prague; 2011.
65. **Blagodatsky S.A.**, Grote R., Kiese R., and Butterbach-Bahl K. Modelling of physico-chemical and biological processes in soil for assessment of N and C budget and greenhouse gases emission. Second national conference EcoMatMod – Mathematical modeling in Ecology, Pushchino, 2011 (in Russian).
66. Blagodatskaya, E., Dorodnikov, M., **Blagodatsky, S.**, Kuzyakov, Y., 2010. Priming effects under elevated atmospheric CO₂: consequence of the increased microbial turnover in soil? Proceedings of International Symposium «SOM 2010: Organic matter stabilization and ecosystem functions», Presqu'île de Giens, p. 194.
67. Blagodatskaya, E., Khomyakov, N., Myachina, O., **Blagodatsky, S.**, Byzov, B., Kuzyakov, Y., 2010. Accelerated organic matter decomposition as a result of earthworms effect on soil microbial community, Proceedings of International Symposium «SOM 2010: Organic matter stabilization and ecosystem functions», Presqu'île de Giens, p. 130.
68. Blagodatskaya E, **Blagodatsky S**, Dorodnikov M, Kuzyakov Y. Elevated atmospheric CO₂ increases microbial growth rates and enzymes activity in soil. Geophysical Research Abstracts; 2010; Vienna. p EGU2010-6769.
69. Blagodatskaya E, **Blagodatsky S**, Yuyukina T, Kuzyakov Y. Kinetic analysis of microbial respiratory response to substrate addition. Geophysical Research Abstracts; 2010; Vienna. p EGU2010-6742.
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71. Blagodatskaya E, Khomyakov N, Myachina T, **Blagodatsky S**, Kuzyakov Y. Temperature or substrate: what is responsible for carbon decomposition in mountain soils? Geophysical Research Abstracts; 2010; Vienna. p EGU2010-6778.
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73. Blagodatskaya E, Zhuravleva A, Myakshina T, **Blagodatsky S**. Effect of ground fire of low intensity on soil organic matter decomposition. Geophysical Research Abstracts; 2010; Vienna. p EGU2010-6728.
74. Blagodatskaya E, **Blagodatsky S**, Kuzyakov Y. Respiration-to-DNA ratio reflects physiological state of microorganisms in root-free and rhizosphere soil. Geophysical Research Abstracts; 2009; Vienna. p EGU2009-12323.
75. Blagodatskaya E, Yuyukina T, **Blagodatsky S**, Kuzyakov Y. Three sources partitioning of CO₂ efflux from soil to evaluate mechanisms of priming effects; 2009 July 6-9, 2009;

Colorado Springs. p 72.

76. Blagodatskaya E, Yuyukina T, **Blagodatsky S**, Kuzyakov Y. Three sources partitioning of total and primed CO₂ efflux induced by glucose addition to soil; 2009; Bonn.
77. **Blagodatsky S**, Dorodnikov M, Blagodatskaya E, Kuzyakov Y. Microbial growth and enzyme activities induced by available substrates at elevated CO₂; 2009 July 6-9, 2009; Colorado Springs. p 121.
78. **Blagodatsky S**, Grote R, Butterbach-Bahl K. MiCNI^T - modeling of microbial carbon and nitrogen turnover in soil and greenhouse gases emission; 2009 July 6-9, 2009; Colorado Springs. p 176.
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