

CURRICULUM VITAE

Professor, Ph.D., Elena V. Zelinskaya
Date of Birth: January 18, 1965
Nationality: Russia (resident)
Language: Russian (native), English (Basic)

Science 02/20/2004 - Professor, Department of Mineral Processing and Environmental Engineering (MP&EE) , Irkutsk State Technical University (ISTU) (Irkutsk National Research Technical University).

03/07/2003 - 01/09/2008 - Dean of the Faculty of Chemical and Metallurgical, ISTU.

01/02/2007 -1/02/2008-head of the department of metallurgy of nonferrous metals, ISTU.

In 1992 - doctor of science, In 2003- professor. In 1992 - Ph.G.

19/12/1994-20/02/2004 - Associate Professor, (MP&EE, ISTU)

01/09/1992 - 12/19/1994 - Senior lecturer, Department of EE, Irkutsk Polytechnic Institute (IPI)

01/11/1991 -1/09/1992 - Junior Researcher Research Sector, IPI

01/11/1988 - 11/01/1991-Graduate student at the Department of Mineral Processing, IPI

1/09/1987-31/10/1988 - Researcher, Department of Mineral Processing, IPI

1/09/1982-31/08/1987 - Student of the Faculty of Metallurgical, IPI

Field of activity

Development of waste management concepts and recycling systems, development of technologies and technological schemes of waste processing, environmental assessment , environmental engineering design (landfills, sewage treatment plants), consulting in environmental issues for enterprises, local authorities and public administrations.

Ongoing Research Projects:

1. "Development of progressive methods and technologies for environmental protection." § 47/417. IRNITU. (RF). Performance Manager.
2. Topics of own research:
 - Theoretical and methodological foundations for the rational use of natural and technogenic mineral raw materials and waste (order of the Federal State Budgetary Educational Institution of Higher Education IRNITU No. 279-P dated 05/17/2018).
 - Comprehensive assessment of the impact of production on ecosystems of various levels (order of the Federal State Budgetary Educational Institution of Higher Education IRNITU No. 442-P dated 30.08.2018).
 - Theory and technology of extraction and concentration of useful components from mineral raw materials of natural and technogenic origin. (order of the Federal State Budgetary Educational Institution of Higher Education IRNITU No. 442-P dated 08/30/2018)
3. Optimization of the process flow diagram for the processing of alumina-containing estimate using photometric separation at PJSC RUSAL Bratsk, CONTRACT No. RB-D-20-727 dated 03.11.2020 (until 10.03.2021). Project Leader
4. Reclamation project of an unauthorized waste disposal facility on a land plot with cadastral number 38: 10: 120132: 12 at the address: Irkutsk Region, Kuytunsky District, in the southeastern part of the Kuytun settlement (Kadinsky LPH area)). Customer MKU "Committee for the management of municipal property of the administration of the municipal entity Kuytunsky district". Contract No. 9MK-016/19 dated 25.10.19. (until 01.10.2021) Project Leader

Completed Research Projects:

In the period 1994-2019, 44 projects, of which 38 projects - Work Manager.

1. Creation of new composite polymer-mineral superstrong materials for the production of a wide range of products. The program "Implementation of projects for obtaining primary scientific results, ensuring the expansion of the participation of subordinate educational organizations in the implementation of the National Technology Initiative", State Law No. 5.11496.2018 / 11.12 of the Ministry of Education and Science. 2018-2019 . Project Leader
2. Theoretical substantiation of hardening and destruction of gas-filled composite materials on the basis of thermosetting resins and industrial waste. Program "Development of the scientific potential of higher education", Г3 No. 11.8090.2017. Ministry of Education and Science. Project Leader.

3. Study of the washability of manganese ore from the Trekhgranny deposit of the Chelyabinsk region. Household contract. The customer is Metallocenter Leader-M LLC. 2019 Performance Manager.
4. "Creation of a project for linking equipment for photometric separation of the estimate to the existing technological scheme of PJSC" RUSAL Bratsk "; contract No. 9110E1217. Customer LLC RUSAL ITC. 2018
5. Numerical modeling of the separation of a gas-liquid mixture in a once-through cyclone with a separation chamber of variable cross-section". The customer is Stroykompozit LLC. Work supervisor, contract No. 20 / E-223/18 dated April 3, 2018.
6. Conducting pilot testing (OPT) of an effective technology for cleaning the alumina-containing estimate of JSC RUSAL Bratsk by dry methods in order to reduce the content of iron and silicon impurities." Contract No. 91110R493 (206/17). Customer RDC RUSAL. Performance Manager.
7. "Development of the technology of complex extraction of liquid commodity products from ash and slag mixtures of TPP". PJSC "Irkutskenergo". Contract No. 145/16 of 12/10/2016. (Project Leader).
8. Investigation of the mechanism of the effect of nanostructuring components and the principle of their interaction with polymer-mineral matrices in the development of new composite materials using wastes. " Ministry of Education and Science. The state project number 1118. 2014-2016 gg. (Project Leader).
9. "Provision of technical assistance for cleaning of alumina containing impurities for secondary use in the process of electrolysis at JSC RUSAL Bratsk. 2016. The customer is RUSAL Bratsk. RB-D-16-02-503. (Project Leader).
10. "Development of advanced training courses:" Integrated sustainable waste management ". Tempus-IV. The European Commission. No. 543962-TEMPUS-1-2013-1-DE-TEMPUS-JPHES 2013-2016. Performer of works.
11. Engineering Center "Inzhi Engineering". The pilot project of the Ministry of Education and Science of Russia in conjunction with the Ministry of Industry and Trade of Russia in pursuance of the RF Government's Order No. DM-P8-3464 of May 23, 2013, and within the framework of the implementation of the roadmap for engineering and industrial design approved by the decree of the Government of the Russian Federation from July 23, 2013 № 1300-r. Performer of works.
12. 2015-2016 "Creation of distance technologies for master's programs in the direction of" Technospheric Security ". V.Potinin's Charity Fund (Grant Competition of V.Potinin's Scholarship Program). No. GPK-15. A personal grant.
13. 2014. "Production of new fire-resistant heat-insulating materials on the basis of fly ash and polymer binders". The program of support of innovative projects, priority for the city of Irkutsk. Agreement No. 010-64-000705 / 4 of 04/07/2014. (Project Leader).
14. 2013-2014. "Development of the production of innovative materials based on waste". The program of support of small innovative projects of the Administration of Irkutsk region. Agreement No. 61-37-4963 / 13. (Project Leader).
15. 2012-2013. "Investigation of regularities in the interaction of polymer and mineral constituents in the process of creating new composite materials." Program "Development of the scientific potential of higher education", GZ No. 3.2091.2011. Ministry of Education and Science. Project Manager. (RF).
16. 2011-2013. "Research and development of technology for the utilization of large-tonnage mineral wastes and the creation on their basis of new competitive fire-resistant heat-insulating materials." The federal program "Scientific and scientific-pedagogical staff of innovative Russia". ГК № 16.740.11.0530. Ministry of Education and Science. (Project Leader). (RF).
17. 2011-2012 "Production of new fire-resistant construction materials based on fly ash and polymer waste". - The program of support of small innovative projects of the Administration of Irkutsk region. Agreement on the subsidy of 27.10.2011 № 62-57-250 / 11. (Project Leader). (RF).
18. 2012 г. « Manufacture of anti-vandal wrought-iron benches with the use of the innovative material "VINIZOL" for the seats and backs for the improvement of the street part of them. F. Engels opposite houses number 21,23». The program of support of subjects of innovative activity directed on realization of innovative projects on the Innovation Alley. The agreement of 25.05.2012г № 010-64-782. Administration of Irkutsk. Project Leader. (РФ).
19. 2012 г. «Investigation of the current state of the landfill for the disposal of solid waste in Usolye-Sibirskoe and the scheme for handling waste in its territory». Limited Liability Company Siberian Environmental Company (ООО SIBEKOM), (Project Leader).
20. 2013 г. ООО «Тюмин Ресурс Байкал». № 32/13. «Complex study of perovskite pyroxenites of the Bolshozadoy area and development of technology for their enrichment». (Project Leader).

21. 2011-2012 г.г. «Manufacture of finishing building materials based on local waste». The program of support of subjects of innovative activity of the Administration of Irkutsk. Contract dated April 12, 2012 № 010-64-484/2.
22. "Production of new fire-resistant heat-insulating materials on the basis of fly ash and polymer binders". The program of support of small innovative projects of the Administration of the Irkutsk region in 2012-2013. Agreement from 26.10.2012 № 63-57-6/2. (Project Leader)
23. "Improving the system of vocational training in the field of environmental safety", 2011, The program "Development of Scientific Potential of Higher Education", Ministry of Education of Russia. (Project Leader).
24. "The organization of production technology of a new type of flammable building insulation and energy-saving materials on the basis of disposal of large plastic and ash waste industry and energy to improve the environmental safety of the environment and human" .(2010-2011). Program development of innovation infrastructure of federal educational institutions. (The head section of the project).
25. "Development of advanced technology natural and waste water recovery and recycling they contain valuable and harmful components in order to improve the quality of the environment and improve the completeness of the use of natural resources. " (2004-2010). ISTU. (Project Leader).
26. "The source of arsenic contamination within the industrial area of Angarsk smelter in the Irkutsk region g.Svirsk" (2008-2012). Program of radiation and chemical safety of Russia.
27. 2009-2010. "Development of new materials based on the use of large-waste ". Federal Program "Research and scientific-pedagogical cadres Innovative Russia". Ministry of Education. (RF).
28. 2007-2010. "Development of a Master course" Managing production and consumption waste "in the technical universities in the Baikal region. " Grant from the TEMPUS-TACIS. (Evroskomissiya).
29. 2008. "Class definition of hazardous waste". "New Technologies (Russia). (Project Leader).
30. 2008. The organization of environmental support waste production and consumption. Megetsy metal factory. Irkutsk region. (Project Leader).
31. 2007. "Integrated use of titanium ores Zhidoyskogo array pirovskitovyh pyroxenite". OAO IAP - The branch corporations Irkut. Irkutsk (Project Leader).
32. 2006-2008. "Developing the concept of solid waste management in the tourist area of Lake Baikal (Olkhon Island). " Irkutsk region. Grant BMU, UBA Germany.
33. 2006. "Development of technologies for processing phosphate ores Haranurskogo field and its economic assessment. " OOO Phosphorites Buryatia. (Project Leader).
34. 2005. "Execution Section"Environmental Protection "project" Filling station in the village of Ust-Orda region of Irkutsk. OOO Horde-Service. (Project Leader).
35. 2004-2008." Identify patterns and conditions of the selective isolation of alkali and alkaline earth metals from multicomponent solutions and highly mineralized natural groundwater". AVTSP FAO RF. Earth sciences. (Project Leader).
36. 2004-2005. "The development of the theory of selective isolation of alkali and alkaline earth metals from multicomponent solutions". - Grant of the President of the Russian Federation for young Russian scientists and leading research. Federal Agency for Science and Innovation. (Laureate of the grant).
37. 2002-2003. "Conduct monitoring investigations technological flows and halos of dispersion of heavy metal geochemical barrier top of the Bratsk reservoir". Irkutsk Region Administration.
38. 1999-2000. "Technology of brines and industrial wastewater to reclamation of valuable components and the environment. " Udachny GOK ALROSA. The Republic of Yakutia. (Project Leader).
39. 1998 - 2001. "Establishment of a scientific and analytical center on the study and management of hydro resources in Eastern Siberia. Federal Program "Integration of Science and Higher Education in Russia in 1997-2001. (Project Leader).

Teaching Experience:

Head Master's Programs, "Waste management and recycling of waste production and consumption" (2008 - 2010), "Industrial ecology and sustainable use of natural resources" (2006-2010).

Lectures: Environmental assessment (2004-2020); Theory and methods for assessing the environmental impact (2008 -2020);Economic methods of waste management (2010); Ecological-economic analysis of environmental activities (2010); Managing hazardous waste in production (2010); Economic Analysis of Nature (2009 -2020); Integrated use of mineral resources (1999-2000); Nature (1998-2003); Environmental Management (1997-1999); Prediction and control of air quality (1996-2004); Principles of design, evaluation of environmental impact and environmental impact assessment (1995 -2020); Processes and equipment of mining and processing industries (1993-2017); Economics, forecasting and efficiency of industrial environmental management (1993-2020).

Supervision of Theses:

1. Olga Ulanova. Develop a process of selective extraction of alkali and alkaline earth metals from underground brines. Ph.G. (25.00.13). Processing of minerals. 2001, Irkutsk
2. Pugach, OP Research and technology development of selective extraction of strontium from brines by ion flotation. Ph.G. (25.00.13). Processing of minerals. 2002, Irkutsk
3. Klimenkova SB Improved technology in the selective extraction of components from the brine from the study of their physico-chemical parameters. Ph.G. (25.00.13). Processing of minerals. 2004, Irkutsk
4. Voronina E. Yu Developing technologies for extraction of alkali and alkaline earth metals from natural brine by fractional crystallization. Ph.G. (25.00.13). Processing of minerals. 2008, Irkutsk
5. Suturina Ekaterina Olegovna. Development of technology for utilization of thermal power plant waste and polymers to obtain composites based on them. Cand. tech. Sciences (03.02.08 - Ecology (in energy); 05.17.06 - Technology and processing of polymers and composites). April 19, 2012. Moscow.
6. Barakhtenko Vyacheslav Valerievich. "Building finishing material from a polymer-mineral composite based on waste." Cand. tech. Sciences (05.23.05 - Building materials and products). June 24, 2014, Saint Petersburg. SPbGASU
7. Burdonov Alexander Evgenievich. "Composite material based on thermosetting resins and fly ash for thermal insulation of pipelines", Cand. tech. Sciences (05.23.05 - Building materials and products). February 10, 2015, Saint Petersburg. SPbGASU
8. Doctoral dissertation: Potapova E.V. Green areas of settlements: structure, state, problems, risks, transformation, development indicators; Doct. s-x. Sciences (06.03.03 Agroforestry and protective afforestation, gardening of settlements, forest fires and the fight against them). June 08, 2017, Yekaterinburg. FSBEI HE "Ural State Forestry University" (ULSTU)
9. Kochneva Alexandra Viktorovna "Recycling of marble mining waste in the production of mineral and polymer materials." Cand. tech. Sciences (25.00.36). 26.12.2017 Irkutsk
10. Tolmacheva Natalya Anatolyevna "Reducing the anthropogenic load on the urban ecosystem by using the resource potential of waste in the production of mineral and polymer materials for construction and housing and communal services." Cand. tech. Sciences 03.02.08 Ecology (in construction and housing and communal services). 17.01.2019 Vladivostok. FEFU

From 1993 to 2010 - head of more than 50 theses and projects, students majoring in environmental protection and rational use of natural resources. "The program manager for the Young Leaders «Arterch». Jennifer Smith. A student from the United States. 2001-2002.

Service / Memberships:

Academy of Sciences: Member of RANS (Russian Academy of Natural Sciences) in the section "Metallurgy" (2008),

Academician of the RAE (Russian Academy of Natural Sciences) (2005),

Corresponding Member of the International Academy of Noosphere and Sustainable Development (MANUR) (2002).

Member of European Academy of Natural Sciences (2013 г.).

Member of the Russian Environmental Academy (2014).

Other public, governmental and professional organizations: Head of independent benchmarks and methodical center for training of managers and specialists in "Environmental security", including the program "Hazardous Waste" and "Environmental Safety in Hazardous Waste Management"; Member of the Siberian regional training and methodological center for environmental specialties (2000-2005); Expert of Territorial Committee on Natural Resources of the Irkutsk region, RTN (1998-2008),

Expert of The Federal Service for Environmental, Technological and Nuclear Supervision (1998-2008).

Member of Public Board of Directors of the Russian-American Institute, "Tahoe-Baikal" (1995-2005).

Dissertation Advice:

Chairman of the Dissertation Council on the specialties: Mineral processing, Metallurgy of Colored, Black, Rare and Precious Metals (2008-2017);

Member of the Dissertation Council on the specialty "Geoecology" (2009-2017),

Member of the Dissertation Council on the specialty "Geology, Prospecting and Exploration of solid minerals, minerageny" (2010-2017).

Professional Development: Program of the World Bank for Reconstruction and Development: Economics and Politics of the Environment "(1999), Moscow, SPC Prombezopasnost" (2008), Irkutsk State Technical University, "Project Management" IRCQLR (2010).

Awards: Labor Veteran (2012); Winner of the State Scientific Scholarship RAS for young scientists in the field of mining sciences (1997), winner of the Grant of President of the Russian Federation for young doctors (2004-2006). Diploma "Golden Chair of Russia" (2009); numerous certificates, diplomas, awards and prizes (for participation in exhibitions and competitions, etc.) (1996-2010); "Order of Honor" of the European Academy of Natural Sciences for special services in the field of ecology (2011); Jubilee medal "In memory of the 350th anniversary of Irkutsk" (2012), diploma of the Deputy Mayor of Irkutsk (2013); Award "Leading Scientist IRNITU - 2015" (2015)

Expert activity: I was the chairman and a member of the commission of state environmental review. I was an expert of more than 100 projects of construction and reconstruction of enterprises. More than 30 projects concerned waste disposal sites.

Publications: 250 scientific publications, including 25 inventor's certificates, patents and know-how, 3 monographs, over 50 scientific articles, 9 of textbooks, for example:

1. E.V. Zelinskaya, N.A. Tolmacheva, V.V. Barakhtenko, A.E. Burdonov, N.E. Garashchenko, A.A. Garashchenko. Waste-Based Construction Materials // International Journal of Engineering Research in Africa. 2019. Vol. 41. P 88-102ю
2. Mymrin V.A., Solyon G.J.P., Pawlowsky U., Alekseev K.P., Zelinskaya E.V., Tolmacheva N.A., Ribas H.E., Catai R.E., Romano C.A. Structure formation processes of composites on the base of ink rejected sludge // Journal «Construction and Building Materials. - Final version published online: 2-NOV-2015. - (2016), Volume 102, Part 1, 15 January 2016, Pages 141–148.
3. Vsevolod A. Mymrin, Natalia A. Tolmacheva, Elena V. Zelinskaia, Anastasia V. Kurina, Aleksandr A. Garashchenko. Research of the environmentally safe waste-based building materials. Vestnik MGSU [Proceedings of Moscow State University of Civil Engineering]. 2018, vol. 13, issue 9, pp. 1143–1153.
4. Толмачева Н.А., Кочнева А.В., Зелинская Е.В., Шатрова А.С. Solid waste heat power engineering and colloidal sludge-lignin precipitation for building materials // Экология и промышленность России. – 2018. – Т.22. - № 12. - С.28-32
5. Zelinskaya E.V. Industrial waters as a perspective source of hydromineral raw materials //IMPC 2018 - 29th International Mineral Processing Congress 29. Moscow. 2019. P. 3003-3011.
6. Burdonov A.E., Zelinskaya E.V. Complex technology development for processing secondary raw materials of aluminum production for use in the electrolysis process //IMPC 2018 - 29th International Mineral Processing Congress 29. 2019. Moscow. P. 3028-3035.
7. Barakhtenko V.V., Zelinskaya E.V., Burdonov A.E., Tolmachova N.A., Garashchenko A. A. Use of mineral waste in the production of polymer composites // Procedia Environmental Science, Engineering and Management 6 (2019). P. 581-590.
8. T.H. Christensen, E.V. Zelinskaya, V.U. Starostina. Life cycle assessment of mining and processing production // Procedia Environmental Science, Engineering and Management 6 (2019). P. 681-685.
9. E.O. Kostyukova, V. Barahtenko, E.V. Zelinskaya, FA Shutov . "Industrial waste - raw materials for the construction materials of the future: the Irkutsk Region" // Ecology of urban areas. - №4, 2010.- P.73-78.
10. E.O. Kostyukova, E.V. Zelinskaya, V. Barahtenko, A.E. Bourdonov, N.A. Malevskaya FA Shutov. "Recycling of industrial waste polyvinyl chloride as a raw material for new construction material in the Irkutsk region" // Industrial production and use of elastomers.-№ 2, 2010. - P.30-36/
11. E.V. Zelinskaya, E.A. Musikhina, L.Y. Dmitrieva, O.M. Musikhina. "The influence of human activities on emergency situations on the planet" // Vestnik Moscow State Regional University.- №1, 2009-P.3-8.
12. O.V. Ulanova, E.V. Zelinskaya, K.V. Fedotov, V.U. Starostina, E.U. Fomina, B.Bilitewski, S.Salhofer, F. Schneider, R. Linzner, T. Christensen. Implementation of «Waste Management» ma degree course at Technical Universities in Baikal region - one more step towards the European university system in engineer-ecological education // European Journal of Natural History. – 2008- № 3.