

**Dr. Daniel Kupka, PhD.**

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**Current position(s):**

Senior Researcher

Head of the Department of Mineral biotechnology of the Institute of Geotechnics SAS

Contact person for the Mineral Biotechnology Laboratory of the PROMATECH Research Centre for Advanced Materials and Technologies

Research topic: Materials for biomedicine and environmental technologies

**Profile:**

Dr. Daniel Kupka, PhD is an expert in environmental microbiology and biotechnology. He is engaged in the development and application of advanced technologies in the recovery of mineral raw materials, waste recycling and environmental protection.

Graduated from the University of Veterinary Medicine in Košice. In 1985 he started to work at the Institute of Geotechnics of the Slovak Academy of Sciences in Košice. He developed new approaches and methods for the study and the cultivation of chemolithotrophic bacteria. He defended the PhD Thesis on "Ferrous iron oxidation by bacteria *Thiobacillus ferrooxidans*" in 2002 at the BERG Faculty of the Technical University in Košice in the field of Mineralurgy and Environmental Technologies. During the PhD study, he studied the mechanics and kinetics of chemical and biological oxidation of iron, which is a key reaction in the genesis of acidic drainage waters from mining and industrial waste. The results were presented in lectures and posters at international conferences in Spain, Greece, the Czech Republic, England, Germany, Kazakhstan and published in domestic and foreign monographs and periodicals.

Dr. Daniel Kupka, PhD has made a significant contribution to the cooperation of the Institute with the commercial sector and in the transfer of scientific results into practice. Dr. Daniel Kupka, PhD. is active in scientific management and pedagogical work. He is a supervisor of numerous diploma theses and supervisor of graduate students in the field of metallurgy. He gives lectures and exercises from the subject of Environmental Microbiology at the Technical University in Košice. From 2006, he takes the post of the head of Department of Mineral Biotechnology. He was the coordinator of VEGA projects and the project from the EU structural funds in the framework of building the Excellence Centers.

He is the author and co-author of 3 chapters in monographs registered in the Current Book Content, 12 publications in journals registered in the Current Content database, more than 35 original scientific articles in reviewed foreign and domestic journals, and more than 70 scientific papers in conference proceedings. He has > 102 citation statements in the WOS database, 12 quotes in the SCOPUS database and over 70 other citation statements.

**Experience:**

1985 - to date - Institute of Geotechnics SAV

2006 – to date - Head of the Department of Mineral Biotechnologies, IGt SAV

contact person for the Mineral Biotechnology Laboratory of the PROMATECH Research Centre for Advanced Materials and Technologies

**Organisation of Scientific Meetings:**

2018 – Member of the Scientific Committee, Biotechnology & Metals Conference, October 11-12, 2018, Košice, Slovakia.

2017 – Member of the Scientific Committee, 4<sup>th</sup> Workshop on Water & Soil Clean-up from Mixed Contaminants, August 9-11, 2017, Nazarbayev University, Astana, Kazakhstan  
2016 – Member of the Scientific Committee, 3<sup>rd</sup> Workshop on Water & Soil Clean-up from Mixed Contaminants, September 22-23, 2016, Košice, Slovakia

**Projects:**

1. Joint Project of Office of Bratislava Self-Governing Region, UGT SAV & PriF UK  
Decontamination of Environmental Load Bratislava – Vrakuňa – Vrakunská cesta, CHZJD Landfill.  
Project coordinator, 25. 7. 2017 – 30. 10. 2017
2. FP7-PEOPLE-2013-IAPP WaSClean 612250 – Water and Soil Clean-up from Mixed Contaminants. 10/2013-9/2017. Marie Curie Action: Industry-Academia Partnership and Pathways
3. Centre of Excellence for Integrative Research of the Earth's Geosphere. ITMS: 26220120064.  
Project co-ordinator for IGt SAS. 9/2010 – 2/2015.
4. Project VEGA 2/0145/15 – Study of positive and negative influences of sulphuretum in the environment and industry. 1/2015-12/2018
5. Project VEGA 2/0159/08 – Bacterial oxidative and reductive processes in connection with the mobilization and stabilization of metals in the environments of sulfide deposits. 1/2008 –12/2010

**Five representative publications:**

ORCID code: 0000-0001-5825-95071.

Researcher ID (in SCOPUS): 6508226711

1. KUPKA, D. - RZHEPISHEVSKA, O.I. - DOPSON, M. - LINDSTRÖM, EB. - KARNACHUK, OV. - TUOVINEN OH. Bacterial Oxidation of Ferrous Iron at Low Temperatures. *Biotechnology and Bioengineering* Vol. 97, No 6 (2007) pp. 1470-1478 (2,999- IF 2006)
2. JÁGER, Dávid – KUPKA, Daniel – VÁCLAVÍKOVÁ, Miroslava – IVANIČOVÁ, Lucia – GALLIOS, G.P. Degradation of Reactive Black 5 by electrochemical oxidation. In *Chemosphere*, 2018, vol. 2, n.10, p. 405-416. (4.208 – IF2017).
3. MAJZLAN, Juraj – ŠTEVKO, Martin – CHOVAN, Martin – LUPTÁKOVÁ, Jarmila – MILOVSKÁ, Stanislava – MILOVSKÝ, Rastislav – JELEŇ, Stanislav – SÝKOROVÁ, Martina – POLLOK, Kilian – GÖTTLICHERE, Jörg – KUPKA, Daniel. Mineralogy and geochemistry of the copper-dominated neutral mine drainage at the Cu deposit Eubietová-Podlipa (Slovakia) In *Applied Geochemistry* 2018, vol. 92, p. 59–70 (2.681 – IF2017).
4. KUPKA, Daniel, – PÁLLOVÁ, Zuzana, – HORŇÁKOVÁ, Andrea, – ACHIMOVÍČOVÁ, Marcela, – KAVEČANSKY, Viktor. Effluent water quality and the ochre deposit characteristics of the abandoned Smolník mine, East Slovakia. In: *Acta Montanistica Slovaca* 2012, vol. 17, no. 1, p. 56-64 (0.134 - IF2010). ISSN 1335-1788.
5. KUPKA, Daniel – LILJEQVIST, Maria – NURMI, Pauliina – PUHAKKA, Jaakko A. – TUOVINEN, Olli H. – DOPSON, Mark. Oxidation of elemental sulfur, tetrathionate and ferrous iron by the psychrotolerant *Acidithiobacillus* strain SS3. In *Research in Microbiology*, 2009, vol. 160, no. 10, p. 767-774. (2.055 – IF2008).

**Patents:**

**Fellowships / Awards / Memberships of Scientific Societies:**

- 2006 – member of the ad hoc expert working group for developing the National Implementation Plan (NIP) for The Stockholm Convention on Persistent Organic Pollutants (POPs)  
2006 – member of the Slovakian Mining Society