

15. Jena Remediation Colloquium
From “expert knowledge” to basic science to application:
15 years of bio-geo interactions
October 13-14, 2016, Jena

Thursday, October 13

- 9:00 Start and introduction
- 9:00 - 11:00 Bioconversion; Chair: Erika Kothe, FSU**
- 9:00-9:30 *Stefan Karlsson, University Örebro, Sweden:*
Soil humic substances – Something old, something new.....
- 9:30-9:50 *István Pócsi, University of Debrecen, Hungary:*
Elements of cadmium stress defense in fungi
- 9:50-10:10 *Thomas Wach, FSU:*
The interaction of *Streptomyces* spores with goethite
- 10:10-10:30 *Julia Kirtzel, FSU:*
Heavy metal release by fungal induced black slate degradation
- 10:30 Coffee break
- 11:00 - 12:30 Biodissolution; Chair: Petra Rösch, FSU**
- 11:00-11:30 *Jürgen Popp, FSU:*
Raman spectroscopic investigation of environmental bacteria
- 11:30-11:50 *Falko Langenhorst, FSU:*
Site-specific TEM preparation and investigation of biominerals
- 11:50-12:10 *Maria L. Bizo, Babeş-Bolyai University, Romania:*
Defense against lead pollution: mycorrhizal trees can form the biomineral pyromorphite in roots and needles
- 12:10-12:30 *Jennifer Stoiber-Lipp, FSU:*
Biodegradation of PAHs in contaminated aquifers of two former gas plant sites
- 12:30 Lunch and poster session
- 14:00 - 15:30 Biomineralization; Chair: Ralph Bolanz, FSU**
- 14:00-14:30 *Giovanni De Giudici, University of Cagliari, Italy:*
Biomineralization: mechanisms and effect from molecular to field scale.
- 14:30-14:50 *Juraj Majzlan, FSU:*
Weathering of tetrahedrite: Mineralogy, geochemistry, and the role of biology
- 14:50-15:10 *Arno Märten, FSU:*
Imaging spatial distribution of possibly environmentally harmful metals in ectomycorrhizal fungi of birch trees
- 15:10-15:30 *Jiro Mori, FSU:*
Sticking together: Inter-species aggregation of bacteria isolated from iron snow is controlled by chemical signaling
- 15:30 Coffee break
- 16:00 - 17:30 Effects on water paths; Chair: Dirk Merten, FSU**
- 16:00-16:30 *Aurora Neagoe, University of Bucharest, Romania*
A research strategy for linking the effects of bioremediation with models of runoff and erosion
- 16:30-16:50 *Tereza Leonhardt, University of Prague, Czechia*
Heavy metals in ectomycorrhizal fungi: Towards identifying genes underlying metal (hyper)accumulation phenotypes in *Amanita*, *Russula* and *Hebeloma* species
- 16:50-17:10 *Daniel Mirgorodsky, FSU:*
Combining bioremediation methods with bioenergy production at field scale
- 17:10-17:30 *David Fürst, FSU:*
Influence of microbial inoculation and soil treatments on the phytoremediation potential of *Sorghum bicolor* on the test site Gessenwiese.
- 18:00 Phyletic Museum
- 19:30 BBQ at Neugasse

Friday, October 14

9:00 - 11:00 **Microbial impact; Chair: Katrin Krause, FSU**

9:00-9:30

Anna Rosa Sprocati, ENEA, Italy:

Microbial Constellations: tools for understanding microbial ecosystems and their impact

9:30-9:50

Katarzyna Turnau, Jagellonian University, Poland:

Friends and foes in revegetation of degraded areas

9:50-10:10

Markus Riefenstahl, FSU:

Metal accumulation and transfer in fast growing tree species – effects of microbial treatments and soil amendments

10:10-10:30

Hermann Bothe, University of Cologne

Life on extreme soil habitats

10:30 Coffee break

11:00 - 12:30 **Bioremediation approaches; Chair: Georg Büchel, FSU**

11:00-11:30

Alex Jakubick, UMREG:

Resilient remediation of mining legacies

11:30-11:50

Virgil Iordache, University of Bucharest, Romania:

Optimizing a remediation method on a tailing dam

11:50-12:10

Bert Allard, RESAB, Sweden:

Biogenic REE-enriched manganese oxide in the Ytterby mine, Sweden - a new mineral discovered?

12:10-12:30

Wolfram Adlassnig, University of Vienna, Austria:

Additional factors besides metals explain species diversity on the copper spoil heap Knappenberg/Austria.

12:30 End of symposium