

June 6th 2025, ZeHS, Winklerstraße 5, 09599 Freiberg				
Time	Speaker	Affiliation	Topic	Chair
09:00	Greeting			Hagen Fiebig
09:10 – 10:00	Keynote: Dr. Marco Krüger	Universität Tübingen International Center for Ethics in the Sciences and Humanities (IZEW)	Why we need (good) Research Ethics	
10:00 – 10:40	Oral Presentations: Session 1 – Sustainable Mining			Hagen Fiebig
10:00	Akuba Bezeba Yalley	Mining Engineering Department, University of Mines and Technology, Tarkwa, Ghana	Development of safe and sustainable mining methods for artisanal and small-scale gold mining operations with alluvial and hard rock potentials	
10:20	Sarah Kuß	Institute of Bioscience, TUBAF	Establishing reductive, microbial processes for waste water treatment and value recovery	
10:40 - 11:45	Poster Session 1 and Coffee Break			
A1	Deepak Varma Thota	Institute of Thermal Engineering, TUBAF	Investigation of Hydrogen Flame Effects and Long-Term Aging in a Hydrogen Atmosphere on Additive Manufactured Ceramics	
A2	Klara Sander	Institute of Analytical Chemistry, TUBAF	Characterisation of Biopolymers using ultrahigh-resolution Mass Spectrometry	
A3	Sophie Manke	Institute of Bioscience, TUBAF	Characterization of microalgae isolated from biological soil crusts on a heavy metal contaminated mining deposit	
A4	Mareike Weigel	Institute of Inorganic Chemistry, TUBAF	Development and Application of New Sol-Gel Systems: From Biofouling Reduction to Sensor Applications	
A5	Lena Bonitz	Institute of Inorganic Chemistry, TUBAF	Stability of polyhalite in salt solutions at 25 °C	
A6	Hagen Fiebig	Institute of Inorganic Chemistry, TUBAF	Stability of Selected Magnesium Carbonate Phases in MgCl ₂ Solutions: Data for Rock Salt Based Nuclear Waste Repositories	
A7	Enver Felix Loayza Mora	Institute of nanoscale and biobased materials, TUBAF	Droplet based microfluidics and miniaturization at high throughput level to screening heterologous secondary metabolites in microbes: A critical review	
A8	Samaneh Mollashahi	Institute of Thermal Engineering, TUBAF	Turning invasive plants into energy: Assessing biogas production from invasive species through LCA	
A9	Anne Seidel	Institute of Inorganic Chemistry, TUBAF	Sustainable Dipeptide Synthesis for Biocompatible Applications	
A10	Willi Max Leopold	Institute of Inorganic Chemistry, TUBAF	From Molecules to Materials: Tuning Sol-Gel Coatings through Experimental Design	

11:45 – 12:45	Oral Presentation: Session 2 - Geotechnology			Sarah Kuß
11:45	Duncan Maina	Geotechnical Institute, TUBAF	The effect of the intermediate principal stress for dimensioning in room and pillar mining	
12:05	M G Muntasir Shehab	Geotechnical Institute, TUBAF	Physics-based machine learning models for predicting saturated and unsaturated hydraulic conductivity of bentonite with global sensitivity analysis	
12:25	Reza Mahmoudi Kouhi	Geotechnical Institute, TUBAF	A coupled hydro-mechanical model using Modified Cam-Clay for predicting swelling behavior of clay–sulfate rocks	
12:45 – 13:45	Break			
13:45 – 14:30	Keynote: Dr. Steffen Neumann	NFID4Chem	Modern RDM in Chemistry	
14:30-15:10	Oral Presentation: Session 3 – Material Science I			Bernhard Berger
14:30	Shuvam Gupta	Helmholtz Institute Freiberg	3D characterization of rare earth in iron ore	
14:50	Mohammed Shakeer Khan	Foundry Institute, TUBAF	Investigating the Empirical Relationship Between Amine Flow and Sand Core Curing in Polyurethane Cold Box System	
15:10 – 15:35	Coffee Break			
15:35 – 16:15	Oral Presentation: Session 4 – Material Science II			Elisabeth Heise
15:35	Sahra Homaee	Helmholtz Institute of Resource Technology, Freiberg	Optimizing Wet Carbonation of Wollastonite for Accelerated CO ₂ Capture and Application in the Cement Industry	
15:55	Fritz Raithel	Institute of Thermal Engineering and thermodynamics, TUBAF	Development of a method for creating standardised load profiles for cooling buildings	
16:15 – 16:30	Closing Remarks			Elisabeth Heise
16:30	Barbecue			