

Monday, 18 September 2023 – Oral presentations- Lecture Room 3

Petrology and Geochemistry I

Chairs: C. Ballhaus (Bonn), T. Müller (Göttingen)

9:00-9:30	Monazite stability as a tool used for identification of granite stacking (a case study from the Western Carpathians) <u>I. Broska</u> (Bratislava), I. Petřík (Bratislava)
9:30-9:45	Decompression of high-grade metamorphic mafic rocks constrained by small-scale compositional layering, Gföhl Unit, Moldanubian Zone <u>R. Asenbaum</u> (Wien), M. Ráček (Praha), R. Abart (Wien)
9:45-10:00	High-pressure gneiss with pseudomorphs after jadeite from the Variscan Erzgebirge in Saxony <u>H.-J. Massonne</u> (Wuhan)
10:00-10:15	Visible and invisible complexities in rocks: mineralogical and petrological constraints on the Variscan metamorphic gradient in the Southalpine metamorphic basement (Brixen quartzphyllites) <u>P. Tropper</u> (Innsbruck), T. Klotz (Innsbruck), A. Wzietek (Innsbruck), H. Pomella (Innsbruck)
10:15-10:30	Mirdita ophiolites, Albania: Refertilization of spinel-plagioclase-peridotites in the shallow Mantle Lithosphere <u>T. Ntaflos</u> (Wien), P. Koutsovitis (Patras), K. Onuzi (Tirane), C. Hauzenberger (Graz)

10:30 – 11:00 Morning coffee and tea, Poster session I, Commercial exhibition

Petrology and Geochemistry II

Chairs: I. Broska (Bratislava), P. Tropper (Innsbruck)

11:00-11:30	Oriented triphylite rods in apatite (Stankuvatske Li deposit, Ukraine): result of pegmatite-wall rock interaction <u>S. Kurylo</u> (Bratislava), I. Broska (Bratislava), R. Gieré (Philadelphia), N. Lyzhachenko (Kyiv)
11:30-11:45	Rates, mechanisms and microstructures of transport-controlled reaction front propagation <u>T. Müller</u> (Göttingen), S. Piazzo (Leeds)
11:45-12:00	"Gold" hydrogen in natural fluid inclusions <u>R.J. Bakker</u> (Leoben)
12:00-12:15	H ₂ O degassing experiments of the lower Laacher See Phonolite – on the way to eruption <u>P. Marks</u> (Tübingen), M. Nowak (Tübingen)
12:15-12:30	GEOROC 2.0: A globally connected geochemical database to facilitate interdisciplinary, data-driven research M. Klöcking (Göttingen), A. Sturm (Göttingen), B. Sarbas (Göttingen), L. Kallas (Göttingen), S. Möller-McNett (Göttingen), K. Lehnert (New York), K. Elger (Potsdam), W. Horstmann (Göttingen), D. Kurzawe (Göttingen), M. Willbold (Göttingen), <u>G. Wörner</u> (Göttingen)

12:30 - 14:30 Lunch break, Poster Session I, Commercial exhibition

Chronology of geological processes: past, present, future

Chairs: D. Gallhofer (Graz), E. Skrzypek (Graz)

14:30-15:00	Thermodynamic forward modelling of main and REE-bearing phases linking in situ U-Th-Pb REE-epidote ages and pressure-temperature conditions <u>B. Huet</u> (Wien), D.A. Schneider (Ottawa), G. Rantitsch (Leoben)
15:00-15:15	U-Pb garnet, zircon, and rutile petrochronology of eclogite xenoliths from the Navajo Volcanic Field (USA) <u>J.E. Pohlner</u> (Frankfurt), R. Albert (Frankfurt), S. Aulbach (Frankfurt), S. Hao (Frankfurt), A. Gerdes (Frankfurt), J.B. Walters (Frankfurt), D.J. Schulze (Toronto), H. Helmstaedt (Kingston)
15:15-15:30	Zircon preservation in hybrid magmas from Mt. Hasan stratovolcano, Central Anatolia, and implications for magma mixing dynamics <u>G. Gencoglu Korkmaz</u> (Konya, Heidelberg), K.A. Cionoiu (Heidelberg), A.K. Schmitt (Heidelberg, Perth)
15:30-15:45	Zircon uses baddeleyite nanoparticles as fundamental building blocks <u>C. Ballhaus</u> (Bonn), H. Helmy (Minia), R. Wirth (Potsdam), V. Roddatis (Potsdam), T. Nagel (Freiberg), A. Schreiber (Potsdam)

15:45 – 16:15 Afternoon coffee and tea, Poster Session I, Commercial exhibition

Interplay of chemical and mechanical processes across scales

Chairs: S. Schorn (Graz), A. Rogowitz (Graz)

16:15-16:30	Deformation induced dissolution-precipitation of zircon in greenschist facies metasediments <u>M. S. Hollinetz</u> (Wien), B. Grasemann (Wien), C. McFarlane (New Brunswick), B. Huet (Wien), D. Schneider (Ottawa)
16:30-16:45	Fluid "self-purification" – Insight from the particle attachment processes during the growth of three-dimensional mineral dendrites <u>Z. Hou</u> (Wien), D. Wos (Warsaw), A. Rogowitz (Wien, Graz), C. Tschegg (Glock Health), A.H.N. Rice (Wien), L. Nasdala (Wien), F. Füsseis (Edinburgh), P. Szymczak (Warsaw), B. Grasemann (Wien)
16:45-17:00	Creep, fail, and creep again at eclogite facies: interactions between metamorphism and deformation at the Hohl eclogite body (Koralpe, Eastern Alps, Austria) <u>B. Huet</u> (Wien), A. Rogowitz (Graz), S. Schorn (Graz)

Monday, 18 September 2023 – Oral presentations- Lecture Room 6

Mineralogy and Crystallography I

Chairs: P. Bačík (Bratislava), B. Krüger (Innsbruck)

9:00-9:30	The compositions of coherent exsolution lamellae in alkali feldspar measured with atom probe tomography <u>D. Heuser</u> (Wien), R. Dubosq (Düsseldorf), G. Bian (Wien), G. Habler (Wien), E. Petrishcheva (Wien), B. Gault (Düsseldorf), C. Lengauer (Wien), C. Rentenberger (Wien), R. Abart (Wien)
9:30-9:45	Eveslogite – Decoding the complexity of evesslogite through three-dimensional electron diffraction <u>E. Götz</u> (Darmstadt), M. Klementová (Praha), W. Depmeier (Kiel), S.V. Krivovichev (Apatity, St. Petersburg), M. Czank (Kiel), M. Schowalter (Bremen), L. Palatinus (Praha), U. Kolb (Darmstadt, Mainz)
9:45-10:00	Modern non-ambient X-ray diffraction for the investigation of minerals, metals and industrial materials of any type <u>B. Pühr</u> (Graz), A.O.F. Jones (Graz), B. Schrode (Graz), M. Kremer (Graz), P. Vir (Graz), A. Paiva (Graz)
10:00-10:15	XRD has changed – The New D6 PHASER Introduction of the first Benchtop Platform XRD <u>G. Weinacht</u> (Wien)
10:15-10:30	Anhydrite formation in planetary surface environments – The case of the Atacama Desert <u>N. Wehmann</u> (Köln), C. Lenting (Köln), T.M. Stawski (Berlin), L. Agudo Jácome (Berlin), S. Jahn (Köln)

10:30 – 11:00 Morning coffee and tea, Poster session I, Commercial exhibition

Mineralogy and Crystallography II

Chairs: S. Jahn (Köln), M. Mrožik (Freiberg)

11:00-11:30	On the existence of a new $MgWO_4$ polymorph <u>E. Hildebrandt</u> (Innsbruck), V. Kahlenberg (Innsbruck), H. Krüger (Innsbruck), S. Wagner (Innsbruck)
11:30-11:45	Structural news from the quaternary system $Na_2O-K_2O-CaO-SiO_2$ <u>V. Kahlenberg</u> (Innsbruck), H. Krüger (Innsbruck), S. Garbner (Innsbruck), J. Aschauer (Innsbruck)
11:45-12:00	STOE Diffractometers empowering Mineralogical Crystallography <u>T. Pippinger</u> (Darmstadt)
12:00-12:15	Inorganic crystal structure database <u>A. Steudel</u> (Eggenstein-Leopoldshafen), S. Rühl (Eggenstein-Leopoldshafen), S. Rehme (Eggenstein-Leopoldshafen)
12:15-12:30	The position of vanadium in the crystal structure of zoisite, a variety tanzanite <u>P. Bačík</u> (Bratislava), M. Wildner (Wien), J. Cempírek (Brno), R. Škoda (Brno), P. Cibula (Bratislava), T. Vaculovič (Brno)

12:30 - 14:30 Lunch break, Poster Session I, Commercial exhibition

Spectroscopic methods in modern geosciences I

Chairs: M. Kaliwoda (Munich), J. Göttlicher (Eggenstein-Leopoldshafen)

14:30-15:00	Confocal μ -XANES as a tool to analyse Fe oxidation state in heterogeneous samples: The case of melt inclusions in olivine from Hekla volcano <u>M. Wilke</u> (Potsdam), R. Botcharnikov (Mainz), J. Garrevoet (Hamburg), M. Portnyagin (Kiel), K. Klimm (Frankfurt), S. Krasheninnikov (Potsdam, Hannover), R. Almeev (Hannover), S. Moune (Clermont-Ferrand), G. Falkenberg (Hamburg)
15:00-15:15	nanoGPS navYXTM – HORIBAs collaborative and inter-instrumental solution for correlative microscopy <u>M. Trapp</u> (Oberursel), C. Lenz (Oberursel)
15:15-15:30	Pressure prediction in a poly-metamorphic terrain based on μ -EDXRF. An example from the Archean Vumba Schist Belt, Botswana <u>D. Rammelmair</u> (Hannover)
15:30-15:45	Raman spectroscopy as an important tool for the petrological study of different meteorite samples <u>M. Kaliwoda</u> (München), I. Drozdovsky (Köln), F. Joseph (München), F. Dellefant (München), W.W. Schmahl (München)

15:45 – 16:15 Afternoon coffee and tea, Poster Session I, Commercial exhibition

Spectroscopic methods in modern geosciences II

Chairs: M. Kaliwoda (Munich), J. Göttlicher (Eggenstein-Leopoldshafen)

16:15-16:30	Atomistic processes in actinolite and tremolite at elevated temperatures <u>B. Mihailova</u> (Hamburg), C. Rösche (Hamburg), N. Petrova (Sofia), T. Malcherek (Hamburg), J. Schlüter (Hamburg)
16:30-16:45	Gem spinel in the Imperial Crown of the Holy Roman Empire: Evidence for very early gemstone heating? L. Nasdala (Wien), T. Lamers (Wien), H.A. Gilg (München), <u>C. Chanmuang N.</u> (Wien), M. Griesser (Wien), F. Kirchweyer (Wien), A. Erlacher (Wien), M. Böhmler (Ulm), G. Giester (Wien)
16:45-17:00	Mineralogical characteristics of agates and their host rocks in Chihuahua, Mexico <u>M. Mrožik</u> (Freiberg), J. Götze (Freiberg)

Tuesday, 19 September 2023 – Oral presentations - Lecture Room 3

Stable and radiogenic isotopes as fingerprints of processes in natural materials

Chairs: Johannes Pohlner (Frankfurt), Chunhui Li (Köln, Chengdu)

9:00-9:30	Litharge from El Centenillo and Fuente Espi: A geochemical and mineralogical investigation of Spanish silver processing in the Sierra Morena <u>P. Krause</u> (Bochum), S. Klein (Bochum), C. Domergue (Toulouse), C. Berthold (Tübingen), N. Jöns (Bochum)
9:30-9:45	Isotope fractionation of antimony during oxidative weathering of stibnite (Sb ₂ S ₃) <u>A.B. Kaufmann</u> (Jena, Hannover), M. Lazarov Hannover), J. Majzlan (Jena), S. Weyer (Hannover)
9:45-10:00	Stable Ba isotopes of Apline mantle peridotites <u>C. Li</u> (Chengdu, Hefei, Köln)
10:00-10:15	Stable tungsten (W) isotope behavior during the early diagenesis in the Gulf of California <u>R. Yang</u> (Köln, Kiel), M. Gutjahr (Kiel), F. Scholz (Kiel), F. Kurzweil (Köln), S. Eroglu (Münster), C. Münker (Köln)
10:15-10:30	SXES: Soft X-ray emission spectrometer new approach in geosciences <u>S. Krisam</u> (Freising)

10:30 – 11:00 Morning coffee and tea, Poster session II, Commercial exhibition

11:00-11:45 Lecture Room 3	Victor-Moritz-Goldschmidt Award of DMG Deformation and reaction of crustal rocks under high-pressure, high-temperature conditions <u>S. Incel</u> (Bochum, London), L. K. Mohrbach (Bochum, Hamburg), J. Renner (Bochum) Plenary lecture sponsored by DMG
11:45-12:30 Lecture Room 3	The importance of volatiles in the formation of magmatic sulfide ore deposits: experimental constraints <u>G. Iacono-Marziano</u> (Orleans), M. Le Vaillant (Perth), S.J. Barnes (Perth), B. Godel (Perth) Plenary lecture sponsored by the session "Metal enrichment processes - latest advances in the understanding of ore formation - Economic Geology and Ore Deposits" (M. Wilke - Potsdam, J. Michaud - Hannover, M. Korges - Potsdam)

12:30 - 14:30 Lunch break, Poster Session II, Commercial exhibition

Metal enrichment processes - latest advances in the understanding of ore formation

Economic Geology and Ore Deposits

Chairs: M. Wilke (Potsdam), J. Michaud (Hannover), M. Korges (Potsdam)

14:30-15:00	Origin of ultramafic rocks associated with carbonatites and their bearing on the formation of HFSE-deposits D. Gudelius (Karlsruhe, Tübingen), M.W. Marks (Tübingen), G. Markl (Tübingen), T.F.D. Nielsen (Copenhagen), J. Kolb (Karlsruhe), <u>B. Walter</u> (Karlsruhe)
15:00-15:15	Trace element geochemistry and isotopic data of sulphides in Alpine-type Pb-Zn deposits in the Eastern and Southern Alps <u>F. Melcher</u> (Leoben), V. Bertrandsson Erlandsson (Leoben), V. Gartner (Leoben), E. Henjes-Kunst (Leoben), P. Onuk (Leoben), J. Raith (Leoben), G. Rantitsch (Leoben), F. Henjes-Kunst (Hannover), B. Potočnik Krajnc (Ljubljana), A. Šoster (Ljubljana)
15:15-15:30	Unearthing genetic insights through a multi-method geochemical approach of the sediment-hosted Cu-Co Dolostone Ore Formation deposit, Namibia <u>V. Bertrandsson Erlandsson</u> (Leoben), R. Ellmies (Swakopmund), F. Melcher (Leoben)
15:30-15:45	Redox processes and metal sources recorded by Se and S isotopes of black smoker sulfides and host rocks <u>A. Grosche</u> (Erlangen), M. Keith (Erlangen), R. Klemd Erlangen), H. Strauss (Münster), S. König (Granada)

15:45 – 16:15 Afternoon coffee and tea, Poster Session II, Commercial exhibition

Metal enrichment processes - latest advances in the understanding of ore formation - Economic Geology and Ore Deposits

Chairs: M. Wilke (Potsdam), J. Michaud (Hannover), M. Korges (Potsdam)

16:15-16:45	Tungsten mineralization in East Tyrol – repeated recycling of W in the crust? <u>J. G. Raith</u> (Leoben), F. Altenberger (Leoben), F. Hutter (Wien), J. Weilbold (Hall in Tirol), C. Auer (Hall in Tirol)
16:45-17:00	Magmatic-hydrothermal versus metamorphogenic origin of tungsten mineralization: Examples from the Eastern Alps <u>F. Altenberger</u> (Leoben), J.G. Raith (Leoben), J. Krause (Freiberg), C. Auer (Wien), J. Weilbold (Wien), H. Paulick (Wien)
17:00-17:15	Antimony isotope evolution during hydrothermal precipitation and during oxidative weathering of diverse antimony mineralization in the Western Carpathians (Slovakia) <u>A. Kaufmann</u> (Hannover, Jena), <u>M. Lazarov</u> (Hannover), S. Weyer (Hannover), J. Majzlan (Jena)
17:15-17:30	Geochemical patterns in karst bauxite of the Unterlaussa mining district (Upper Austria) <u>F.J. Hampf</u> (Leoben), F. Melcher (Leoben), I. Dunkl (Göttingen), B. Schmidt (Göttingen), V. Bertrandsson Erlandsson (Leoben)
17:30-17:45	Machine learning-assisted pyrite indicator mineral approach in mineral exploration <u>S. Raič</u> (Graz), F. Molnár (Budapest), N. Cook (Queensland), P. Nikkola (Espoo), K. Szentpéteri (Espoo), H. O'Brien (Espoo), A. Taivalkoski (Oulu), J.-P. Ranta (Oulu)
18:10-19:10 Lecture Room 3	Öffentlicher Vortrag (in German with English slides) - Lecture Room 3 Rohstoffe für den Green Deal: woher nehmen? <u>F. Melcher</u> (Leoben)

Tuesday, 19 September 2023 – Oral presentations - Lecture Room 6

Crystallographic Materials Science: from basics to application

Chairs: S. Schorr (Berlin), C. Weidenthaler (Duisburg-Essen)

9:00-9:30	The effects of anion and cation substitution on the crystal structure of Cu-based quaternary chalcogenides <u>D. Matzdorff</u> (Berlin), M. Avdeev (Sydney), D. Sheptikov (Villigen), G. Gurieva (Berlin), S. Schorr (Berlin)
9:30-9:45	Structural peculiarities in $(1-x)\text{Na}_{0.5}\text{Ba}_{0.5}\text{TiO}_{3-x}\text{BaTiO}_3$ at the morphotropic phase boundary studied by high-pressure XRD and Raman spectroscopy <u>C. Rösche</u> (Hamburg), T. Boffa-Ballaran (Bayreuth), T. Malcherek (Hamburg), C. Paulmann (Hamburg), R. J. Angel (Padova), B. Mihailova (Hamburg)
9:45-10:00	Defect adamantines: potential materials for photovoltaic applications Y. Tomm (Berlin), G. Gurieva (Berlin), D. M. Többens (Berlin), <u>S. Schorr</u> (Berlin)
10:00-10:15	A machine learning force field for albite and the diffusion mechanisms of its defects <u>A. Gorfer</u> (Wien), R. Abart (Wien), C. Dellago (Wien)
10:15-10:30	Crystallography in energy applications <u>C. Weidenthaler</u> (Mülheim an der Ruhr)
10:30 – 11:00 Morning coffee and tea, Poster session II, Commercial exhibition	
11:00-11:45 Lecture Room 3	Victor-Moritz-Goldschmidt Award of DMG Deformation and reaction of crustal rocks under high-pressure, high-temperature conditions <u>S. Incel</u> (Bochum, London), L. K. Mohrbach (Bochum, Hamburg), J. Renner (Bochum) Plenary lecture sponsored by DMG
11:45-12:30 Lecture Room 3	The importance of volatiles in the formation of magmatic sulfide ore deposits: experimental constraints <u>G. Iacono-Marziano</u> (Orleans), M. Le Vaillant (Perth), S.J. Barnes (Perth), B. Godel (Perth) Plenary lecture sponsored by the session "Metal enrichment processes - latest advances in the understanding of ore formation - Economic Geology and Ore Deposits" (M. Wilke - Potsdam, J. Michaud - Hannover, M. Korges - Potsdam)
12:30 - 14:30 Lunch break, Poster Session II, Commercial exhibition	
Structure-property relationships of minerals and beyond - Minerals as advanced materials I	
Chairs: M. Münchhalfen (Bochum), J. Schreuer (Bochum)	
14:30-15:00	Computational studies of zeolites as adsorbents for the removal of pharmaceuticals and personal care products <u>M. Fischer</u> (Bremen), J. Brauer (Bremen)
15:00-15:15	Thermoelastic properties and phase transition of natural pollucite <u>J. Schreuer</u> (Bochum), M. Münchhalfen (Bochum), E. Hartman (Bochum)
15:15-15:30	Unravelling the true nature of Martian 'lh'-kieserite <u>D. Talla</u> (Wien), M. Wildner (Wien)
15:30-15:45	Cement analysis by X-ray diffraction and X-ray fluorescence <u>S. Wollstadt</u> (Neu-Isenburg), T. Füllmann (Neu-Isenburg), E. Hartmann (Neu-Isenburg)
15:45 – 16:15 Afternoon coffee and tea, Poster Session II, Commercial exhibition	
Structure-property relationships of minerals and beyond - Minerals as advanced materials II	
Chairs: M. Münchhalfen (Bochum), J. Schreuer (Bochum)	
16:15-16:45	Structural changes in Ln-monazites under swift heavy ion irradiation <u>J. Marquardt</u> (Frankfurt), T. Lender (Aachen), L. Bayarjargal (Frankfurt), E. Haussühl (Frankfurt), C. Trautmann (Darmstadt), L. Peters (Aachen), B. Winkler (Frankfurt)
16:45-17:00	Thermoelastic properties of radiation-damaged zircon <u>M. Münchhalfen</u> (Bochum), J. Schreuer (Bochum)
17:00-17:15	Crystal structure and Li-ion conductivity in $\text{Li}_7\text{La}_3\text{Zr}_{12}\text{O}_{24}$ garnets: a review <u>G. Amthauer</u> (Salzburg), D. Rettenwander (Trondheim), R. Wagner (Salzburg), G.J. Redhammer (Salzburg)
17:15-17:30	Plagioclase hosted magnetite micro-inclusions from oceanic gabbro: shape orientation and implication for bulk magnetic properties O. Ageeva (Wien), G. Bian (Wien), G. Habler (Wien), <u>R. Abart</u> (Wien)
17:30-17:45	Digital Microscopy Solutions: Practical Analysis for different applications <u>A. Roland Szalai</u> (Wiener Neudorf)
17:45-18:00	Electron Diffraction – Structure Elucidation of Nano-Crystalline Materials <u>A. Portier</u> (Zürich), P. Simoncic (Zürich)
18:10-19:10 Lecture Room 3	Öffentlicher Vortrag (in German with English slides) - Lecture Room 3 Rohstoffe für den Green Deal: woher nehmen? <u>F. Melcher</u> (Leoben)

Wednesday, 20 September 2023 – Oral presentations - Lecture Room 3

The co-evolution of Earth's atmosphere, oceans, continents, and life from the early Archean until today

Chairs: S. Viehmann (Hannover), A.S. Rodler (Vienna), S.V. Hohl (Shanghai, China)

9:00-9:30	Do chromium isotope compositions record signs of oxygenation in the Campbellrand-Malmani Platform (2.56 to 2.52 Ga, South Africa)? <u>S. Bruggmann</u> (Lausanne), C. Thomazo (Burgundy), J. Marin Carbonne (Lausanne), S. Jaccard (Lausanne)
9:30-9:45	Reconstruction of a 3.5-billion-year-old marine environment: Evidence from trace element data of iron formation from the Daitari Greenstone Belt, Singhbhum Craton, India <u>S. Kienle</u> (Wien), S. Viehmann (Hannover), J. Jodder (Witwatersrand, Johannesburg), A. Hofmann (Johannesburg), T. Schulz (Wien), C. Koeberl (Wien)
9:45-10:00	Highly siderophile element and Re-Os isotope compositions of the 3.5 Ga Tomka Iron Formation, Daitari Greenstone Belt, India <u>A. Salzmann</u> (Wien), T. Schulz (Wien), S. Viehmann (Hannover), J. Jodder (Witwatersrand), A. Hofmann (Johannesburg), C. Koeberl (Wien)
10:00-10:15	Geochemical insights into one of the earliest marine habitats on Earth – the reliability of 3.5-billion-year-old jaspillites from the Dresser Fm., Australia <u>S. Viehmann</u> (Hannover), D. Krämer (Hannover), C. Koeberl (Wien), S.V. Hohl (Shanghai), M.J. van Kranendonk (Sydney)
10:15-10:30	Enzymatically induced apatite formation as a key mechanism in fish fossilization – an experimental study <u>F. Gäb</u> (Bonn), S. Karačić (Potsdam), R. Wirth (Potsdam), G. Bierbaum (Potsdam), C. Bultmann (Wiesbaden)
10:30 – 11:00 Morning coffee and tea, Poster session III, Commercial exhibition	
11:00-12:30 Lecture Room 3	Oral contribution & panel discussion: Turning toolboxes into an ecosystem: How to make research software interoperable? Moderator: <u>T. Rose</u> (Frankfurt, Bochum), D.C. Hezel (Frankfurt)
	An extensible, open, and web-based research environment to understand geochemical data <u>T. Tamanna</u> (Frankfurt), D.C. Hezel (Frankfurt)
12:30 - 14:30 Lunch break, Poster Session III, Commercial exhibition	
A tribute to Josef Zemann (1923–2022) - Lecture Room 3	
Chairs: G. Giester (Wien), E. Libowitzky (Wien), M. Wildner (Wien)	
14:30-15:00	Zemannite, $Mg(H_2O)_6[Zn^{2+}Fe^{3+}(TeO_3)_3]_2 \cdot nH_2O$, $n \leq 3$: Trigonal symmetry enables a fully ordered host-guest structure <u>R. Miletich</u> (Wien), H.S. Effenberger (Wien), M. Ende (Wien)
15:00-15:30	Structural diversity in new, synthetic zemannite-type phases <u>F. Eder</u> (Wien), A. Marsollier (Bordeaux-Gradignan), M. Weil (Wien)
15:30-15:45	$CuSeO_4$ and $Cu(SeO_3OH)_2 \cdot 6H_2O$: A tribute to the enlightenment of the stereochemistry of Cu^{2+} ions by Josef Zemann (1923–2022) <u>H.S. Effenberger</u> (Wien), G. Giester (Wien), M. Wildner (Wien)
15:45 – 16:15 Afternoon coffee and tea, Poster Session III, Commercial exhibition	
Young Scientist Session	
Chairs: L. Czekay (Bayreuth), R. Volkmann (Potsdam)	
16:15-16:45	Uranium incorporation in andraditic garnet <u>C. Ackermann</u> (Frankfurt), H.R. Marschall (Frankfurt), M. Kutzschbach (Berlin), D.C. Hezel (Frankfurt), A.B. Woodland (Berlin), L.J. Millonig (Berlin), J.B. Walters (Berlin), A. Schmidt (Berlin)
16:45-17:00	Mechanical-thermochemical process combination for the recycling of fine fractions from waste treatment plants – A journey into waste mineralogy <u>T. Kremlicka</u> (Leoben), T. Sattler (Leoben), S. Steiner (Graz), S. A. Viczek (Wien), K. P. Sedlazeck (Leoben)
17:00-17:15	Recycling of mineral waste materials by geopolymerization – first results <u>B. Ratz</u> (Leoben), T. Sattler (Leoben), F. Steindl (Graz), S. Raič (Graz), I. Zögl (Graz), S. Radinger (Graz), O. Rudić (Graz), Florian Mittermayr (Graz), C. Grengg (Graz)
17:15-17:30	Hydrogen induced changes in the mineralogical phase composition of downhole cements: fundamentals research within the context of Underground Hydrogen Storage. <u>T. Sammer</u> (Leoben), K. Ravi (Leoben), J. G. Raith (Leoben)
17:30-17:45	Phosphorus in the deep Earth: An experimental investigation of Ca-phosphates at upper- to lower-mantle P-T conditions <u>T. Pausch</u> (Innsbruck), B. Joachim-Mrosko (Innsbruck), A.C. Withers (Bayreuth), T. Ludwig (Heidelberg), J. Vazhakuttiyakam (Innsbruck), J. Konzett (Innsbruck)

Wednesday, 20 September 2023 - Oral presentations- Lecture Room 6

Linking microstructures, crystallographic textures, and the nature of interfaces

Chairs: T. Griffiths (Wien), G. Habler (Wien)

9:00-9:30	Metamorphic reaction kinetics at anhydrous to water-saturated conditions M. Franke (Innsbruck), B.C. Schmidt (Göttingen), R. Stalder (Innsbruck), <u>B. Joachim-Mrosko</u> (Innsbruck)
9:30-9:45	Petrogenetic information stored in needle-shaped rutile inclusions in pegmatoid garnet <u>V. Kohn</u> (Wien), T. Griffiths (Wien), E. Libowitzky (Wien), O. Ageeva (Wien), R. Abart (Wien), G. Habler (Wien)
9:45-10:00	Discerning different nucleation mechanisms in synthetic trachybasalts: example from three Titanomagnetite populations in single experiments <u>S. Peres</u> (Wien), T.A. Griffiths (Wien), F. Colle (Parma), S. Iannini Lelarge (Pisa), M. Masotta (Pisa), A. Pontesilli (Roma), L. Mancini (Ljubljana)
10:00-10:15	Preliminary EBSD analysis and interpretation of Spinel-Olivine-Plagioclase pseudomorphs in skarnoid xenoliths from Southern Slovakia <u>L. Reato</u> (Bratislava), M. Huraiová (Bratislava), T. Griffiths (Wien), G. Habler (Wien), R. Abart (Wien), V. Hurai (Bratislava), P. Konečný (Bratislava)
10:15-10:30	An uncommon terrestrial rock that was believed to be a meteorite <u>L. Pittarello</u> (Wien), S. Chernozhkin (Leoben), H. Downes (London), O. Marchhart (Wien), S. Merchel (Wien), A. Wieser (Wien), F. Vanhacke (Ghent), J. Villeneuve (Nancy), S. Goderis (Brussel)

10:30 – 11:00 Morning coffee and tea, Poster session III, Commercial exhibition

11.00-12:30 Lecture Room 3	Oral contribution & panel discussion: Turning toolboxes into an ecosystem: How to make research software interoperable? Moderator: <u>T. Rose</u> (Frankfurt, Bochum), D.C. Hezel (Frankfurt)
	An extensible, open, and web-based research environment to understand geochemical data <u>T. Tamanna</u> (Frankfurt), D.C. Hezel (Frankfurt)

12:30 - 14:30 Lunch break, Poster Session III, Commercial exhibition

A tribute to Josef Zemann (1923–2022) - Lecture Room 3

Chairs: G. Giester (Wien), E. Libowitzky (Wien), M. Wildner (Wien)

14:30-15:00	Zemannite, $Mg(H_2O)_6[Zn^{2+}Fe^{3+}(TeO_3)_2]_2 \cdot nH_2O$, $n \leq 3$: Trigonal symmetry enables a fully ordered host-guest structure <u>R. Miletich</u> (Wien), H.S. Effenberger (Wien), M. Ende (Wien)
15:00-15:30	Structural diversity in new, synthetic zemannite-type phases <u>F. Eder</u> (Wien), A. Marsollier (Bordeaux-Gradignan), M. Weil (Wien)
15:30-15:45	On the occasion of the 100 th anniversary of Josef Zemann's birthday: a tribute to his scientific oeuvre

15:45 – 16:15 Afternoon coffee and tea, Poster Session III, Commercial exhibition

Mineral history & teaching - Geoscientific collections & museums

Chairs: V.M.F. Hammer (Wien), C. Kehrler (Freiberg), D. Kleinschrot (Würzburg), B. Kreher-Hartmann (Jena)

16:15-16:45	Special exhibition: Wonder world agate - fascination between legend and science <u>M. Mrozik</u> (Freiberg), J. Götze (Freiberg), A. Massanek (Freiberg), M. Gäbelein (Freiberg)
16:45-17:00	Minerals in a greenhouse environment: a cross-disciplinary exhibition <u>S.P. Mueller</u> (Marburg)
17:00-17:15	The "Societät für die gesammte Mineralogie zu Jena" – Members and minerals from Austria, Slovakia, and Hungary <u>B. Kreher-Hartmann</u> (Jena)
17:15-17:30	Children's and teenagers' geoscience projects at the Mineralogical State Collection Munich (MSM) <u>M. Kaliwoda</u> (München), M. Junge (München), F. Hentschel (München), F. Joseph (München), W.W.Schamahl (München)
17:30-17:45	Special exhibitions are suitable for knowledge transfer <u>D. Kleinschrot</u> (Würzburg)

Thursday, 21 September 2023 - Oral presentations - Lecture Room 3

Archeometry

Thomas Rose (Frankfurt)

9:00-9:30	The inner beauty of Roman Egyptian blue: micro-CT and mineralogy J. Heinemann (Innsbruck), <u>P. Tropper</u> (Innsbruck), G. Degenhart (Innsbruck), B. Zerobin (Innsbruck), G. Goldenberg (Innsbruck), A. Rodler (Wien)
9:30-9:45	Thracian marbles from Archaic to Roman Times - Imports or local production? <u>W. Prochaska</u> (Wien), S. Ladstätter (Wien), V. Anevlavi (Wien)
9:45-10:00	Provenance studies on raw garnets from the Zillertal (Tyrol), Ahrntal (South Tyrol), and Radenthein (Carinthia) <u>S. Wagner</u> (Innsbruck), B. Zerobin (Innsbruck), R. Köchl (Innsbruck), P. Tropper (Innsbruck), G. Goldenberg (Innsbruck)
10:00-10:15	Fahlore analyses from a prehistoric work and settlement site in Kundl, Tyrol <u>L. Oettel</u> (Innsbruck), P. Tropper (Innsbruck), L. M. Eß (Innsbruck)
10:15-10:30	Investigating the metal sources of the Early Nordic Bronze Age through a multi-proxy approach <u>A. Wittke</u> (Mannheim), B. Cornelis (Mannheim), D. Berger (Mannheim)

10:30 – 11:00 Morning coffee and tea

Crystal structure of minerals

Chairs: B. Mihailova (Hamburg), D. Matzdorff (Berlin)

11:00-11:30	Study of natural As_2S_3 glass <u>T. Witzke</u> (Almelo), G. Nénert (Almelo), M. Gateshki (Almelo)
11:30-11:45	$Ca_2(Mn,Ti)O_4$, a potentially new mineral with the Ruddlesden-Popper structure R. Juroszek (Katowice), <u>B. Krüger</u> (Innsbruck), G. Cametti (Bern)
11:45-12:00	Structure and vibrational properties of hydrous and anhydrous amorphous SiO_2 at high pressures <u>S. Jahn</u> (Köln), M. Herrmann (Köln), M. Schulze (Köln), J. Dreschmann (Köln), W. Morgenroth (Potsdam), G. Garbarino (Grenoble), M. Mezouar (Grenoble), M. Wilke (Potsdam)
12:00-12:15	The incorporation of Li in the tourmaline structure <u>A. Ertl</u> (Wien)

Thursday, 21 September 2023 – Oral presentations - Lecture Room 6

Applied and Technical Mineralogy

Chairs: R. Boch (Graz), P. Németh (Budapest, Veszprém), M. Dietzel (Graz)

9:00-9:30	Mineral reactions in thermally treated calcareous clays for brick production <u>P. R. Pesek</u> (Wien), C. L. Lengauer (Wien), R. Abart (Wien), A. Kurka (Wien), G. Früh (Hennersdorf), W. Gaggli (Hennersdorf)
9:30-9:45	Characterization of NaOH gas attack on silica bricks by experimental alkali vapour tests and thermochemical modelling by FactSage™ <u>N. Lechner</u> (Leoben)
9:45-10:00	Clays from the Westerwald area as a source for high reactive main cement constituent <u>C.J. Piribauer</u> (Dornburg), R. Diedel (Dornburg), H. Knapp (Dornburg), W. Heuser (Dornburg), M. Schellhorn (Dornburg)
10:00-10:15	How to predict strength and optimum mix-designs of mineral-waste-based geopolymers <u>I. Zögl</u> (Graz), O.Rudić (Graz), C. Grengg (Graz), F. Steindl (Graz), D. Etezad (Graz), M. Dietzel (Graz), S. Raič (Graz)
10:15-10:30	Glass transition temperatures and crystallization kinetics of a synthetic, anhydrous, amorphous calcium-magnesium carbonate <u>K.-U. Hess</u> (München), J. Schawe (Nänikon), M. Wilding (Bristol), K.E. Goetschl (Graz), S. Sturm (München), K. Müller-Caspary (München), E. Sturm (München), W. Schmahl (München), E. Griesshaber (München), T. Bissbort (München), D. Weidendorfer (München), M. Dietzel (Graz), D.B. Dingwell (München)

10:30 – 11:00 Morning coffee and tea

Carbonates in natural and technical environments – Precipitation mechanisms, monitoring and applications; Applied, Technical, and Environmental Mineralogy, Geochemistry

Chairs: R. Boch (Graz), P. Németh (Budapest, Veszprém), M. Dietzel (Graz), Elena Sturm (München)

11:00-11:30	CaCO ₃ precipitation in drainage systems of subsurface infrastructure – Monitoring approaches and crystal growth control <u>R. Boch</u> (Graz), M. Pettau (Graz), S. Eichinger (Graz), A. Leis (Graz), H. Wagner (Graz), M. Dietzel (Graz)
11:30-11:45	Tracking transformation processes in the Mg phosphate mineral system – A mineralogical study for environmental applications <u>R. Volkmann</u> (Potsdam, Berlin), R. Blukis (Berlin), C. Schmidt (Potsdam), L. G. Benning (Potsdam, Berlin)
11:45-12:00	Mineralogical control of synergetic thallium and antimony weathering <u>T. Đorđević</u> (Wien), M. Stöger-Pollach (Wien)
12:00-12:15	Bi-Te-S biomineralization in Precambrian Volyn biota (Ukraine) <u>G. Franz</u> (Berlin), R. Wirth (Potsdam), A. Schreiber (Potsdam), V. Khomeiko (Berlin, Kyiv)