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**Sunday, 24 June 2018**

**Chairpersons:** Carmen Sanchez-Valle, Timm John, Nadia Malaspina, Simone Tumiatì and Yuri Podladchikov

**18:00–20:00:** Icebreaker

**Monday, 25 June 2018**

**Congress Hall**

**Chairperson:** Carmen Sanchez-Valle

**08:45–09:15:** Opening

**Theme 1: Experimental & theoretical studies of fluid properties****09:15–10:45: GC4-Subduction-20**

The role of volatiles in subduction zone metasomatism and melting: An experimental perspective (solicited)

**Kessel, Ronit**

**10:45 Coffee break****11:00–11:20: GC4-Subduction-24**

Experimental determination of forsterite, enstatite and magnesite solubilities in graphite-saturated and redox-buffered high-pressure COH fluids (invited)

**Tiraboschi, Carla;** Tumiatì, Simone; Sverjensky, Dimitri; Pettke, Thomas; Ulmer, Peter; Poli, Stefano

**11:20–11:40: GC4-Subduction-12**

COH-fluid driven carbonation of serpentinites and spinel peridotites within the forearc region of the mantle wedge and in the subducting slab

**Sieber, Melanie;** Hermann, Joerg; Yaxley, Gregory; Lanari, Pierre

**11:40–12:00: GC4-Subduction-9**

The Metasomatic Influence of Silicic HDF on the Sub Continental Lithospheric Mantle

**Meltzer, Amit**

**12:00–12:20: GC4-Subduction-13**

Molecular modeling approaches to element speciation in aqueous fluids (invited)

Stefanski, Johannes; **Jahn, Sandro**

**12:40–13:00** Discussion

**13:00 Lunch break**

**Chairperson:** Simone Tumiatì

**14:00–14:20: GC4-Subduction-42**

Solubility of Aragonite in Aqueous Fluids

**Daniel, Isabelle;** Facq, Sébastien; Petitgirard, Sylvain; Cardon, Hervé; Sverjensky, Dimitri A.

**14:20–14:40: GC4-Subduction-32**

Brine-like fluids in the lithospheric mantle beneath the Styrian Basin – a fluid inclusion study

**Aradi, László Előd;** Berkesi, Márta; Szabó, Csaba

**14:40–15:30:** Discussion Theme 1

**15:30–16:10:** Flash poster presentations:

**P1: GC4-Subduction-10**

The Aqueous Solubility Of Rhodochrosite In Subduction Zones

**Farsang, Stefan;** Louvel, Marion; Redfern, Simon A. T.

**P2: GC4-Subduction-23**

Redox processes and the role of carbon-bearing volatiles from the slab-mantle interface to the mantle wedge

**Tumiatì, Simone;** Malaspina, Nadia

**P3: GC4-Subduction-22**

Metal mobilization and transport in magmatic-hydrothermal fluids

**Springsklee, Christina;** Sanchez-Valle, Carmen; Plückthun, Christian; Testemale, Denis

**P4: GC4-Subduction-15**

Stability of oxidized iron species and the redox budget of slab-derived fluids

**Sanchez-Valle, Carmen;** Testemale, Denis; Borca, Camelia; Grolimund, Daniel

**P5: GC4-Subduction-17**

Metasomatism of UHP garnet peridotites by crustal-derived fluids in subduction zone setting reflected by solid inclusions and chemical zoning in garnet

**Kotkova, Jana;** Čopjaková, Renata; Škoda, Radek

**P6: GC4-Subduction-39**

Sources and speciation of sulphur and carbon in the subduction zone mélange

**Schwarzenbach, Esther;** Caddick, Mark; Petroff, Matthew; Gill, Benjamin; Cooperdock, Emily; Barnes, Jaime

**P7: GC4-Subduction-8**

Pressure estimates from fluid and solid inclusions in minerals from UHPM rocks

**Mazzucchelli, Mattia Luca;** Angel, Ross J.; Nestola, Fabrizio; Alvaro, Matteo

**P8: GC4-Subduction-27**

Recycling Bromine in subduction zones: New insights from X-ray absorption measurements on fluids, melts and glasses

**Louvel, Marion**; Cadoux, Anita; Brooker, Richard; Hazemann, Jean-Louis; Sanchez-Valle, Carmen

**16:10–18:00 Poster session I & refreshments**

**19:30 Dinner**

## Tuesday, 26 June 2018

**Congress Hall**

**Chairperson:** Nadia Malaspina

### **Theme 2: The rock perspective (natural samples)**

**09:15–10:45: GC4-Subduction-16**

Fluids in subduction-zone rocks (solicited)

**Scambelluri, Marco**

**10:45 Coffee break**

**Chairperson:** Timm John

**11:00–11:20: GC4-Subduction-7**

Highly oxidizing fluids generated during serpentinite breakdown in subduction zones (invited)

**Debret, Baptiste**

**11:20–11:40: GC4-Subduction-4**

Carbon mobilisation in the shallow Mariana subduction zone: insights from IODP Exp. 366

**Albers, Elmar**; Klein, Frieder; Bach, Wolfgang and the Expedition 366 Scientists

**11:40–12:00: GC4-Subduction-36**

Material Transport in Subduction Zones: Not all Flow is Fluids (invited)

**Marschall, Horst**

**12:00–12:20: GC4-Subduction-29**

Reduction and abiotic synthesis of hydrocarbons in subduction zones: widespread or anecdotal?

**Vitale Brovarone, Alberto**; Martinez, Isabelle; Sverjensky, Dimitri; Piccoli, Francesca

**12:20–12:40: GC4-Subduction-43**

Novel isotope tracers of slab-derived fluids

**Williams, Helen**; Debret, Baptiste; Pons, Marie-Laure; Bouilhol, Pierre

**12:40–13:00 Discussion**

**13:00 Lunch break**

**Chairpersons:** Nadia Malaspina and Simone Tumati

### **Theme 3: Thermodynamic modelling**

**14:00–15:30: GC4-Subduction-38**

Thermodynamic modeling of deep Earth fluid-rock interactions (solicited)

**Sverjensky, Dimitri**

**15:30–15:50: GC4-Subduction-5**

Thermodynamics of aqueous species at high pressures: constraints from mineral solubilities on applicability of equations of state

**Dolejs, David**

**15:50–16:10: GC4-Subduction-34**

Stability of serpentinite-hosted ophicarbonate during subduction metamorphism and antigorite dehydration

**Menzel, Manuel**; Garrido, Carlos; López Sánchez-Vizcaino, Vicente; Marchesi, Claudio; Hidas, Károly

**16:10 Coffee break**

**16:25–16:45: GC4-Subduction-37**

Internally consistent database for oxygen isotope fractionation in minerals: theory and application to high-pressure metamorphic rocks (Sesia Zone, Italy)

**Vho, Alice**; Lanari, Pierre; Rubatto, Daniela

**16:45–17:05: GC4-Subduction-11**

Thermodynamic investigations of redox state in subduction zone fluids (invited)

**Evans, Katy**; Crossley, Rosalind

### ***Presentation of Pohorje field trip:***

**17:05–17:25: GC4-Subduction-31**

Microdiamond and Moissanite Inclusions in Garnets from Pohorje Mountains, Eastern Alps, Slovenia

**Vrabec, Mirijam**; Janák, Marian; Ambrozic, Bojan; Sasinková, Vlasta; Yoshida, Kenta; Rogan-Smuc, Nastja; Sturm, Saso

**19:30 Dinner**

## Wednesday, 27 June 2018

**Field trip: High-and ultrahigh-pressure rocks of Pohorje – a window to deep subduction and lithosphere dynamics through geologic time**

**19:30 Banquet**

**Thursday, 28 June 2018****Congress Hall****Chairperson:** Yuri Podladchikov**Theme 4: Geochemistry-Geodynamics coupling****09:15–10:45: GC4-Subduction-26**Numerical subduction zones: advances in geodynamic and geochemical modeling (solicited)  
**Wilson, Cian**; van Keken, Peter; Spiegelman, Marc**10:45 Coffee break****11:00–11:20: GC4-Subduction-35**Numerical modelling of porosity and fluid escape structures in subduction zones (invited)  
**Vrijmoed, Johannes C.**; Plümpfer, Oliver; John, Timm; Podladchikov, Yuri Y.; Scambelluri, Marco**11:20–11:40: GC4-Subduction-25**Physical factors that control fluid migration pathways in the mantle wedge  
**Cerpa, Nestor G.**; Wada, Ikuko; Wilson, Cian; Katz, Richard F.; May, Dave A.; Rees Jones, David**11:40–12:00: GC4-Subduction-40**V p/V s ratio of the subducting oceanic Nazca plate & implications for fluid processes  
Bloch, Wasja; **Kummerow, Joern**; John, Timm; Schurr, Bernd; Shapiro, Serge A.**12:00–12:20: GC4-Subduction-30**An Integrated Thermodynamic and Dynamic Approach to Modeling High Temperature Fluid Interaction in the Mantle Wedge  
**Tweed, Lucy**; Spiegelman, Marc; Evans, Owen; Kelemen, Peter**12:20–13:00 Discussion****13:00 Lunch break****Chairperson:** Timm John**14:00–15:15: Break out discussions****15:15–16:15: Flash poster presentations:****P9: GC4-Subduction-44**

HSE concentrations and highly radiogenic Os isotopic signature in orogenic lamproites from the Bohemian Massif: implications for subduction-related metasomatism of the sub-continental lithospheric mantle

**Hrubý, Jakub**; Krmíček, Lukáš; Ackerman, Lukáš**P10: GC4-Subduction-18**Primary spinel+chlorite inclusions in mantle garnet formed at UHP: implications for the crust-to-mantle redox budget  
**Campione, Marcello**; Tumiati, Simone; Malaspina, Nadia**P11: GC4-Subduction-19**High pressure melting of phengite-bearing eclogite: evidence for multiple slab-derived melt/fluid-mantle interaction during HP and HT metamorphism of grt-peridotites of Monte Duria (Central Alps, N Italy)  
**Pellegrino, Luca**; Malaspina, Nadia; Zanchetta, Stefano; Langone, Antonio; Tumiati, Simone**P12: GC4-Subduction-21**Barian mica in multiphase solid inclusions from orogenic garnet peridotites as indicator of composition of subduction-zone fluids  
**Čopjaková, Renata**; Kotková, Jana**P13: GC4-Subduction-28**Lawsonite-rich veins and layers as records of fluid flow and element cycling in subducted oceanic crust  
**Fornash, Katherine**; Whitney, Donna**P14: GC4-Subduction-33**Fluid-rock interaction in the ultramafic-mafic association of Cabo Ortegal Complex (NW-Spain)  
**Spránitz, Tamás**; Józsa, Sándor; Szabó, Csaba**P15: GC4-Subduction-14**Fluid release and seismicity at a transition between oceanic and continental subduction  
Halpaap, Felix; **Rondenay, Stéphane**; Ottemöller, Lars**P16: GC4-Subduction-41**Fast dehydration-related intraslab fluid-flow events: implications for pore fluid pressure fluctuations at the plate interface  
**John, Timm**; Taetz, Stephan; Bröcker, Michael; Spandler, Carl; Stracke, Andreas**16:15–18:00 Poster session II & refreshments****19:30 Dinner**

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## Friday, 29 June 2018

### Congress Hall

**Chairpersons:** Carmen Sanchez-Valle, Timm John, Nadia Malaspina, Simone Tumiatì and Yuri Podladchiko

**09:15–10:45:** Round table, wrap up

### 10:45 Coffee break

**Chairperson:** Carmen Sanchez-Valle

**11:00–12:30:** Concluding remarks

### 12:30 Lunch & departure

