

“Grand Challenges in Earth System Petrology”

Friday, November 15, 08³⁰ – 16⁰⁰
Building 1671 – 137, Høegh-Guldbergs Gade 2 DK-8000 Aarhus C

08:30 - Structure, composition and dynamics of the lithosphere - asthenosphere system

KEYNOTES (20 mins)

Petrology of Mantle Melting (Eric Brown, AU)

Seismology and Other Geophysical Observables to Constrain the Physical State of the Mantle (Derek Schutt, CSU)

“Teasers” (≤ 5 mins)

- **Melt depletion controls the thermal evolution of rifted lithosphere** (Kenni Petersen, AU)
- **Seismological evidence for a fossil subduction zone in the East Greenland Caledonides** (Christian Schiffer, AU)
- **Upper mantle seismic velocity anomalies - temperature and/or composition?** (Niels Balling, AU)
- **Dynamic and stationary topography of the North Atlantic realm** (Søren Bom Nielsen, AU)
- **Buoyancy forever?** (Charles Lesher, AU/UCD)
- **The South China Sea rifted margin - a new IODP initiative** (Hans-Christian Larsen, TU)
- **A new ultra high pressure complex in the 1.8 Ga Nagssugtoqidian Orogen of West Greenland** (John Korstgård/Kaj Sørensen, AU/GEUS)
- **High Pressure Capabilities at AU** (Martin Bremholm, AU)

10:30 - Earth in Crisis

KEYNOTES (20 mins)

Greenland - A chip of Earth's crust (Minik Rosing, KU)

The role of metamorphic and igneous processes in triggering Earth crises and environmental changes (Henrik Svensen, CEED – OU)

“Teasers” (≤ 5 mins)

- **Gas blasts in the past** (Michael Storey, RUC)
- **F, Cl, and S concentrations in olivine-hosted melt inclusions from the Etendeka Province, Namibia: implications for volatile release from LIPs** (Jakob Keiding, GFZ)
- **How and where can volcanic forcing of the atmosphere-climate system during the early Paleogene in the North European area be examined?** (Pi Suhr Willumsen, AU)
- **New evidence for pre-PETM volcanism** (Claus Heilmann-Clausen, AU)
- **End-Triassic seismites linked to CAMP volcanism** (Sofie Lindström, GEUS)
- **Role of hardrockers: Atom pirates or atom custodians?** (Bo Holm Jacobsen, AU)
- **Isotopes in crisis** (Gry Barfod, AU)
- **TBA** (Mads Knudsen, AU)

13:30 - Fluids in the Crust

KEYNOTE (20 mins)

Decoding magmatic histories using non-traditional stable isotopes (Craig Lundstrom, UIUC)

“Teasers” (≤ 5 mins)

- **Magmatic Fe isotope fractionation - who's wagging the tail?** (Charles Lesher, AU/UCD)
- **Mossbauer spectroscopy of the Skaergaard intrusion** (Palle Gunnlaugsson, AU)
- **Differentiation of emulsions** (Lars Peter Salmonsén, AU)
- **FeTi-oxides as tracers for in situ fractionation** (Troels Nielsen, GEUS)
- **Thy on Mors(e)** (Peter Thy, UCD)
- **Phenocryst Transport and In-situ Crystallization in Sills within the Franklin Igneous Province, Canada** (Richard Naslund, SUNY)
- **F, Cl, and S concentrations in olivine-hosted melt inclusions from the Etendeka Province, Namibia: implications for volatile release from LIPs** (Jakob Keiding, GFZ)
- **Significance of volatiles and metals in crustal fluids** (Thomas Ulrich, AU)
- **Hydrothermal gold in the deeper crust** (Jochen Kolb, GEUS)
- **Seiland Igneous Province: a window in to igneous and ore-forming processes at the roots of a giant magmatic systems** (Rune Larsen, NTNU)
- **High Arctic volcanism** (Christian Tegner, AU)