

Geowissenschaftliche Kolloquien WiSe 2025/2026

Mo 26.01.2026 Herr Prof. Dr. Thomas Ulrich

17.15 Uhr

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The mineralization potential and ore-forming processes in magma chambers in Greenland

In this presentation, I would like to take you on a journey to Greenland and present some research on the Ilímaussaq and the Skaergaard magmatic systems. Both intrusive complexes have a long history of investigation, but there are still many unresolved questions. In particular, the magma chamber processes of these complexes play a crucial role in the formation of ore deposits and need to be understood to explore for new resources.

The alkaline/peralkaline intrusion at Ilímaussaq is famous for its wealth of (rare) minerals and hosts REE-Nb-Ta-Zr mineralization. The formation of this extraordinary magmatic complex is still debated and includes different magmatic and metasomatic models related to extended crystal fractionation.

In contrast, the mafic Skaergaard intrusion hosts sulphide-poor, blind Pt-Pd mineralization that formed likely due to sulphide liquid immiscibility. I will present how we study these systems to unravel the ore forming processes.

