



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

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Time & place: February 27, 2025 at 15h00. William-Olsson lecture hall, Geohuset

In this presentation, I will 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 sulfide liquid immiscibility. I will show how we study these systems to unravel the ore forming processes.

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