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Petrology of the Skaergaard Layered Series

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## Petrology of the Skaergaard Layered Series

The Skaergaard intrusion is a layered, ferrobasaltic intrusion emplaced during the Early Eocene into the rifting volcanic margin of East Greenland. In this special issue, the authors, Peter Thy, Christian Tegner and Charles E. Lesher, present a comprehensive review of differentiation processes exemplified by the Skaergaard intrusion. They present petrographic, mineralogical and major and trace element data of the Layered Series collected during ground traverses and from a drill core and show that differentiation was principally controlled by crystal fractionation interrupted by liquid immiscibility and the termination of melt convection in the upper parts of the intrusion. They further attribute a decoupling of included and excluded trace elements to the mobility of an immiscible granophyric melt in the mush. Accompanying this special issue is a rich resource of online supplementary data, photomicrographs and modelling results, as well as key maps and aerial photos. It is the hope that this archive will be a valuable long-term resource for studies of the petrology and geochemistry of the Skaergaard intrusion and similar plutons. A foreword is provided by Troels F.D. Nielsen and the Editor of this issue is Jakob K. Keiding, both Geological Survey of Denmark and Greenland.



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