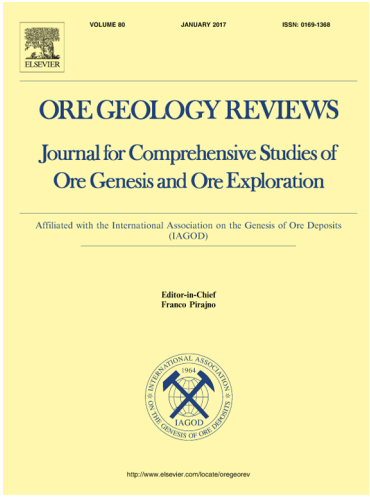

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Mabrouk Sami, Theodoros Ntaflos, Esam S. Farahat, Haroun A. Mohamed, Awaad F. Ahmed, Christoph Hauzenberger

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Title

Mineralogical, geochemical and Sr-Nd isotopes characteristics of fluorite-bearing granites in the Northern Arabian-Nubian Shield, Egypt: Constraints on petrogenesis and evolution of their associated rare metal mineralization

Author names and affiliations

Mabrouk Sami[a,b] , Theodoros Ntaflos[a], Esam S. Farahat[b], Haroun A. Mohamed[b], Awaad F. Ahmed[b], Christoph Hauzenberger[c]

[a] Department of Lithospheric Research, University of Vienna, Althanstrasse 14, A-1090 Vienna, Austria

[b]Department of Geology, Faculty of Science, Minia University, El-Minia 61519, Egypt

[c] Institute of Mineralogy and Petrology, Karl-Franzens University, Graz, Austria

Abstract

The Central Eastern Desert (CED) of Egypt, a part of Neoproterozoic Arabian Nubian Shield (ANS), embraces a multiplicity of rare metal bearing granitoids. Gabal El-Ineigi represents one of these granitic plutons and is a good example of the fluorite-bearing rare metal granites in the ANS. It is a composite pluton consisting of a porphyritic syenogranite (SG; normal granite) and coarse- to medium-grained highly evolved alkali-feldspar granite (AFG; fluorite and rare metal bearing granite) intruded into older granodiorite and metagabbro-diorite rocks. The rock-forming minerals are quartz, K-feldspar (Or_{94-99}), plagioclase (An_{0-}