

**MINERAL CHEMISTRY OF RADIOACTIVE AND ASSOCIATED
PHASES FROM NEOPROTEROZOIC UNCONFORMITY-
RELATED PROXIMAL URANIUM DEPOSIT AT
KOPPUNURU, PALNAD SUB-BASIN, GUNTUR
DISTRICT, ANDHRA PRADESH, INDIA**

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Abstract

The unconformity proximal uranium mineralization at Koppunuru, Guntur district, Andhra Pradesh, holds a small, low grade uranium deposit. Mineral chemistry reveals wide variation in chemical composition of pitchblende, coffinite and mixed phases of U, Ti, Si, Al, Ca, P and Pb, present as veins, grain boundary/fracture fillings in gritty quartzite of Banganalapalle Formation. The presence of multiple U-phases and their low total in situ chemical analyses suggests higher activity of alteration processes and emplacement of epigenetic solution / gel rich in U, Ti, Si, Al, Ca, P and Pb, preferably along available spaces as vein, cavity and grain boundary. The area holds potential for U-mineralization.

Keywords: Unconformity, U-mineralization, Mineral Chemistry, Radioactivity.