

Analysis of radiation effects in quartz from some uranium deposits: a natural analogue study

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Characterization of uranium ores and associated rocks by analysis of radiation effects in quartz is useful in understanding hidden history of ancient uranium accumulation and removal. CL (cathodoluminescence) observation discloses radiation-damage halos by alpha particles, whereas ESR (electron spin resonance) quantitatively measures the signals by beta and gamma rays. Experimental results for He ion implantation together with analysis of natural uranium ores by these methods will be reported and discussed.