**UMo/Al nuclear fuel plate behavior under thermal treatment (425-550°C)**

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**Abstract:** Nuclear fuel plates based on a γU-Mo/Al mixture are proposed for research reactors. In this work their thermal behavior in the [425; 550°C] temperature range has been studied mainly by neutron and high energy X-ray diffraction. Even if complementary studies will be necessary, the kinetics of first the growth of the interaction layer between γU-Mo and Al and second of the γU-Mo destabilization have been accurately measured. This basic work should be helpful for defining manufacturing conditions for fuel plates with optimized composition.

  