

RERTR 2018 – 39<sup>TH</sup> International Meeting on  
Reduced Enrichment for Research and Test Reactors

November 4-7, 2018  
Sheraton Grand Hotel and Spa  
Edinburgh, Scotland

## **Uranium adsorption from uranium silicide alkaline dissolution using a strong base anion exchanger**

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### **ABSTRACT**

This present work deals with uranium recovery from low enriched uranium silicide fuel scrap material. The strong base anion exchanger resin MTA5012 was tested for the selective adsorption of uranium. The uranium silicide undergoes a two-step dissolution process using sodium hydroxide solution; thereafter batch experiments were performed. The influence of pH, contact time, presence of aluminium and initial uranium concentrations were studied and the results were fitted to the Langmuir and Freundlich adsorption isotherms. The resin showed adsorption of both aluminium and uranium; however the aluminium adsorption was found to decrease with decreasing pH.