

## A Kinetic Study of the Oxidation of $\text{UO}_2$ to $\text{U}_3\text{O}_8$

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In this work, a kinetic model has been suggested to explain the mass transfer and the diffusion effects during the oxidation of a  $\text{UO}_2$  pellet. The results calculated by the model equation are in good agreement with the experimental data. The kinetic parameters were estimated by a fitting of the experimental data. The resistances from the mass transfer and the pore diffusion increase with an increase of the fractional oxidation. The oxidation characteristics of  $\text{UO}_2$  were interpreted by the suggested kinetic model.