

Supporting Information

Grain growth of NpO_2 and UO_2 nanocrystals

Viktoria Baumann^{1,2,*}, Karin Popa², Marco Cologna², Olaf Walter^{2,**}, Murielle Rivenet¹

¹ Univ. Lille, CNRS, Centrale Lille, Univ. Artois, UMR 8181 – UCCS – Unité de Catalyse et Chimie du Solide, F-59000 Lille, France.

² European Commission, Joint Research Centre, Karlsruhe, Germany.

*Corresponding author. E-mail address: viktoria.baumann@univ-lille.fr; **olaf.walter@ec.europa.eu

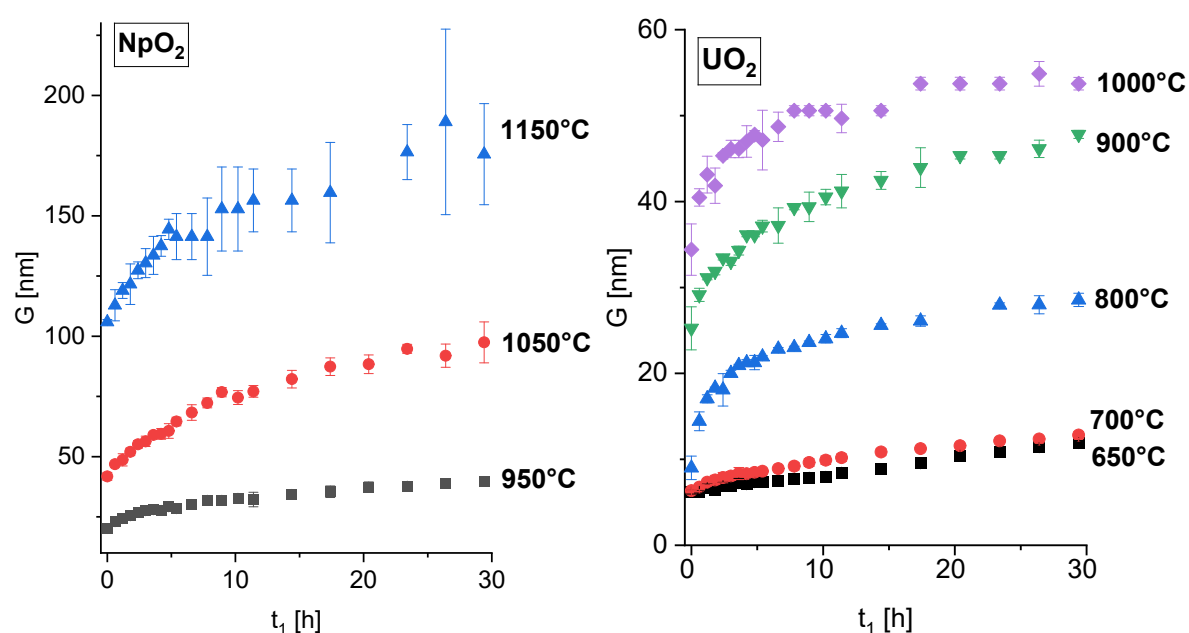


Figure S1. Crystallite size as a function of time at different temperatures for NpO_2 (left) and UO_2 (right).

The slope of the linear regression gives the grain growth constant k , reported in Table 2

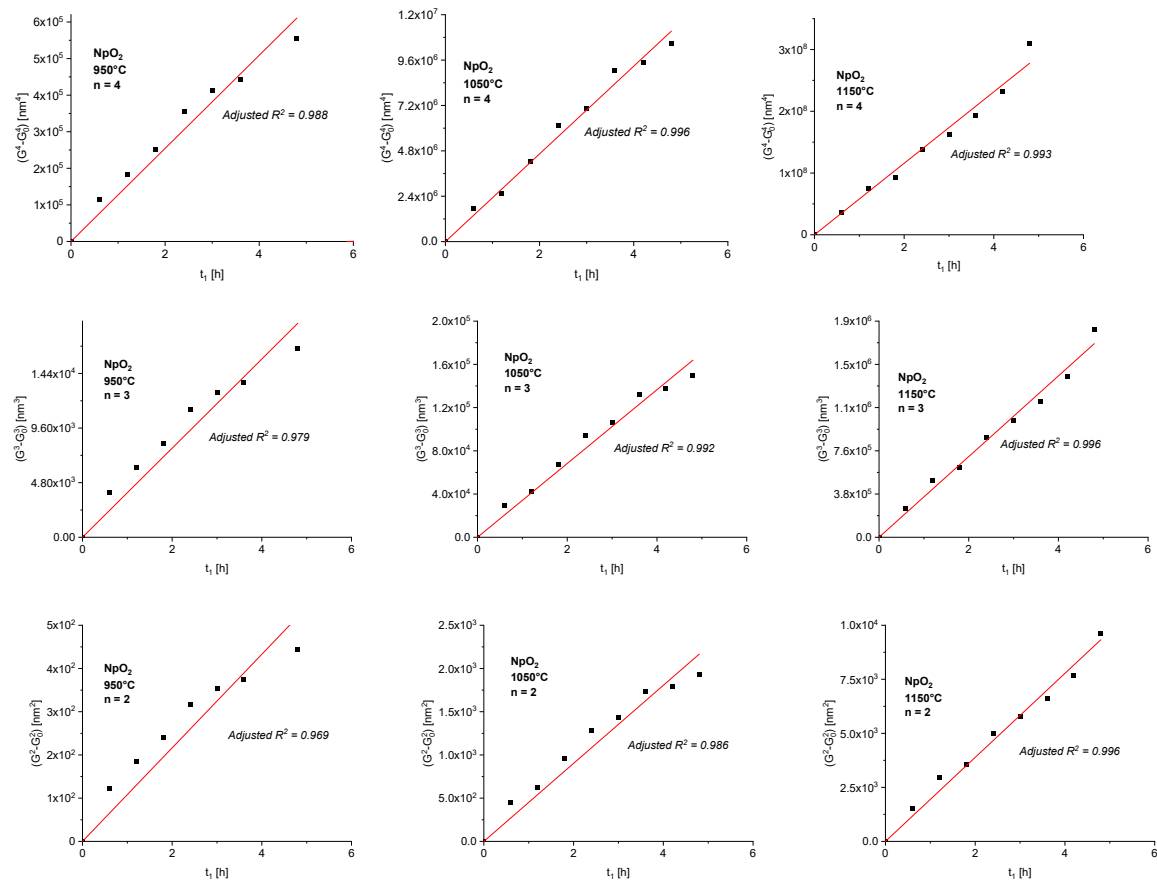
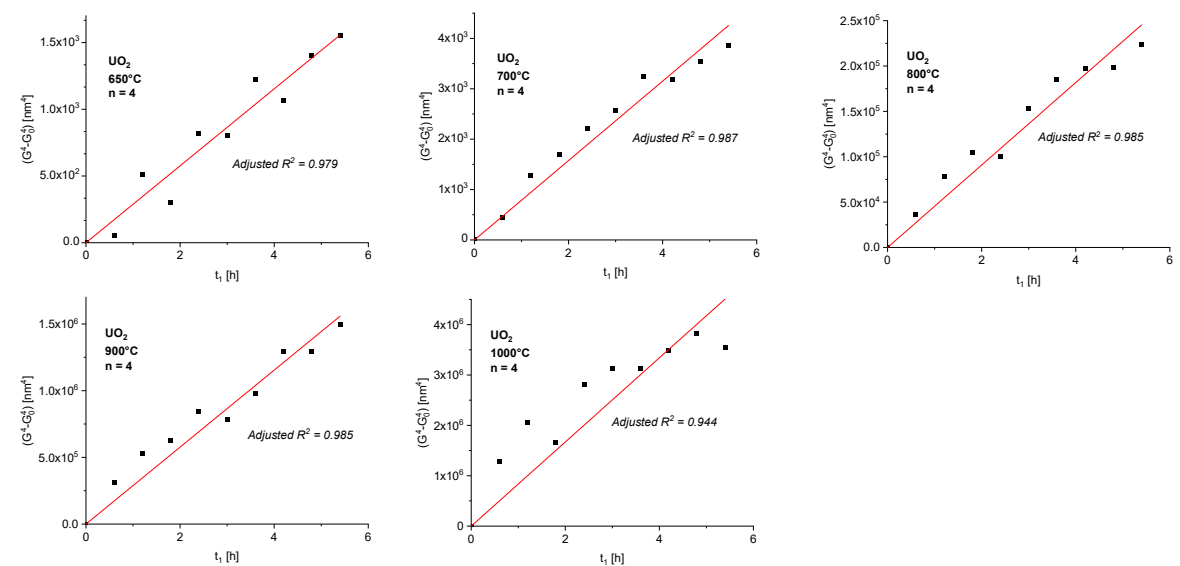


Figure S2: Crystallite growth fitted to the growth model of Eq. 2, exponent n in the range $n = 2$ to 4 for NpO_2



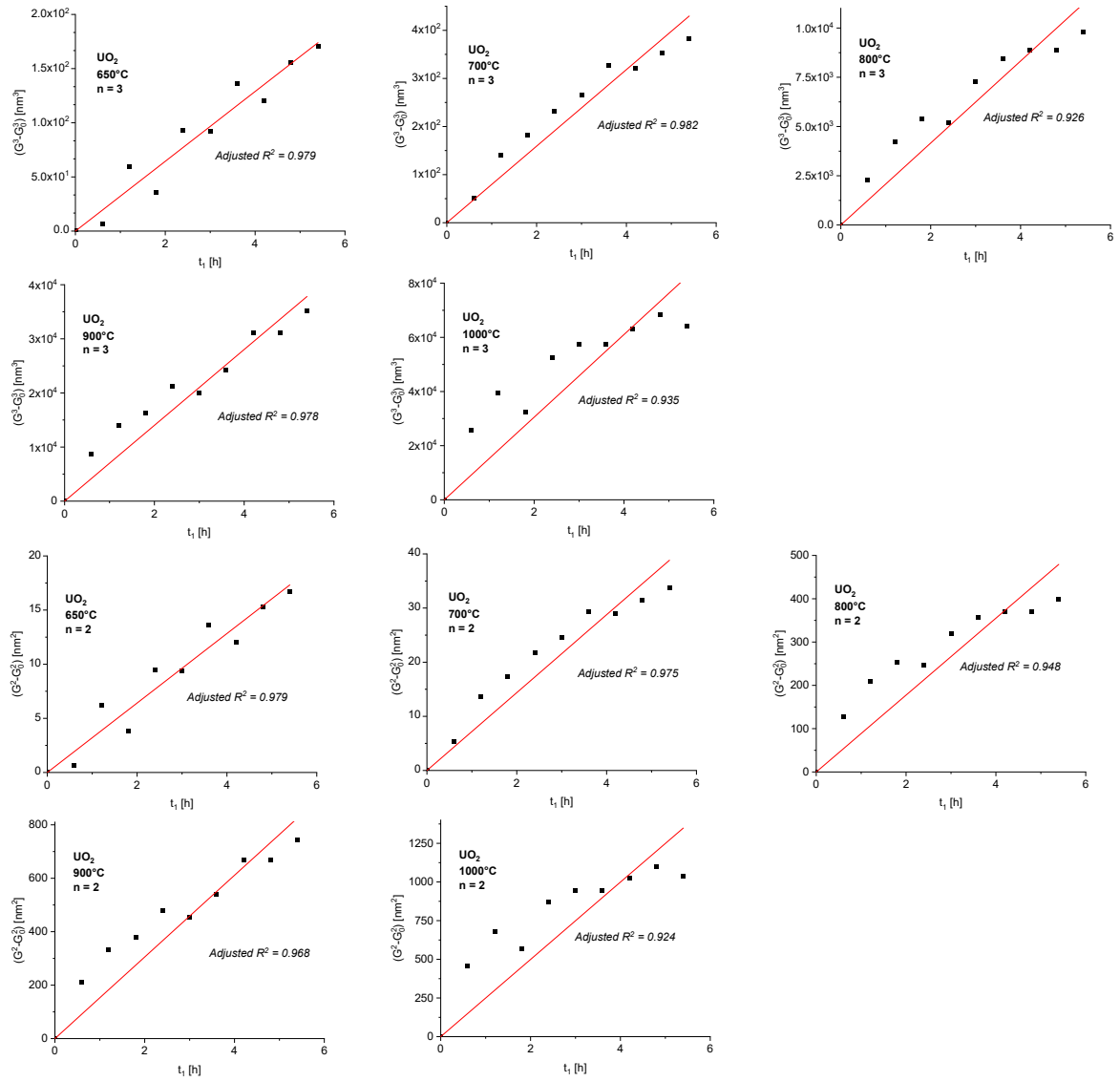


Figure S3: Crystallite growth fitted to the growth model of Eq. 2, exponent n in the range $n = 2$ to 4 for UO_2 .

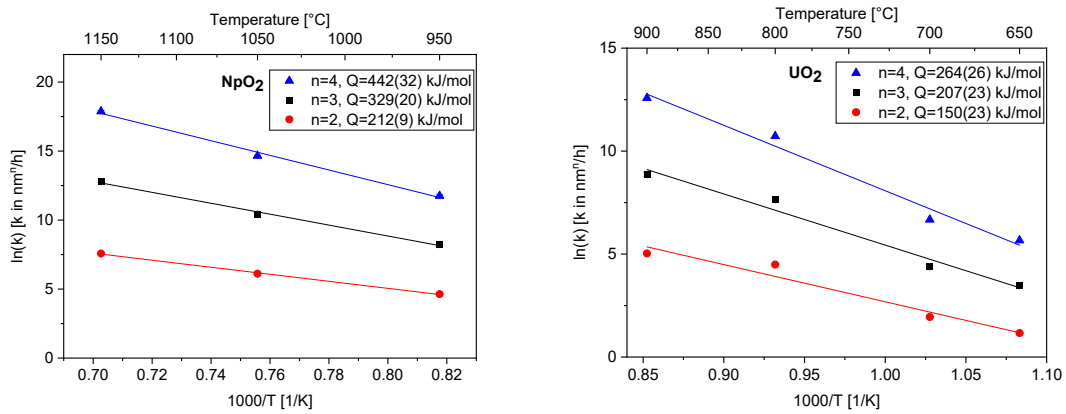


Figure S4: Arrhenius plot for exponent n in the range $n = 2$ to 4 for NpO_2 (left) and UO_2 (right).

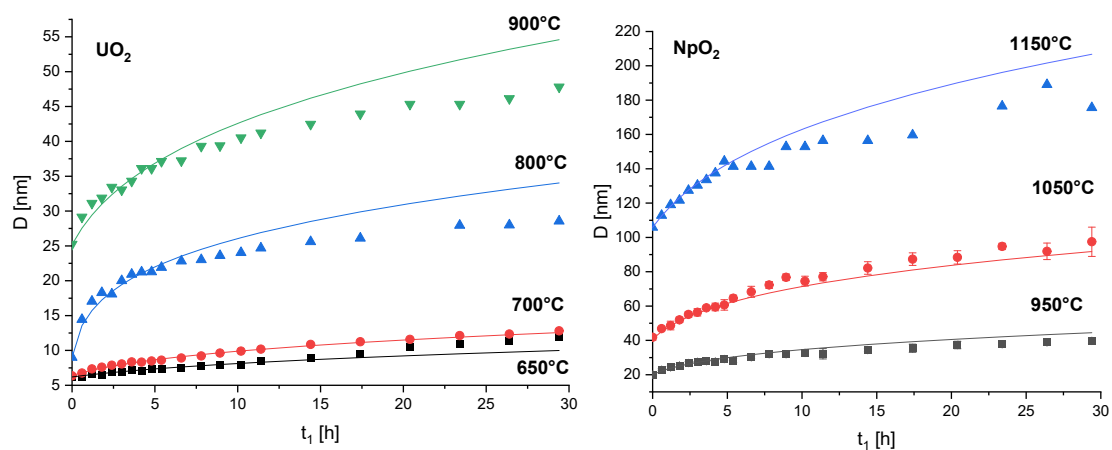


Figure S5. Extrapolation of crystallite size as a function of time.