

EFFECT OF CALCINATION TEMPERATURE ON NEPTUNIUM DIOXIDE MICROSTRUCTURE AND DISSOLUTION

Kathryn M. Peruski^{(1)*} and Brian A. Powell^{(1,2,3)*}

⁽¹⁾Environmental Engineering and Earth Sciences, Clemson University, Anderson, SC, US 29625

⁽²⁾Department of Chemistry, Clemson University, Clemson, SC USA 29634

⁽³⁾Savannah River National Laboratory, Aiken, SC, USA 29808

Summary of SI File:

- Pages: 3
- Tables: 1
- Figures: 3

Supplementary Figures and Tables

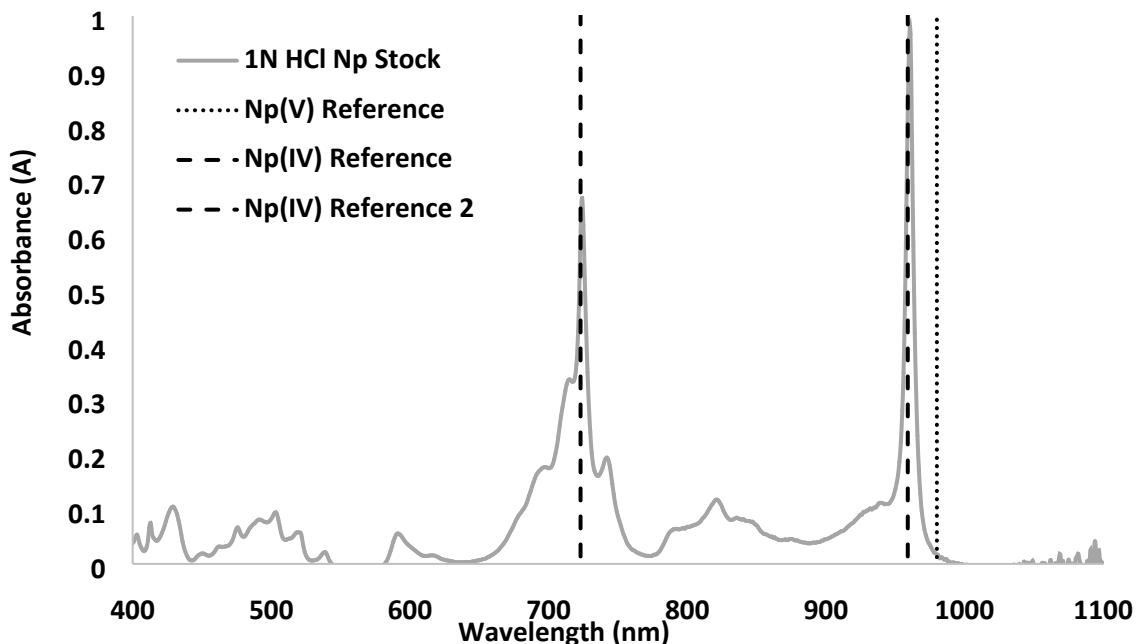


Figure S.1: UV-VIS spectrum of initial Np stock in 1N HCl.



Figure S.2: Green neptunium oxalate solid at tip of centrifuge tube after centrifugation.

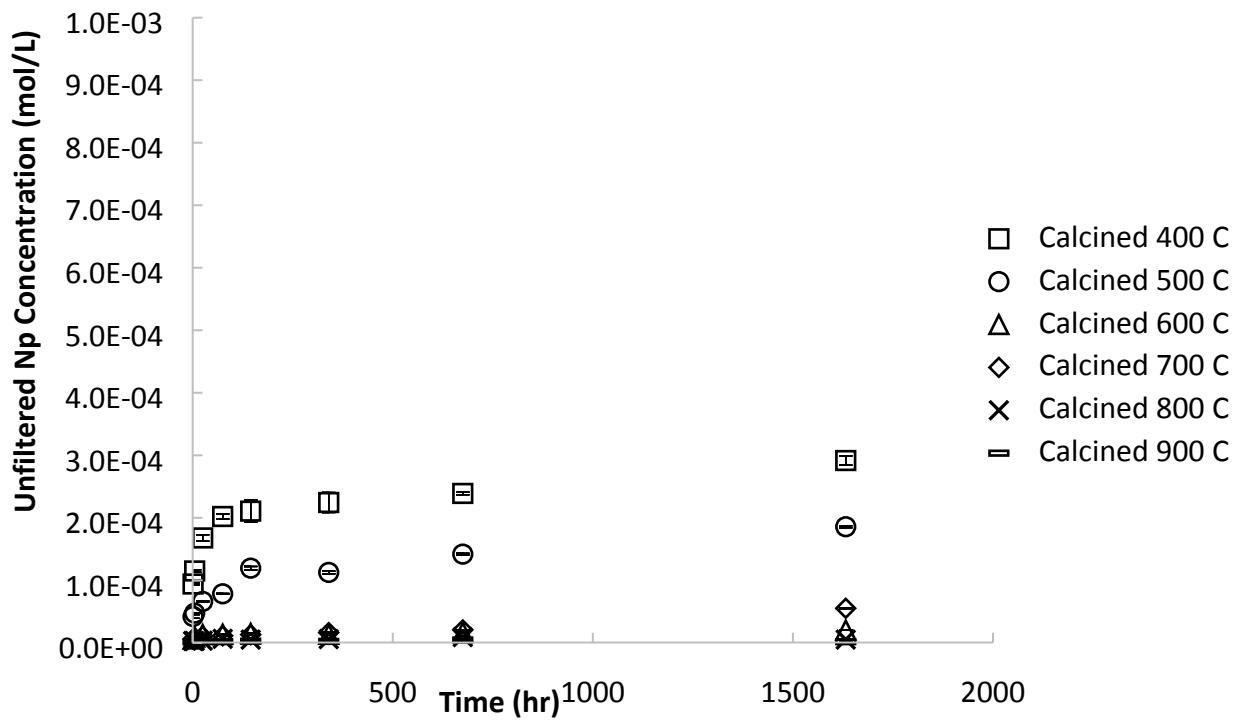


Figure S.3: Kinetic dissolution data for initial dissolution of $\text{NpO}_2(\text{s})$. Error bars are hidden by data points.

Table S.1: Average pH of solution over time during initial dissolution.

Calcination Temperature	Average pH
400	3.222 ± 0.073
500	3.077 ± 0.031
600	3.008 ± 0.029
700	3.017 ± 0.027
800	2.998 ± 0.034
900	2.998 ± 0.032
Background Solution	3.023 ± 0.025