Supporting Information for:

Reactivity of UH₃ with Mild Oxidants

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**Figure S1.** UV/Vis spectrum of 1 in Et₂O (0.091 mM).

**Figure S2.** UV/Vis spectrum of 2 in DME (0.87 mM).
Figure S3. UV/Vis spectrum of 3 in DME (4.2 mM).

Figure S4. UV/Vis spectrum of 4 in DME (6.6 mM).
Figure S5. UV/Vis spectrum of 5 in DME (4.1 mM).

X-ray Crystallography.

Further details of the X-ray crystallographic determinations of complexes 1, 2·CH₂Cl₂, 3, 4, and 5 can be found in the following paragraphs:

For complexes 3 and 4, as the crystals did not have a regular shape, it would be difficult to determine the individual faces and corresponding center-face distances precisely. Thus, we used empirical absorption correction instead of numeric correction.

For complexes 1, 3, 4, and 5 relatively high Rint values are observed. We attribute this to significant absorption (μ > 10mm⁻¹) due to the presence of heavy atoms. As a result, the empirical absorption correction based on psi-scan may not perfectly correct for the absorption effect.
For complex 4 large maximum and minimum residual electron densities are observed. For instance, the structure has a highest residual peak of 6.63 at 0.2513 0.5946 0.2196 (0.88 Å from U1) and a lowest residual peak -4.51 at 0.2303 0.5513 0.2581 (0.96 Å from U1). Because of their close proximity to the heavy uranium atom they are likely 'ghost peaks'. 