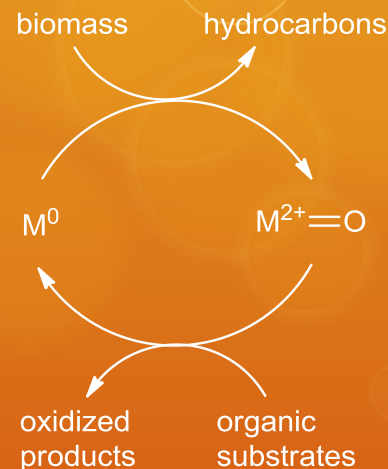


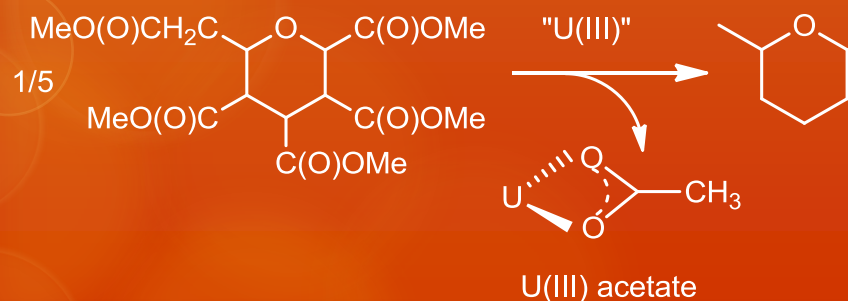
# Low-Valent Uranium Complexes with Redox-Active Ligands for C-O Bond Activation

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Uranium(III) derivatives may be useful for biomass deoxygenation, which requires two processes: 1) C-O bond activation and 2) formation and conversion of metal oxos. Single and double C-O bonds are effectively reduced using uranium(III) species, forming strong U-O bonds. Highly reduced uranium species are stabilized by redox-active ligands, but are not converted to low-valent oxo species as they undergo multiple oxidation events to achieve thermodynamically favored oxidation states.



## C-O Bond Activation:



## Oxo Formation:

