

## **Construction and Testing of a Lithium-Uranium Dioxide Battery**

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A battery has been constructed consisting of a lithium metal anode and a uranium dioxide cathode. The performance and characterization of this battery will be presented. This battery is the first step to utilize depleted uranium compounds as an electrode. Uranium dioxide has six valence electrons and it is highly corrosive. There is presently over nine billion pounds of depleted uranium available to be used. Uranium dioxide's electrochemical properties have been well characterized in aqueous solutions but only sparsely in organic solvents/lithium salts. Uranium dioxide has shown some reversible characteristics in aqueous solutions.