SOLAR CELLS FABRICATED FROM DEPLETED URANIA

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ABSTRACT

Depleted urania has an electronic bandgap that makes it a suitable candidate to be used as a solar cell. While many values of its electronic bandgap have been reported, the value that most accurately describes its photovoltaic properties is the one reported by Samsonov of 1.3 eV. Schottley barrier diodes were fabricated out of urania by depositing various thin films of metals such as gold, silver, and platinum onto the urania. These diodes were then characterized under light and dark conditions and photo response determined along with cell dynamic resistance. Schottley diodes were initially made using intrinsic urania and characterized followed by Schottley diodes fabricated using n-type urania and p-type urania.