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## Investigating whether mixed urania-thoria fuel is a safer alternative for urania fuels.

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Geethu Sasikala (PhD Student)

Investigating whether mixed urania-thoria fuel is a safer alternative for urania fuels.

The naturally occurring radioactive metal thorium is expected to have a great role in the development of nuclear energy technologies. Since thorium is not fissile, it is always recommended to use thorium with other fissile isotopes such as uranium or plutonium.

My research focuses on the study of mixed urania-thoria fuel specimens under DGR (Deep Geological Repository) conditions. I conduct Corrosion experiments on the mixed fuel specimen and characterize the fuel specimen before and after each experiment and identify the degree of oxidation. I am currently aiming to study whether the presence of thorium in mixed fuels can reduce the radionuclide release under DGR conditions. This research aims to create a better class of nuclear fuels which become a milestone in reducing the corrosion rate to a greater extent.