

KNOO – Nuclear Graphite

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Background

- Nuclear Graphite is the main structural Component in the core of Generation IV (NGNP) Very High Temperature Reactors
- Fast neutron irradiation leads to significant dimensional and property changes in graphite components
- This could lead to premature failure of components, some of which cannot be replaced
- The microstructural mechanisms driving these changes are not fully understood, leading to difficulty predicting component life.
- This project aims to investigate the relationship between irradiation driven microstructural change and property change in nuclear graphite

KNOO – Graphite Team

- **Cardiff - (Simulation of Irradiated Graphite, ion bombardment)**
 - Dr. Albert F Carley
 - Dr. A H Taylor
 - Alex Theodosiou (PhD)

- **Manchester (Microstructural Studies on Irradiated Graphite, ion damage and neutron damage)**
 - Professor Barry J Marsden
 - Dr. James Marrow
 - Dr. Keyun Wen (PDRA)
 - Dr. Abbie Jones (PDRA)
 - Ismail Olatinji Olaonipekun (PhD - Task 4)



New active graphite laboratory at the University of Manchester