



Contribution ID: 21

Type: **Poster Presentation**

INVESTIGATING DIFFUSION OF XENON IMPLANTED GLASSY CARBON

Wednesday, 5 July 2017 17:10 (1h 50m)

Recently, there has been a renewed interest in employing glassy carbon to contain radioactive fission products. One of the fission products, Xe is significant by itself due to its high neutron absorption cross-section and high production as a fission product. 200 keV Xenon (Xe) ions were implanted in the glassy carbon samples to a fluence of 1×10^{16} Xe⁺ cm⁻² at room temperature. The diffusion of the implanted Xenon in the glassy carbon was measured using Rutherford backscattering (RBS) after vacuum annealing. The surface topography of the samples before and after each annealing temperature was investigated using scanning electron microscopy (SEM).

Apply to be considered for a student award (Yes / No)?

Yes

Level for award (Hons, MSc, PhD, N/A)?

PhD

Main supervisor (name and email) and his / her institution

Johan Malherbe
Johan.Malherbe@up.ac.za
University of Pretoria

**Would you like to
 submit a short paper
 for the Conference
 Proceedings (Yes / No)?**

Yes

Primary author: Mr ISMAIL, Mahjoub (Postgraduate student)

Co-authors: Prof. MALHERBE, Johan (UP staff); Dr HLATSHWAYO, Thulani (UP staff)

Presenter: Mr ISMAIL, Mahjoub (Postgraduate student)

Session Classification: Poster Session 2

Track Classification: Track B - Nuclear, Particle and Radiation Physics