Contribution ID: **549** Type: **Poster Presentation**

Synthesis and characterisation of carbon nanostructures, for hydrogen storage and gas sensing application.

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Abstract content
   (Max 300 words)

In this work, we study carbon nanofibers(CNFs) grown on zinc oxide nanorods for hydrogen storage. Zinc Oxide nanodots have been deposited using DC magnetron sputtering. We have then grown aligned ZnO nanorods on the ZnO nanodots and then grown carbon fibres in vacuum using acetylene as a source of carbon. The structure and morphology of ZnO:CNFs and ZnO nanorods have been studied using scanning electron microscopy (SEM).

Carbon nanofibers have small diameters, a pore-size distribution which leads to excellent adsorption capacity and improved gas-sensing ability. Initial Elastic Recoil Detection Analysis (ERDA) results are presented and they show promise that these fibres are promising candidates for hydrogen storage.

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

yes

Level for award
 (Hons, MSc,
   PhD)?

MSc

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

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Would you like to
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No

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