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Nitrogen-doped carbon nanospheres

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Abstract content
   (Max 300 words)

Complex carbon structures are widely recognised as holding some of the greatest potential in providing new and more effective materials in many fields. Specifically carbon nanospheres may hold interesting properties that could be applied to electronics, medical and electromechanical applications. A complete characterisation of a nitrogen-doped carbon nanospheres (NDCNS) may provide essential information on the properties of these technologically important materials. A new suite of samples synthesized in a CVD reactor (and extracted from different parts of the reactor) were characterized using Electron Paramagnetic Resonance (EPR) and Raman Spectroscopy (RS). The g-factor and the power saturation characteristics of each sample were determined using EPR. EPR measurements also allowed us to estimate the nitrogen concentration of each sample. RS was employed to determine if there was any difference in the structural order from sample to sample. Our results suggest that the spheres created in different parts of the reactor do have different concentration of nitrogen, but that the nitrogen does not change the structural order of the spheres. Plans for future work will also be presented.

Apply to be
 consider 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 <br> submit a short paper <br> for the Conference
 Proceedings (Yes / No)?

Yes

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