Contribution ID: **245** Type: **Oral Presentation**

Erbium point defects and complexes in GaN: A G0W0 and hybrid functional study

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Abstract content
   (Max 300 words)

We have investigated erbium (Er3+) point defects and defect complexes in GaN a wide band gap semiconductor using; generalized gradient approximation (PBE-GGA), G0W0 quasi-particle approximation and hybrid functional (HSE06). We have paid particular attention to the structure, energetics, and electronic properties of the defects. We found the most stable site for Er3+ to be when the Er3+ is located at a Ga substitutional site but none of the defects possess deep energy levels..

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

Yes

Level for award
 (Hons, MSc,
   PhD)?

PhD

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

Dr Walter E Meyer
wmeyer@up.ac.za

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

Yes

Primary author: Mr OUMA, Cecil (Student)

Presenter: Mr OUMA, Cecil (Student)

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