Jan Boeyens Structural Chemistry Laboratory, School of Chemistry, University of the Witwatersrand, Johannesburg, South Africa

Call for Applicants for Claude Leon Postdoctoral Fellowship

DEVELOPING TECHNIQUES FOR THE STRUCTURE DETERMINATION OF LIQUID FUELS AND THE CONTROL OF THEIR PHYSICAL PROPERTIES

The Structural Chemistry Laboratory is looking for candidates to start a postdoctoral project from January 2016 onwards. Funding for the fellowship will involve applying to the **Claude Leon Postdoctoral Fellowhip Programme**. The Fellowship will be awarded for two years and will be worth R235 000 per annum (19,8000 EUR). Candidates who are interested need to send a complete CV together with a reference letter from their PhD or current postdoctoral supervisor by 3 April 2015. Candidates will be shortlisted for an interview and a single candidate will be announced by 10 April 2015, who will then spearhead the application process further. The University deadline for submission of the application is 24 April 2015. Applicants from South Africa will be favoured. For more information, visit:

http://www.leonfoundation.co.za/postdoctoral.htm

The primary objectives of the project are local technique and skills development in the crystallization and structural analysis of liquid samples. In particular, the aim of the project is to develop local skills for the determination of crystallization and thermodynamic properties (such as melting characteristics and phase diagrams) of liquids typically used as biodiesels. As part of the project we intend to develop techniques to suppress the crystallization of biodiesels so as to lower their melting points and make them more easy to use in cold environments. An *in-situ* crystallization technique employing OHCD (Optical Heating and Crystallization Device) will be used. This technique is a miniature version of the zone melting method commonly used to grow large silicon single crystals for the semi-conductor industry.

Candidates must have graduated with a PhD within the last five years in a relevant scientific discipline and have substantial experience with powder X-ray diffraction, single-crystal diffraction, hot stage microscopy and DSC. Experience in the use of an OHCD device is a bonus. Experience with BRUKER SCXRD instruments is particularly advantageous. The candidate is expected to work independently and drive the project on their own accord, as well as training postgraduate students on the technique.

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