

CAREER OPPORTUNITY

The Council for Scientific and Industrial Research (CSIR) is a leading scientific and technology research organisation, implementing projects throughout Africa and making a difference in people's lives.

Master's/Doctoral Studentship

About the Job:

The CSIR has a **Master's/Doctoral Studentship** opportunities in the National Centre for Nanostructured Materials within the Materials Science and Manufacturing (MSM) unit. The research work will focus on designing novel nanostructured metal/metal oxide composite heterogeneous catalysts, structural characterisation and catalytic activity testing in developing downstream chemical conversion processes of biomass platform chemicals. The position is based in Pretoria.

About the Unit:

The center undertakes innovative research on nanostructured materials and has an extensive research network with other local and international research organizations. It is well equipped with cutting-edge nanostructured materials synthesis, processing, characterization and testing facilities. In addition, there are nanostructures scale-up and industrial-scale polymer processing and product development facilities. It has a strong focus on human capital development, makes a significant contribution to the creation and dissemination of new scientific knowledge, and collaborates closely with industry to help ensure successful outcomes and impact of the group's research and development activities.

Key responsibilities:

- Prepare a research plan and proposal for the postgraduate study;
- Conduct research on project that is in line with the Master's/Doctoral studies and scope of the research group goals;
- Contribute to applicable multidisciplinary research projects, typically as part of a team;
- Write technical reports and oral presentation of results;
- Contribute towards co-authoring research outputs in peer-reviewed journals, or conference proceedings;
- Report research findings in the form of conference/symposium presentations and journal articles within timelines agreed with supervisor(s);
- Complete Master's/Doctoral studies and defend the work successfully;
- Contribute to extra activities that may be outside the scope of the Master's/Doctoral research as per the needs of the research group from time to time.

Qualifications, skills and experience:

For Masters: An Honours degree in chemistry, applied chemistry or material sciences with background in inorganic chemistry or metal nanoparticles synthesis;

For Doctoral: A Master's degree in chemistry, applied chemistry, chemical engineering or material sciences specialising in heterogeneous catalysis and preferably metal nanoparticles synthesis is strongly recommended;

- Must have ability to set-up chemical reaction processes, prior experience in working with reactors (high-pressure autoclave and fixed-bed), GC-FID or HPLC analysis is highly required, including the interpretation of produced data;
- Strong understanding of heterogeneous catalysis and organic chemical synthesis;
- Knowledge and interpretation of characterisation techniques such as XRD, BET, SEM and TEM is required;
- Effective communication skills (oral, written and presentation);
- Ability to work independently, as well as working in a team;
- Ability to work under pressure and tight deadlines;
- At least the candidate should have published one peer-reviewed research article following his/her Master's work in heterogeneous catalysis preferably as first author. Submitted article(s) with proofs of submission will also be considered.

Should you meet the above requirements, please email your CV to jobapplications@csir.co.za with your name and surname, position title and reference number in the subject line, **(e.g. John Smith: Masters/Doctoral Studentship: Reference No: 308047)**

Closing date: 02 June 2017

PLEASE NOTE THAT FEEDBACK WILL BE GIVEN TO SHORTLISTED CANDIDATES ONLY.

For more info, please contact the CSIR Recruitment Centre on **012 841 4774** or email us at Recruitmentinfo@csir.co.za

*The CSIR is an equal opportunity employer. As such, it is committed to the Employment Equity Act of 1998. By applying for this position at the CSIR, the applicant understands, consents and agrees that the CSIR may solicit a credit and criminal report from a registered credit bureau and/or SAPS (in relation to positions that require trust and honesty and/or entail the handling of cash or finances) and may also verify the applicant's educational qualifications and employment history. **The CSIR reserves the right to remove the advertisement at any time before the stated closing date and it further reserves the right not to appoint if a suitable candidate is not identified.***