



**RESEARCH OFFICER: Thermocatalytic Synthesis Gas Conversions**  
(3-year contract)  
**Catalysis Institute**  
**Department of Chemical Engineering**  
**Faculty of Engineering & the Built Environment (EBE)**

Applications are invited from suitably qualified and experienced candidates for the 3-year contract position of Research Officer, to commence duty as soon as possible.

The incumbent must be a mature, energetic, driven, strongly disciplined individual, able to deal with multiple, simultaneous demands in a high-pressure environment. The incumbent will be expected to support and lead research projects in the Catalysis Institute with special focus on complex chromatography and operando catalyst characterisation/testing. The incumbent will be responsible for carrying out academic and industrial research in thermocatalytic synthesis gas conversion and related reactions. He/she must have excellent communication, inter-personal and planning skills and be able to write scientific proposals, interpret and work with large amounts of data, write scientific reports and present the work to a technical audience.

**Requirements:**

- A PhD qualification in Chemical Engineering, Chemistry or related disciplines.
- Minimum 3 years of experience in a heterogeneous catalysis research environment with a strong focus on materials for thermocatalytic conversions.
- Proven experience with 2D chromatography and operando catalyst characterisation/testing.
- Extensive theoretical knowledge in thermocatalytic synthesis gas conversion and related reactions and the application of theory to interpret experimental results.
- Well-developed and professional interpersonal and communication skills.
- Effective time-management skills and the ability to organize, prioritize and multi-task within a highly pressurised environment.
- High level of computer literacy and competency in different characterisation packages appropriate to the field.

**Responsibilities:**

- Be in charge of application of complex gas chromatography techniques in academic and industrial projects.
- Be in charge of and support the application of in-situ/operando catalyst characterisation techniques in academic and industrial projects.
- Conduct research towards the design and development of novel state-of-the-art heterogeneous catalysts for thermocatalytic synthesis gas conversions.
- Conduct research towards the design and development of new model catalyst systems to elucidate activity-performance relationships in thermocatalytic synthesis gas conversion and related reactions.
- Solve technical challenges with innovative approaches in materials handling, engineering approaches, chemistry, etc.
- Publish results of findings that are not in need of protection of intellectual property in peer-reviewed journals.
- Present findings of academic research at local and international conferences.
- Support visiting researchers from collaborating institutions.
- Supervision of MSc and eventually PhD students will be expected.

The annual cost of employment in 2019, including benefits, is between **R510 726 – R683 358** per annum.

**To apply**, please e-mail the below documents in a **single pdf file** to Ms Abigail Dixon at [recruitment03@uct.ac.za](mailto:recruitment03@uct.ac.za):

- UCT Application Form (download at <http://forms.uct.ac.za/hr201.doc>)
- Motivation letter, and
- Curriculum Vitae (CV)
- Proof of Doctorial studies

Please ensure the title and reference number are indicated in the subject line.

**An application which does not comply with the above requirements will be regarded as incomplete.**

**Only shortlisted candidates will be contacted.**

**Telephone:** 021 650 1673 **Website:** <http://www.ebe.uct.ac.za/ebe/study/chemeng>

**Reference number:** E19514 **Closing date:** 11 December 2019

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UCT reserves the right not to appoint.