



University of the Witwatersrand, Johannesburg

Postdoctoral Research Fellowship (2023)

Inviting diligent and driven candidates for the position of a postdoctoral research fellowship within the Molecular Sciences Institute (MSI). The core purpose of this position involves developing novel electrocatalysts for alkaline water electrolysis which exhibit great performance, scalability, affordability and preferably recyclability. This position is a fixed-term appointment for a period of 12 months. There is a strong possibility of renewal for a second year, subject to budget availability, as well as your demonstrated capability and desire to complement the overall strategic direction of the project.

MINIMUM REQUIREMENTS:

1. PhD degree obtained within the last 5 years in Chemistry, Chemical Engineering, Materials Science, or any relevant field is essential.

KEY FUNCTIONAL/ TECHNICAL COMPETENCIES:

- Experience in synthesis of nanomaterials including ligand functionalisation/polymers.
- Experience in electrochemical characterisations: cyclic voltammetry (CV), linear polarisation (LP), chronoamperometry (CA), electrochemical impedance spectroscopy (EIS).
- Knowledge and/or hands-on experience in operating/interpreting a variety of chemical/physical characterisation techniques such as NMR, FT-IR, ATR, XRD, XPS, EDX, SEM, TEM, and AFM.
- Demonstrated proficiency in identifying structure-activity correlations of catalysts using electrochemical and material characterisations.
- Rigorous documentation of research findings with an emphasis on publications in peer-reviewed journals.
- Training, supervision, and transfer of knowledge/skills to MSc and/or PhD students in the group.

KEY BEHAVIOURAL COMPETENCIES:

- Demonstrated experimental background and publication record in electrochemical processes and/or electrocatalysis.
- Good problem solving, troubleshooting and analytical skills.
- Proven ability to work effectively both in a team environment and independently to meet project milestones and scientific goals.
- Demonstrated ability to work efficiently under pressure in a rapidly changing environment.
- Good interpersonal skills.
- Demonstration of language proficiency (English) to function optimally in the various multilingual environments of Wits.

KEY RESPONSIBILITIES:

1. Research is the primary focus
2. Postgraduate supervision and Mentoring
3. Limited administrative tasks

REMUNERATION

R275 000 tax free stipend, R50 000 for research activities and good quality medical aid.

CONTACT AND DOCUMENTS:

- CV and copy of degree certificate(s).
- Suggested research plan spanning over two years (only 1 Page), briefly presenting a topic/gap you would like to work on which is current, relevant, and will contribute to the research project.

Email: anzel.falch@wits.ac.za

Wits supports equal opportunities.

Closing date: 26 April or before (dependant if position is filled). **Starting date:** As soon as possible