



**Stellenbosch**

UNIVERSITY  
IYUNIVESITHI  
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SCIENCE  
EYENZULULWAZI NGEZENDALO  
NATUURWETENSKAPPE

CHEMISTRY AND POLYMER SCIENCE

CHEMIE EN POLIMEERWETENSKAP

## Postdoctoral Research Fellowship 2024: LC×LC method development

**Scope of Research:** Comprehensive two-dimensional liquid chromatography (LC×LC) is increasingly being used for the analysis of complex mixtures. One of the main hindrances to LC×LC finding more widespread application is the complexity of technique, and especially method development. This project aims to develop an automated, accurate and flexible software program suitable for both preliminary and advanced method development in LC×LC. The software will be based on multi-parameter or Pareto optimisation, by extending previous work in this area by the group. A range of instrumental configurations, separation modes and modulation strategies will be included. The accuracy of the prediction software will be thoroughly assessed using experimental data, and a user-friendly, flexible software package will be developed for LC×LC users. The program will be used to develop improved LC×LC methods for the analysis of complex natural product samples using ion mobility spectrometry (IMS) and high resolution mass spectrometry (HR-MS).

**Requirement:** PhD (must have graduated within the last five years). The successful candidate will have experience in multidimensional liquid chromatography, preferably regarding method development, as well as mass spectrometry.

**Commencement of duties:** July 2024 or as soon as possible thereafter.

**Duration of fellowship:** One year.

**Financial support:** A bursary valued at R300,000 per annum is available.

**Closing date:** 30 June 2024

**Enquiries:** Send a letter of application, including a short statement (maximum one A4 page) outlining the applicant's expertise relating to the intended research, and accompanied by a comprehensive CV, to:

Prof André de Villiers, Department of Chemistry and Polymer Science, University of Stellenbosch  
([ajdevill@sun.ac.za](mailto:ajdevill@sun.ac.za)).

Applicants should request at least two referees to forward confidential letters of recommendation by the closing date directly to the same email address.

### Please note:

- Postdoctoral fellows do not hold posts or positions and neither do they enter into an employment contract with the University.
- They receive a fellowship in order to conduct research, and do not receive a salary or remuneration for contract research or teaching.
- Their bursaries are paid out via the bursary system and not Human Resources.
- They are not part of the teaching staff of the University, neither are they contract researchers.
- They are not postgraduate students.