200 YEARS
GHENT
UNIVERSITY

Ghent University is currently looking to recruit **a PhD student**:

to perform a unique research project

"**Unravelling atmospheric processes related to volatile organic compounds and airborne particles in Dronning Maud Land, Antarctica**"

within the research group EnVOC:
Environmental Organic Chemistry and Technology, www.EnVOC.UGent.be
(supervisors: Prof. Dr. ir. Herman Van Langenhove & Prof. Dr. ir. Kristof Demeestere)

Project description:

Antarctica is considered the best preserved region on Earth from anthropogenic emissions. However, the impact of anthropogenic airborne particles and pollutants could be significantly larger than expected. Furthermore, a detailed understanding of present day atmospheric transport pathways of particles and of volatile organic compounds (VOC) from source to deposition in Antarctica remains essential to document biogeochemical cycles and the relative importance of natural and anthropogenic compounds, which are not well constrained at the moment.

The CHASE project, funded by the Belgian federal government (http://www.belspo.be/belspo/brain-be/projects/CHASE_en.pdf), provides detailed physical and chemical analyses of both atmospheric and surface snow particles recovered near the Belgian research station Princess Elisabeth, Dronning Maud Land, East Antarctica, and thoroughly investigates their atmospheric transport pathways. Also the presence of volatile organic compounds in the ambient air will be investigated. Such detailed studies have never occurred in the region where the Princess Elisabeth station is located.

The whole project is a multi-partner collaboration involving research groups from the Royal Meteorological Institute of Belgium (RMI), Ghent University (UGent), Université Libre de Bruxelles (ULB) and Vrije Universiteit Brussel (VUB). **The PhD research at UGent will deal with the characterization of the organic atmospheric composition, with focus on both volatile organic compounds and organics sorbed onto particulate matter.** Passive and active (pumped) sampling methodologies will be evaluated in this challenging context, and state-of-the-art as well as innovative chemical analyses (e.g. thermal desorption-gas chromatography mass spectrometry, high-resolution mass spectrometry, and proton transfer reaction mass spectrometry (Ionicon PTR-Qi-TOF) will be investigated at the EnVOC research lab, to unravel the atmospheric processes going on in the Antarctica region.

Your profile:

We are looking for a highly motivated researcher with great interest in and/or good knowledge of analytical chemistry and atmospheric sciences, and with the skills to do innovative research with the aim to make a PhD manuscript in this field.

Candidates should have a M.Sc. diploma and should have a good command of English.

Depending on the planning of the project, it is possible that the candidate can participate in one of the campaigns at the Princess Elisabeth base, Antarctica.

How to apply:

Please send all of the following information via e-mail to Kristof.Demeestere@UGent.be:

- a brief (maximum 1-page) application letter (in which you explain your motivation for this project and scientific research in general)
- curriculum vitae
- proof of study results (e.g. score sheets)
- short description (max. ½ page) of your M.Sc. thesis research (+ lab and promoter)

Please send this information at the latest on **January 31, 2018**.