

## Helmholtz – CSC – Fellowships 2010

- Helmholtz Centre:** Helmholtz Zentrum München
- Research Field:** Ambient particulate matter and Health effects
- Research Project:** **Impact of low emission zones on properties of ambient particulate matter**
- Position:** PhD Student  Sandwich PhD Student  Postdoc

**Department/Supervising scientist:** Institute of Ecological Chemistry Prof Dr. Ralf Zimmermann / Dr. J. Schnelle-Kreis

**Research Area:**

The impact of ambient particulate matter (PM) on human health is central field of interdisciplinary research at the Helmholtz Zentrum München. Various scientific disciplines interact within the fields of aerosol characterization, dosimetry and exposure, epidemiological and toxicological research on health effects and risk assessment ([http://www.helmholtz-muenchen.de/aerosols/index\\_en.php](http://www.helmholtz-muenchen.de/aerosols/index_en.php)). In this context, the effectiveness of so called low emission zones (LEZ, zones with reduced traffic) on PM concentrations, characteristics (size distribution, composition), toxicological properties as well as the health of the population is currently under investigation. Our group at the Institute of Ecological Chemistry is investigating the impact of LEZ on the composition of PM. Daily ambient PM samples are collected in tow cities within and outside of LEZ. The samples are characterized for chemical composition by gas chromatography-mass spectrometry and EC/OC analysis. Additional analyses (e.g. elemental composition, inorganic ions, water soluble organic compounds, etc.) will be carried out from additional samples, which shall be collected in special sampling campaigns. The data analysis (chemical mass balance, factor analysis) shall be carried out in consideration of meteorological and traffic data.

**Specific Requirements:**

We are looking for an analytical chemist. Experiences in analysis of organic trace compounds including sample extraction, clean up and instrumental analysis are prerequisite. Practical experiences in gas chromatography and mass spectrometry will be helpful. Additionally, knowledge of different methods of (statistical) data analysis are required.

**Work Place:** Helmholtz Zentrum München – Campus Neuherberg (practical work), University Rostock (dissertation and examination)

**Earliest Start:** September 2010

**Language Course:** Several internal courses for English. German for foreign employees, German language-training for PhD students and postdocs (external)

**Further Information:**

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