

Research Opportunities for Bachelor and Master Students in Chemistry / Chemistry & Management

Are you a Bachelor or Master student looking for hands-on research experience in a highly relevant and interdisciplinary field? We are offering exciting opportunities within the **Institute of Analytical and Bioanalytical Chemistry (IABC)** in **Prof. Mizaikoff's group** at Ulm University.

We currently offer the following research options:

- Bachelor Thesis
- Master Thesis
- Project Work

Research Topic:

Infrared Spectroscopic Analysis as an analytical tool for deoxynivalenol mitigation in feed

In this project, students will work on the detection and mitigation of **mycotoxins**, specifically **deoxynivalenol (DON)**, a toxic compound commonly found in cereals that poses significant health risks to humans and animals. The research will explore the potential of **carbon-based absorbents** to bind DON and reduce its bioavailability.

Key aspects of the work include:

- Performing extraction procedures of fungal contaminants (mycotoxins) from food products such as cereals, peanuts, and herbs.
- Operating a commercial **Fourier-Transform Infrared (FTIR) spectrometer** for qualitative and quantitative chemical analysis.
- Applying **spectral pre-processing techniques, chemometrics, and advanced data modelling** to evaluate the effectiveness of DON binding.

What you will gain:

- Practical laboratory experience in food safety and analytical chemistry
- Hands-on training with cutting-edge IR spectroscopy technology
- Skills in statistical data analysis and multivariate modelling
- Insights into applied research with real-world impact for the food industry

If you're motivated to contribute to an important research topic and want to develop your analytical and data evaluation skills, we encourage you to apply.

For further information or to express your interest, please contact:

Dipl.-Chem. Polina Fomina

✉ polina.fomina@uni-ulm.de