



## Postdoctoral Scholarship in Optical Frequency Comb Spectroscopy

The Optical Frequency Comb Spectroscopy Group works with development and applications of optical frequency comb spectroscopy (OFCS) for broadband precision measurements and ultrasensitive detection of molecular species in gas phase. We are now seeking a postdoctoral researcher interested in **developing a mid-infrared optical frequency comb spectrometer for applications in combustion diagnostics and environmental monitoring**. The system will be based on a difference frequency generation source pumped by an Yb: fiber femtosecond laser and a cavity-enhanced Vernier spectrometer. The first task in the project will be to develop the DFG source and the Vernier spectrometer, and test the performance of the entire system using calibrated gas samples. In the next phase, the system will be optimized for detection of high-temperature spectra in a flame and for detection of greenhouse gases and atmospheric species in ambient air. Contact [Aleksandra Foltynowicz](#) for a more detailed description of the project.

The successful candidate should hold a PhD degree or a foreign degree that is deemed equivalent to a PhD degree in experimental physics. Priority should be given to candidates who have completed their doctoral degree no more than three years before the closing date of the application. The applicant should have practical experience with nonlinear frequency conversion, laser absorption spectroscopy, and electronics. A strong interest in instrumental development will be seen as an advantage. The applicant must be highly motivated and have the ability to work independently as well as a part of the research group. The candidate must be fluent in both oral and written English.

The application should include:

1. A motivation letter describing previous research experience relevant to the project.
2. Curriculum vitae with a list of publications.
3. Copies of two most relevant publications.
4. Copies of relevant exam certificates.
5. A list of university courses with grades.
6. Contact information of three reference persons.

Your complete application, marked with **reference number FS 2.1.6-1050-16**, should be sent as a pdf-document to [medel@diarie.umu.se](mailto:medel@diarie.umu.se) (state the reference number as subject) on **Aug 1, 2016 at the latest**. The appointment is for one year starting in the fall of 2016, with possible extension for a second year. The full announcement is available at the [Umeå University webpage](#).