



seit 1558

# Raman Gas Analysis

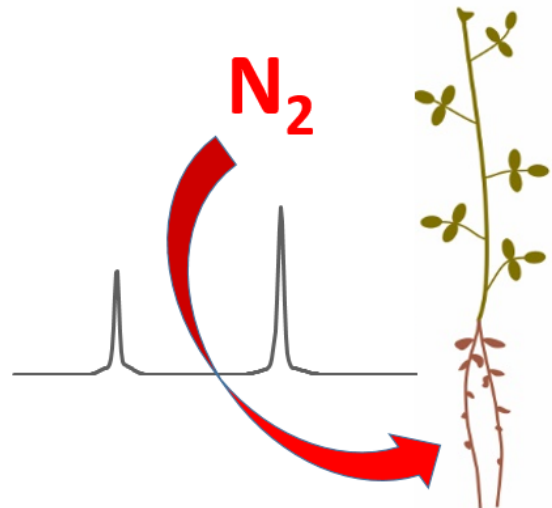
The group **Fiber Spectroscopic Sensing** of the **Leibniz Institute of Photonic Technology** is looking for PhD candidates in Raman gas sensing within the IMPRS gBCG.



In this project a new setup for Raman spectroscopic nitrogen gas sensing will be developed and applied for studying biological nitrogen fixation. Several interdisciplinary gas sensing experiments will be performed together with our collaboration partners.

## Your qualification, skills and interests:

- Master degree in physics, engineering, analytical or physical chemistry or related disciplines
- Experimental and technical skills
- Interest in the development and application of new instruments and setups
- Interest in Raman Spectroscopy, gas sensing and optics
- Interest in environmental and biogeochemical sciences
- Very good oral and written communication skills in English



## We offer:

- Attractive research environment with excellent instrumental equipment
- Possibility of interdisciplinary cooperation
- Young and dynamic team with interdisciplinary background

Monitoring of gas composition in a laboratory biogas plant using cavity enhanced Raman spectroscopy. **Analyst (2018)**, 143.6, 1358-1366.

Direct Raman spectroscopic measurements of biological nitrogen ( $N_2$ ) fixation under natural conditions: A novel analytical approach for studying nitrogenase activity, **Analytical Chemistry (2016)**, 89, 2, 1117-1122.

All-in-one: A versatile multi-gas sensor based on fiber enhanced Raman spectroscopy for monitoring postharvest fruit conservation and ripening, **Analyst (2016)**, 141, 2023

Online investigation of respiratory quotients in *Pinus sylvestris* and *Picea abies* during drought and shading by means of cavity-enhanced Raman gas spectroscopy, **Analyst (2015)**, 140, 4473

Fiber-enhanced Raman multi-gas spectroscopy – a versatile tool for environmental gas sensing and breath analysis, **Analytical Chemistry (2014)**, 86, 11, 5278

**For further information** please contact

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