

# PhD Position in protein complex engineering for sustained H<sub>2</sub> production

(3 years, TV-L E13, 65%)

**The imminent climate change** requires fundamentally novel concepts for the generation and use of energy forms. The Photobiotechnology group at the Faculty for Biology & Biotechnology at Ruhr University Bochum focuses on understanding the working principles of H<sub>2</sub> producing enzymes (hydrogenases) and applies a multitude of advanced (bio)chemical, biophysical and spectroscopic techniques. We also investigate the natural photosynthesis-dependent H<sub>2</sub> metabolism of microalgae. Based on the in-depth characterization of the mechanism and diversity of natural hydrogenases, we optimize the natural enzymes and pathways and design artificial biocatalysts.

**For a novel project** in which we aim to boost microalgal H<sub>2</sub> production through protein complex engineering we are looking for a **motivated doctoral candidate**. The PhD project aims at characterizing and re-designing biological protein complexes for the sustainable production of H<sub>2</sub>. This research is part of a collaborative project in the framework of the EIG Concert Japan initiative with partners from France, Belgium and Japan. The doctoral student will have the opportunity to conduct experiments at the world's largest third-generation synchrotron radiation facility together with the Japanese partners at the Institute of Protein Research, Osaka University.

**You** should have a Master of Science degree in (bio)chemistry or biology and have experience especially in molecular biology, biochemistry and enzyme catalysis. We welcome enthusiastic team players who enjoy international journeys, especially to Japan, and interdisciplinary work. Please send your application in a single pdf file to Thomas Happe ([thomas.happe@rub.de](mailto:thomas.happe@rub.de)).

**Prof. Dr. Thomas Happe | Photobiotechnology Group  
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[www.rub.de/pbt/index.html](http://www.rub.de/pbt/index.html)

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