**Type of Position:** Doctoral Researcher (TV-L13, 65%), Ulm University, Germany

**Research Area:** Chemistry, Materials science

**Principal Investigator (PI):** Prof. Dr. Timo Jacob

**Name of Institute:** Institute of Electrochemistry

**Ulm University, Germany**

**TRR234-B10: Modulating the Photocatalytic Properties of Molecularly Functionalized Carbon Nitride Polymers by Nanoconfinement and Pore Structure Engineering**

The project aims at the synthesis of polymeric carbon nitride (CNₓ)-based materials with high specific surface area, to tune the properties as well as to enhance the surface accessibility and adsorption of substrate molecules in light-driven catalysis. This will lead to a more reactive interface compared to bulk-CNₓ. The influence of specific surface area, nanostructure, and morphology on the photophysical and photochemical properties of such materials, e.g., dynamics of charge separation and recombination will be investigated by a combination of model materials and theoretical calculations.

**Responsibilities:** Research data acquisition and management; collaboration with partners at University of Jena; writing and publishing scientific papers in peer-reviewed journals; presenting results at national and international conferences

**Profile:** The successful applicant will have strong background in chemistry and materials science. Moreover, excellent skills in characterization and theoretical modelling of polymeric nanomaterials are expected. Ideally, the successful candidate should have previous knowledge in photocatalysis and photoelectrochemistry. He/she should be highly motivated to work in an interdisciplinary and international team and should have excellent written and oral communications skills in English.

**All applications should include:**

- Cover letter describing the motivation for the project, research interests, and relevant experience
- Complete curriculum vitae including names and contact details of at least two scientific references
- A digital copy of BSc/MSc certificates

**Electronic applications** (a single PDF) should be sent to nawi.ec@uni-ulm.de by 31.10.2022.

Ulm University is committed to establishing and maintaining a diverse and inclusive community that collectively supports and implements our mission to do great science. We will welcome, recruit, develop, and advance talented staff from diverse genders and backgrounds. Candidates with severe disabilities will be given preference in the case of equal qualifications and suitability.