

DOCTORAL RESEARCH POSITION "POLYMER PHOTOCATALYSTS FOR OVERALL WATER SPLITTING"

Independent research group "Water Splitting" at *University of Jena (Germany)*, led by Jacob Schneidewind.

We are looking for a highly motivated PhD researcher with a focus on *polymer photocatalysts for overall water splitting*. A fully funded PhD position starting in fall 2023 is available. Together, we will elucidate the working mechanisms of polymer photocatalysts and develop new catalysts for the scalable production of green hydrogen directly from sunlight and water .

FRIEDRICH-SCHILLER-UNIVERSITÄT JENA

CEEC JENA
Center for Energy and Environmental Chemistry Jena

FCI FONDS DER CHEMISCHEN INDUSTRIE

Background

We are a young, interdisciplinary research group located at Center for Energy and Environmental Chemistry Jena (CEEC Jena) - University Jena (Germany). Our mission is to create applicable systems for the production of green hydrogen and solar fuels from sunlight and water. To this end, we work on the development and understanding of homogeneous as well as heterogeneous photocatalysts for water splitting. Furthermore, we employ cost and sustainability studies to transition the research into applications.

For more information visit our website (water-splitting.uni-jena.de) or reach out to Jacob via email (jacob.schneidewind@uni-jena.de) or Twitter (@water_splitting).

Your Profile

- University degree (Master's or equivalent) in chemistry, materials science or a related field
- Familiarity with the preparation and characterization of carbon nitrides and/or (conjugated) polymers, ideally experience in photochemistry/ photocatalysis
- Proficiency in conducting, evaluating and documenting your research while considering all safety aspects
- Strong teamwork and communication skills, growth mindset and passion for scientific research
- Good command of written and spoken English (German proficiency is not required)

Your Tasks

You will develop graphitic carbon nitride as well as conjugated polymer photocatalysts for overall water splitting. The project will involve the design and synthesis of novel materials (via various thermal treatment and polymerization routes) and photocatalytic testing with *in situ* product detection (H_2, O_2 …) to derive structure-reactivity relationships. Through cooperations, detailed mechanistic investigations and high-throughput experimentation will be employed to establish a firm understanding of the photocatalysts and accelerate their development. Furthermore, you will support teaching activities and the supervision of students/interns in the research group.

Our Offer

- A 3-year PhD position funded via a doctoral researcher scholarship (net salary equivalent to a 55% TV-L E13 position)
- Additional funds for conference visits, summer schools and workshops
- 30 days of recreational leave
- Becoming part of a dynamic young research group that is deeply committed to your professional development and growth as a scientist
- Excellent laboratory and analytical infrastructure and collaboration with world-leading research groups

Application Process

Please send your CV, possible publication list, contact information for two references and a motivational letter that describes your research interests/ experiences as well as your specific reasons for wanting to join our group to Jacob (Jacob.Schneidewind@uni-jena.de), with the subject "PhD Position Polymer Photocatalysts". The application deadline is **September 30, 2023**.

Diversity and Equity

At the Friedrich Schiller University (FSU) people from a wide range of (cultural and academic) backgrounds study and work together. At FSU, and in particular in our group, we see diversity as a strength and key for our success. We rely on different ways of thinking to create the most impactful research.
Our group is a place for everyone — irrespective of their background — to feel safe and be successful.

Doing a PhD at University Jena

The Friedrich Schiller University is a traditional university with a strong research profile rooted in Jena, at the heart of Germany. Since its foundation, it has been one of Germany's most famous places to study, where outstanding academics like Goethe and Schiller left their marks. As a university covering all disciplines, it offers a wide range of subjects. Its research is focused on the areas Light—Life—Liberty. It is closely networked with non-research institutions, research companies (links going back to Carl Zeiss, Otto Schott, and Ernst Abbe) and renowned cultural institutions. With around 18,000 students and more than 8,600 employees, the university plays a major role in shaping Jena's character as a cosmopolitan and future-oriented city (of around ~100 000 inhabitants).

Germany is a beautiful and safe country with great work-life balance and life satisfaction.

You will receive a very competitive salary with which you will live comfortably and save money for leisure activities. Students need approximately 700 EUR monthly for rent, food, health insurance, books, and personal items.

Your workplace

Our lab is located in the newly constructed Center of Energy and Environmental Chemistry Jena at the Landgrafencampus (close to one of the best viewpoints of the city), where four new buildings with ca. 7500 m² lab space have been built over the last 10 years.
Frequently, start-companies involving PhD researchers and Postdocs are created, and a new incubator for chemistry related start-ups is currently being built next to the campus.

