

## PhD- and Post Doc-Positions

Company:  
**Friedrich-Schiller-Universität Jena**

Location:  
**Germany / Jena**

Discipline:  
**Light-driven Molecular Catalysts in Hierarchically Structured Materials - Synthesis and Mechanistic Studies**

Employment Type:  
**PhD- and Post Doc-Positions**

Posted:  
**2022-07-06**

Contact Person:  
**If you wish to apply for this position, please specify that you saw it on AKADEUS.**

All projects are funded by the German Science Foundation or the Austrian FWF via the program

### **CATALIGHT - CRC/TRR 234**

## **Light-driven Molecular Catalysts in Hierarchically Structured Materials**

### **- Synthesis and Mechanistic Studies**

The Collaborative Research Center/Transregio 234 - CataLight - addresses fundamental challenges in the design of photoactive materials for solar energy conversion. Inspired by the design principles of natural photosynthesis, will provide fundamental insights into the performance of molecular photocatalysts embedded in functional and hierarchically structured soft matter materials. To this end, synthetic strategies are developed to tune the reactivity of molecular light-absorbers and catalysts as well as soft matter polymeric matrices. All components are optimized to create materials with synergies between molecular components and soft matter matrices for light-driven catalysis. Experimental and theoretical analyses across multiple length- and timescales will be used to rationalize photochemical reactivity and to understand new effects arising from embedding molecular components within a suitable matrix. The gained knowledge will be used to achieve novel material properties, e.g. materials capable of self-regulation and active repair, both, on a molecular and material level. CataLight will lead to new paradigms, which break down the current boundaries between the realms of molecule-based reactivity and bottom-up material design. This will result in fundamentally new, knowledge-guided concepts for light-driven productive chemistry in hybrid materials - opening new research opportunities for chemistry, biology and materials science.

Projects are carried out either at the *Friedrich Schiller University Jena (Germany)*, *Ulm University (Germany)*, the *Johannes Gutenberg University Mainz (Germany)*, the *University of Vienna (Austria)*, the *Max Planck Institute for Polymer Research Mainz (MPI-P, Germany)* and the *Leibniz Institute of Photonic Technology Jena (Leibniz-IPHT, Germany)*.

Salaries are competitive (in Germany: TV-L + allowance depending on the candidate's profile, in Austria: praedoc), participation at the Integrated Research Training Group (iRTG). Equal

opportunities are a cornerstone of our staff policy.

## Requirements

Candidates with an MSc or equivalent degree in Chemistry, Physics, Material Science or a related discipline, with an overall grade of at least "good", are strongly encouraged to apply. The candidate should be fluent in English, be able to integrate in a team, work independently and have good organizational as well as communication skills. Scientific curiosity with an open attitude to work interdisciplinary in the framework of international collaborations is also expected in such large-scale projects.

## Application

Further information about actual projects can be found on [www.catalight.eu](http://www.catalight.eu).

If you think you fit the job, please send your full application together with a letter of motivation and a minimum of 1 reference letter to [catalight@uni-jena.de](mailto:catalight@uni-jena.de) specifying *Ref. TRR234-PN* (PN is the project number) in the subject line. Please only apply to not more than 3 open positions. Suitable candidates will be invited to an assessment workshop (in person or online) held in July.

## Application Deadline: 5th of August 2022

### Spokesperson of the CRC/Transregio at the at the Coordinating University

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