

The Laboratory for Chalcogenide Photovoltaics (LCP), which belongs to the Energy and Semiconductor Research Laboratory (EHF) at the Institute of Physics, Carl-von-Ossietzky University of Oldenburg has a vacant

## PhD student Position – Electrical Yield Optimization of CIGS

(Research Assistant, TV-L E13, 50%, ID: MYCIGS I)

in the field of physics and material science for the period of 3 years with the opportunity of pursuing a PhD. The employment will initially be limited to 31.07.2020 until the end of the project. Starting date should be at the earliest possible date.

The LCP has many years experience in fabrication, analysis, modelling and optimization of thin-film solar cells based on chalcogene materials such as Chalcopyrite ( $\text{Cu}(\text{In,Ga})(\text{Se,S})_2$ ) (CIGS) and Kesterite ( $\text{Cu}_2\text{ZnSn}(\text{S,Se})_4$ ). Manifold international collaborations, a comprehensive lab equipment and a team of excellent researchers ensure a significant impact in this research field.

Within the framework of a BMWi-funded network project you will work on the optimization of the energy yield of industrially relevant CIGS thin film solar cells and modules accompanied by extensive characterization and device modelling.

### Aims and major topics of your work:

- comprehensive material and electro-optical device characterization of CIGS solar cells with focus on electrical behavior and temperature effects (IV(T), EQE(T), CV(T))
- multi-dimensional modelling with a TCAD platform
- cell and module design optimization with focus on BIPV application
- assistance in the supervision of students

### Conditions of employment:

- qualifying university degree (diploma or master) above average in experimental physics or similar course of studies
- very good knowledge of English language and basic German

Beneficial **prior knowledge** or experience:

- Experience with measurements on solar cell materials (e.g. IV(T), EQE, CV, PL, TRPL)
- Experience in modelling and simulation of physical processes
- Background in semiconductor physics, photovoltaics and thin films
- Knowledge on solar cell device physics and defect spectroscopy on chalcogenide materials

### We offer:

- Professional working environment on a high scientific level and well equipped laboratories
- Friendly, international and inspiring team with flat hierarchical structures
- Participation in international workshops, conferences and publication of results
- Participation in a network among Germany's leading institutes in the field of thin film solar cells

The University of Oldenburg is dedicated to increase the percentage of female employees in the field of science. Therefore, female candidates are strongly encouraged to apply. According to § 21, 3 NHG female applicants are to be preferentially considered in case of equal qualification. Handicapped applicants will be given preference in case of equal qualification.

Please send your application including the job signature and all the usual documents (curriculum vitae, graduation results, job references etc.) preferably by e-mail as a pdf-file at the latest by June 25<sup>th</sup>, 2017 to:

### **Dr. Michael Richter**

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