

The Chemnitz University of Technology is an established innovative scientific and educational institution, which takes on the challenges connected with the competition between the universities. The Chemnitz University of Technology offers attractive employment for personalities with proven scientific excellence who want to contribute to the further innovative development.

Starting at 01.10.2024, the Faculty of Natural Sciences, Professorship Optics and Photonics of Condensed Matter, offers an employment for a

### **Doctoral Candidate (DC) / PhD Position (m/f/x)**

(100 %, salary plus allowances package according to the Marie Skłodowska-Curie Actions (MSCA) – Doctoral Networks rules)

for a period of 3 years. Selection is based on suitability, qualification and professional performance. Chemnitz University of Technology aims to support women in particular and therefore expressly asks qualified women to apply. In the case of equal suitability, severely disabled persons or persons of equal status will be given priority in accordance with SGB IX.

The above position is one of the 10 Doctoral Candidate positions of the EIFFEL (Efficient Fullerene-Free organic solar cells) Doctoral Network (<https://www.eiffelproject.eu/jobs/doctoral-candidate-phd-student-position-dc2-204373>). The described open position has the topic "Recombination mechanisms in fullerene-free photovoltaic devices" and is supervised by Prof. Dr. Carsten Deibel.

This network focuses on the development of efficient NFAs, revealing the mechanisms of operation and degradation in non-fullerene-based organic solar cells (NFA-based OSCs), and establishing synthetic strategies for their mitigation to form the basis for a new generation of OSCs - compatible with mass production - for successful commercialisation. The EIFFEL project offers the possibility to pursue the PhD within the Network at different universities/research centres/industrial companies from 7 European countries (Germany, Belgium, the Netherlands, Spain, Denmark, Cyprus and France). Background information on all DC positions is available on [www.eiffelproject.eu](http://www.eiffelproject.eu).

EIFFEL has received funding from the European Union's Horizon 2022 research and innovation programme under the Marie Skłodowska-Curie Action Doctoral Networks (HORIZON-MSCA-2022-DN-01) scheme, grant agreement number: 101119780.

#### **Working tasks:**

- training in fundamental characterisation techniques for solar cell devices, in particular optoelectronic frequency domain methods as well as sensitive photovoltaic subgap quantum efficiency and electroluminescence spectroscopy,
- studying radiative and nonradiative recombination of charge carriers in NFA OSCs
- training in drift-diffusion device simulation to model solar cells in the frequency domain and steady state
- fitting experiments
- travelling abroad for research secondments at partner organisations of the EIFFEL Network
- participating in specialised training meetings and international conferences

The DC will enrol in the doctoral student programme at Chemnitz University of Technology.

You will use your research results for scientific publications and your own qualification. This is a position for further scientific qualification.

If you want to join our interdisciplinary and highly motivated team in academically exploring a topic of high practical relevance, you should bring along the following **qualifications and traits**:

- Applicants must hold a Master's degree or equivalent in Physics or a related course such as Materials Science, providing access to PhD programs and should have experience with experimental research.
- Applicants must have a very good knowledge (written & spoken) of the English language.
- Strong motivation and ability to collaborate in an interdisciplinary and international team.

**Eligibility conditions according to the MSCA eligibility criteria:**

- Living less than 12 months in the 3 years immediately before the recruitment date in Germany
- Don't having an PhD

If you want to apply , please fill out the online form on the website

<https://www.eiffelproject.eu/jobs/doctoral-candidate-phd-student-position-dc2-204373>, indicating "Project Priority A" with "Project 2: Recombination mechanisms in fullerene-free photovoltaic devices" before **31<sup>st</sup> May 2024**.

**Further information:**

For additional information about this research project and DC position, please contact the scientist-in-charge/supervisor Prof. Dr. Carsten Deibel:

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For additional information about administrative aspects, please contact [hello@eiffelproject.eu](mailto:hello@eiffelproject.eu).

**Background material (host institution and research group):**

- <https://www.tu-chemnitz.de/physik/OPKM>
- [www.eiffelproject.eu](http://www.eiffelproject.eu)

The relevant information on the collection and processing of personal data can be found at [https://www.tu-chemnitz.de/verwaltung/personal/public/Datenschutz/dse\\_dp.html](https://www.tu-chemnitz.de/verwaltung/personal/public/Datenschutz/dse_dp.html).