

*We are a young, innovative university located in the heart of the Ruhr metropolis. Distinguished in research and teaching, we think in terms of possibilities rather than limits and develop ideas for the future. We embrace diversity, foster potential, and are committed to educational equity that truly deserves the name.*

The **University of Duisburg-Essen (UDE)** at **Campus Essen**, Faculty for Chemistry, Technical Chemistry I is looking for a

**Scientific co-worker (f/m/d, No. 084-26)**  
**(Payment according to Grade 13 TV-L, 67 %)**

Technical Chemistry I is one of the largest institutes at the Faculty for Chemistry and focuses on synthesizing nanomaterials by laser processing in liquids and their integration into real-world applications. Our latest focus is on the laser processing of food ingredients, an emerging field you will be working in. We currently employ a young, innovative, and highly motivated team of more than 15 PhD students. We aspire not only to understand the fundamentals of laser-particle interactions but also to develop the resulting materials into real-world applications. Further information can be found here:

<https://www.uni-due.de/barcikowski-group/>

<https://www.youtube.com/@nanofunction>

### Your Tasks

Can you prepare coffee with a laser? At first, you may think this is a crazy idea. However, our previous work has shown that when you treat coffee powder dispersions with low-energy laser pulses, extraction profiles are altered and coffee extracts with unique aroma profiles emerge without heating the water. So, we need you to help us explore the fundamentals of this exciting new research field, laser extraction in liquids, and pave the way for consumer products based on laser-processed food ingredients using coffee as a promising starting material. Your work will involve:

- Optical setups with modern high-power lasers
- Continuous flow-through setups for processing coffee
- Analytical methods based on LC-MS and GC-MS, developed and utilized in collaboration with an Analytical Chemistry institute

### Your Profile

- Master of Science in Chemistry with a focus on food chemistry
- Familiarity with handling and characterization of microparticle powders and dispersions
- Experience with food ingredient analytics and HPLC methodology
- Basic understanding of chemical engineering and some hands-on experience is desirable
- Previous experience with optical setups and pulsed lasers, as well as laser processing in liquids, is helpful.
- Familiarity with research data documentation and experimental design is beneficial
- We expect your willingness and ability to work in an international and interdisciplinary team

### You can expect

- Exciting challenges and opportunities in the research field of laser processing of organic microparticles and food science.
- Collaborations with national partners within the framework of a DFG-funded project.
- You will become part of a young and highly motivated team that prioritizes cooperation and teamwork over competitive thinking. This includes the opportunity to participate in numerous social activities.
- The possibility of further scientific qualification in the context of a dissertation (Dr. rer. nat.) with numerous support offerings.
- Family friendliness through childcare options for your children

- Advice on family care responsibilities
- A wide range of training and professional development opportunities, with individual onboarding
- Very good public transport connections and free parking
- Attractive sports and health offers (university sports)
- The option to work from home

<b>Starting date</b>	01.06.2026
<b>Contract duration</b>	36 months
<b>Working Time</b>	67% of a full position
<b>Application Deadline</b>	09.04.2026

Please direct your application containing all common documents and the application reference number 084-26 to Dr. Christoph Rehbock, University of Duisburg-Essen, Faculty for Chemistry, 45117 Essen, Phone: +49 201 183 3040, E-Mail: Christoph.rehbock@uni-due.de.

You can find information about the faculty and the advertised position at:

<https://www.uni-due.de/barcikowski-group/>

The University of Duisburg-Essen aims to promote the diversity of its members

(<https://www.uni-due.de/diversity>).

It aims to increase the proportion of women in academic staff and therefore expressly encourages suitably qualified women to apply. In accordance with the North Rhine-Westphalia State Equal Opportunities Act, women are given preferential consideration in cases of equal qualification. Applications from suitable severely disabled persons and persons with equivalent status, in accordance with § 2 (3) SGB IX, are welcome.

