

The art of measurement — made in Germany. Striving to perfect it is the mission of the 2,200 employees of PTB, the Physikalisch-Technische Bundesanstalt. As Germany's national metrology institute and a leading center of research, we operate in an international environment to develop world-class measurement standards. We at PTB work to ensure that people and organizations can trust the measurements they use.

At our Braunschweig site, we are looking to fill the following position in Department 3.7 (Fundamentals of Explosion Protection):

Doctoral candidate in physics, chemistry, mechanical engineering or materials sciences

Remuneration Group 13 [TVöD Bund](#) ◦ Three-year fixed term ◦ Part-time (33.15 hours/week)

Your tasks:

[Working Group 3.72 \(Explosion Processes under Non-Atmospheric Conditions\)](#) deals with research work on hydrogen safety. This includes working out fundamentals of explosion protection decoupling using flame arresters and flameless pressure vents in cooperation with participants from industry and academia.

- Working on scientific questions on explosion protection decoupling for hydrogen applications
- Examining explosion initiation and progression as well as characterizing them in detail
- Independently conceptualizing, planning, coordinating and carrying out experimental investigations (explosion tests with product samples)
- Supporting project organization and collaboration with project partners
- Presenting and publishing the research results

Your profile:

- You have completed your university studies (master's degree or German *Diplom*) in physics, chemistry, mechanical engineering, material sciences or a comparable discipline of natural/engineering sciences, preferably with a focus on physical chemistry and/or safety engineering.
- You will ideally have experience in at least one of the following fields:
 - Developing and operating complex metrological setups
 - Safety engineering matters in the field of explosion protection
 - Examining and modeling combustion-dynamic processes
 - Analyzing complex data (programming skills in Python, Java, Origin)
 - Automation of measurement setups (programming skills in LabView)
- You are interested in interdisciplinary issues.
- You are able to work independently; you are highly committed and determined.
- You are a strong team player and have good communication skills.
- You have a good command of German ([B1 level](#)) and English ([B2 level](#)).
- You are willing to travel for work both in Germany and abroad.
- You are physically able to work in a chemistry laboratory.

We offer:

- **Support for your doctoral work:** You will carry out research as part of an internationally renowned team and will benefit from PTB's excellent infrastructure. At PTB, you will be able to concentrate on your doctoral work without having to give lectures. Our support program for doctoral candidates additionally gives you the opportunity to network with your peers at the national and international levels, for example, at scientific conferences.
- **Work-life integration:** We offer flexible working arrangements and conditions (part time, flextime, work from home, telework, compensation days) to help you manage your family, care and career responsibilities in all of life's phases.
- **Transparent terms:** Remuneration in accordance with Germany's collective agreement for federal-level public service employees (TVöD Bund), 30 days of paid vacation and an employment-based pension plan for employees covered by the collective agreement are just some of the benefits of working at PTB.
- **Location benefits:** Our attractive campus offers an easy commute for drivers and cyclists as well as very good direct bus services. Plenty of free parking is available.
- **Jobticket:** We take environmental and climate protection seriously. To encourage commuting by public transportation, we offer a subsidy towards the cost of the *Deutschlandticket Job*.
- **Family friendly:** From daycare and dedicated parent-child offices to school holiday childcare, we offer a variety of ways to help you master the family-work balancing act.
- **Inclusion:** For people with disabilities, we offer an inclusive corporate culture and a range of integrative programs.
- **Learning opportunities:** We want to help you get ahead by offering a wide range of training and development programs to expand and enhance your skills.
- **Health options:** Your health is important to us, which is why we offer health promotion and maintenance programs, including workplace sports, a mobile massage service and back care classes.
- **Canteen:** Situated on our park-like campus grounds, our canteen offers a wide variety of culinary choices every day, including vegetarian/vegan options.

This is important to us:

PTB promotes gender equality and strongly encourages applications from female candidates. At the same time, we strive to reflect the diversity of our society. We therefore welcome every application submitted, regardless of the candidate's gender, cultural or social background, religion, ideology or sexual identity. If equally suited to the position, disabled persons or persons having equivalent status under German law will be given preference.

Your application:

For subject-related questions concerning this position, please contact [Department 3.7](#): Dr. Arnas Lucassen, phone: +49 531 592-3720, email: arnas.lucassen@ptb.de.

We look forward to receiving your [online application](#) by 26 June 2024 under Ref. No. 24-108-3B. Unfortunately, we cannot accept applications sent via email.

