

For our department Plasma Diagnostics we are looking to recruit **at the earliest possible date a**

### PHD STUDENT (F/M/D)

FOR THE TOPIC 'CHARACTERIZATION OF CHARGE CARRIERS IN TECHNOLOGICAL RELEVANT PLASMAS'

Fixed term contract for 3 years

Part-time appointment (27 hours/week)

Target salary: TV-L/E13

#### YOUR KEY RESPONSIBILITIES:

The topic of your PhD is the investigation of fundamental questions concerning charge carrier densities and their energy distribution functions in technological relevant plasmas. This includes low-pressure plasmas as well as atmospheric pressure plasma jets. In view of the challenges, especially for the latter, conventional methods for the characterization of charge carriers in plasmas, such as Langmuir probes, will be extended by the application of modern optical methods such as MW interferometry and THz spectroscopy.

Within the scope of your doctoral thesis:

- You will develop and apply various methods of optical diagnostics for the characterization of charge carriers, not only electrons but also ions being positively and negatively charged.
- You will confirm your findings in technologically relevant plasmas with conventional methods such as Langmuir probes and/or retarding field energy analyser (RFEA).
- You will be given the chance to work with a worldwide state-of-the-art THz time-domain spectrometer as well as a MW interferometer.

#### YOUR PROFILE:

- University degree (Master/Diploma) in physics, chemistry or related fields
- Fundamental knowledge of plasma physics and plasma diagnostics
- Preferable experience in probe diagnostics such as Langmuir or RFEA
- Highly motivated and with the drive to advance scientific research in the field of plasma diagnostics with modern techniques
- Enjoys working in an international team
- Ability to work independently, structured and meticulous with good communication skills
- Good English skills

- High degree of commitment, incentive, self-reliant working, ability to handle stress, team spirit, flexibility, reliability and problem-solving competence

#### OUR OFFER FOR YOU:

- Creative and international working environment
- State-of-the-art technical facilities
- Experienced and professional assistance throughout your PhD
- In-house training (e.g. project management, scientific writing, writing project proposals)
- Networking opportunities at national and international conferences and in cooperation with national and international research and industry partners
- Opportunities for external training
- In-house German course free of charge
- Possibility of designing and implementing own project ideas
- Sports courses in our institute rooms
- Staff kitchen

#### ABOUT INP

Our institute ranks among the largest and most modern institutions in the field of low-temperature plasmas worldwide. In an international working environment, we conduct socially relevant research within our core areas Materials & Energy and Environment & Health. Currently the INP employs about 200 scientists and staff at three locations (Greifswald, Rostock and Karlsburg).

For further information, please visit our website at [www.leibniz-inp.de](http://www.leibniz-inp.de).

#### HOW TO APPLY

Please apply with the common documents (cover letter, CV, copies of academic degrees and letters of reference) giving the keyword **„0370 PhD Student for Plasma Diagnostics“** - preferably via our online application - until **25 October 2020**.

Your performance and personality matters regardless of your age, origin, gender, sexual identity, disability or ideology. We look forward to receiving your applications!

The INP wants equal participation of men and women, especially in science. There are many good reasons why it is worthwhile to promote the potential of women specifically. Qualified women candidates are explicitly called to apply. Handicapped applicants will be preferred in case of equal qualification.

**CONTACT:**

For further information, please do not hesitate to contact Dr. Jean-Pierre van Helden (tel. +49 3834/554-3811; e-mail: [jean-pierre.vanhelden@inp-greifswald.de](mailto:jean-pierre.vanhelden@inp-greifswald.de)).

**Please send your applications to\*:**

Leibniz-Institute for Plasma Science and Technology (INP)

Mrs. Gabriele Lembke

Human Resources Department

Felix-Hausdorff-Str. 2

17489 Greifswald

E-Mail: [bewu@inp-greifswald.de](mailto:bewu@inp-greifswald.de)

*\* Unfortunately, we cannot refund any expenses associated with the application or job interview due to budgetary regulations.*

