

Job posting

Type of position

scientific
administrative

Target group

graduates
post docs
other

Title

PhD POSITION (F/M/X) FOR HIGH FREQUENCY SIGNAL MEASUREMENTS
PLASMA SOURCE CONCEPTS

Institution

RESEARCH AND DEVELOPMENT
FROM IDEA TO PROTOTYPE

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).

Position

The INP is conducting basic research focusing on high frequency electrical signal diagnostics. Our aim is the absolute ion density measurement (MAID) by evaluating ion acoustic wave oscillations within the current signal, supported by plasma modeling. The DFG project involves the setup of a ground loop free electrical current measurement system with high bandwidth. The recording, identification and analysis of ion acoustic waves within the current signals as well as the adaptation of the measurement system to different discharge configurations at atmospheric pressure is the central task. We offer a project position in Karlsburg near Greifswald, starting on 1st January 2022 as

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Fixed term contract for 3 years / Part-time appointment (30 hours/week) / Target salary: TV-L/E13

Responsibilities

- You develop and adapt a high frequency sensitive diagnostic system for weak current oscillations within the range of MHz up to several GHz in cold atmospheric plasma (CAP) discharges
- You evaluate the ion acoustic wave traces and quantify the ion density from the current signal in multiple CAP setups at different operating parameters
- You correlate your results with modeling results and you solve the dispersion relation for the ions
- You interact with an interdisciplinary team from physicists to

medical stuff including the presentation of scientific results.
- You present your scientific results on scientific conferences and publish them in peer reviewed journals

Requirements

- Very good university-level qualification (Master of Science degree) in physics, electrical engineering or comparable subject areas
- You have experience in high frequency signal processing and measurement setups
- Understanding of following areas would be helpful: electrical diagnostics, high frequency technology, gas discharge physics, non linear dynamics and plasma instabilities
- Analytical competencies and problem-oriented thinking
- Fluent English, German optional
- Experienced team worker, willingness and enthusiasm for independent work
- Very high communication skills, individual initiative and extraordinary engagement are required.

Application procedure (deadline etc.)

OUR OFFER FOR YOU:

- Compensation according to the collective salary agreement of Länder (TV-L) including employer contributions to medical and dental insurance, maternity leave and retirement benefits
- Creative work environment
- Technical facilities of the highest standard
- Thesis advisory committee: experienced and professional assistance throughout your PhD
- Opportunities for professional development (e.g. project management, acquisition of third-party funding)
- Networking opportunities at national and international conferences and further research groups within the field
- Possibility of developing and implementing own project ideas
- In-house German course free of charge
- Flexible working hours and mobile working offers
- 30 vacation days per year (plus: December 24th and 31th)
- Sports courses in our institute rooms

HOW TO APPLY

Please apply with the common documents (cover letter, CV, references) giving the keyword „0438 PhD Position Plasma Source Concepts“- preferably via our online application form - until 17th October 2021.

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

CONTACT:

For further information and inquiries, please contact Dr. Torsten Gerling (E-Mail: gerling@inp-greifswald.de).

Please send your applications to*:

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* Unfortunately, we cannot refund any of your expenses for applications and job interviews due to budgetary regulations.