



Terahertz Spectroscopy for Plasma Technology

at the Leibniz Institute for Plasma Science and
Technology (INP) e.V., Greifswald, Germany

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TERAFLAG Workshop, 6. September 2018, Cassis, France

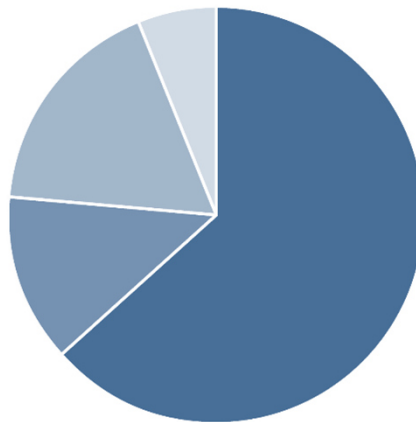


FROM IDEA TO PROTOTYPE

Leibniz Institute for Plasma Science and Technology (INP Greifswald)

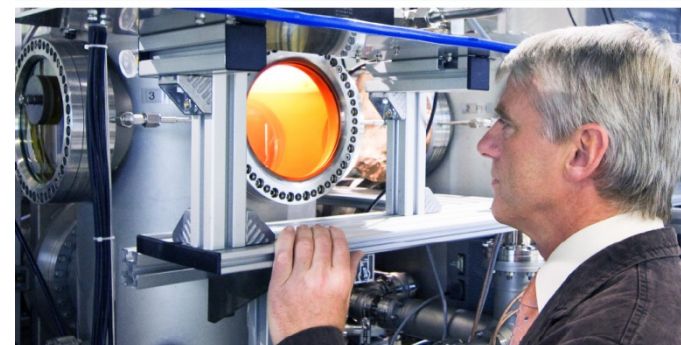
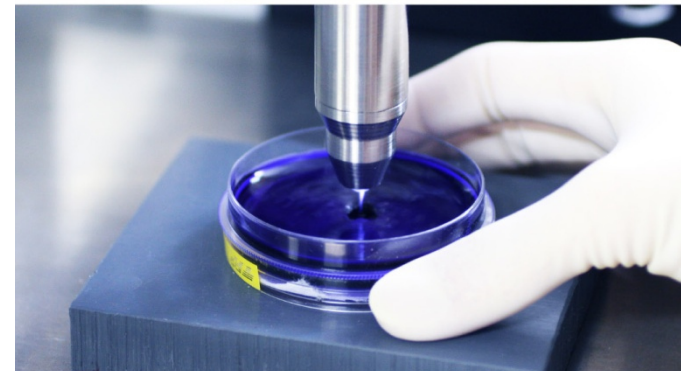
- 1.1.1992 foundation of the INP (Institute for Low Temperature Plasma Physics)
- Biggest non-university research institution for low temperature plasmas in Europe
- Application-oriented basic research

Staff (2018)

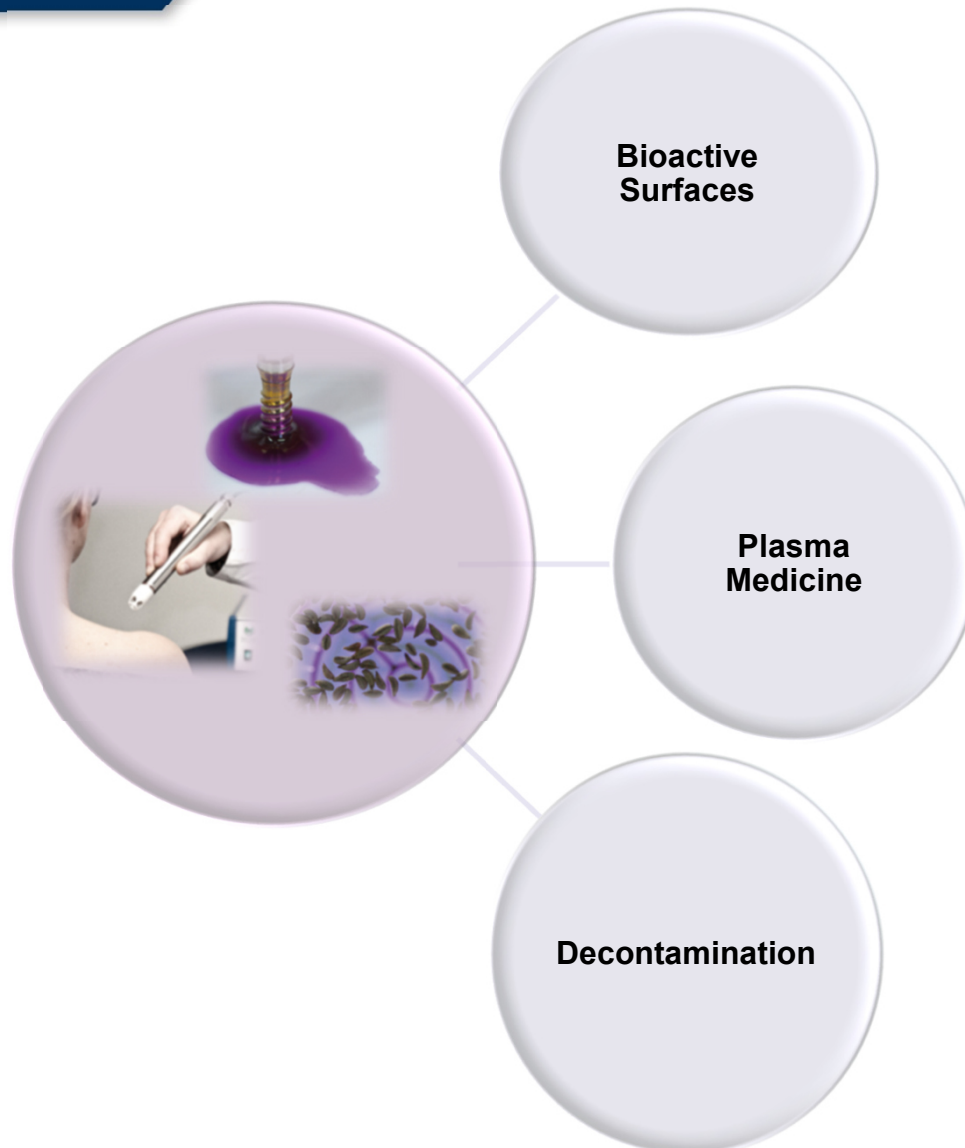


195 Employees (March 2018)

- science/engineering 130
- assistance/trainees 20
- administration/infrastructure 33
- management support 12



Research Division Plasmas for Environment & Health



■ Biomaterials and surfaces

- Implants, therapeutic devices, disposables, biosensing surfaces

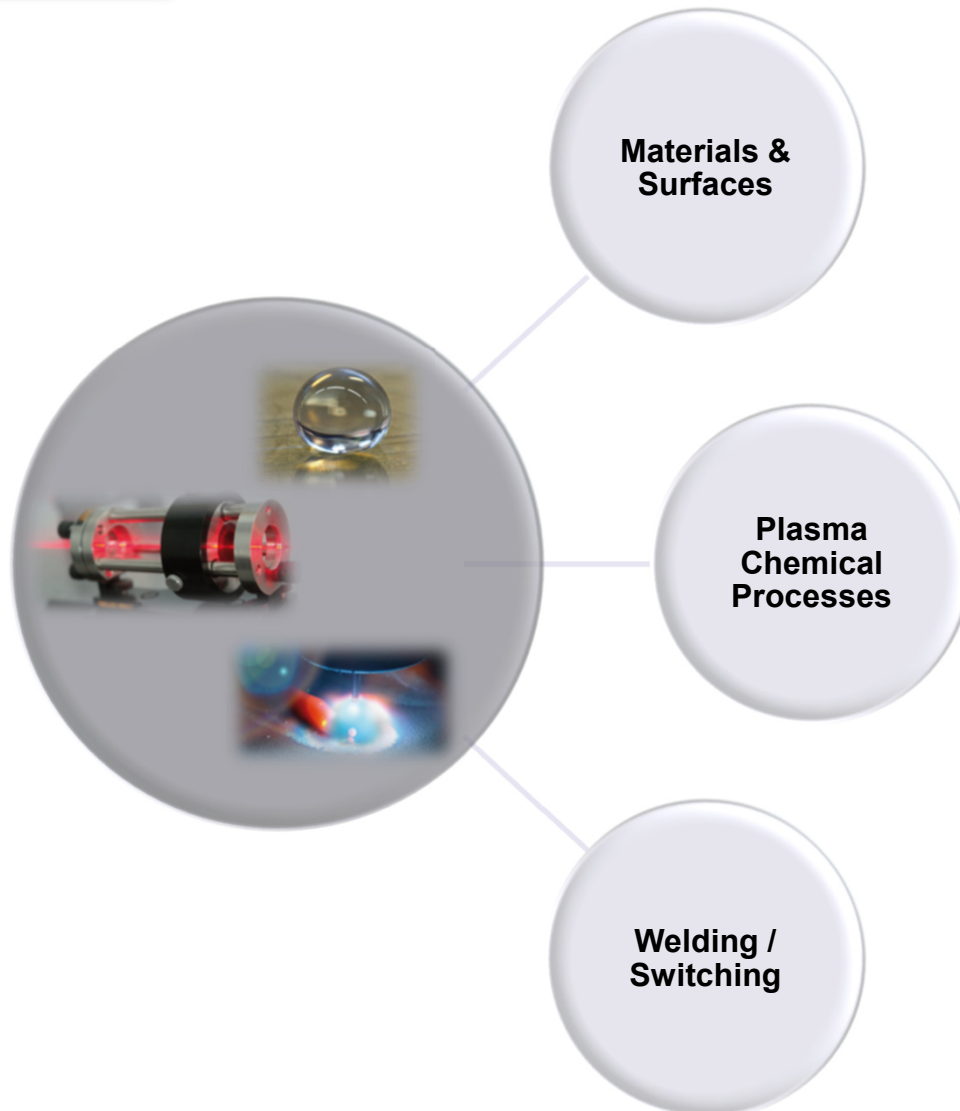
■ Plasma Medicine

- Wound healing, skin diseases, dentistry, plasma sources for therapeutic applications, antiseptic of body and tissue surfaces

■ Decontamination

- Plasmas and liquids, surface decontamination, air hygiene, food hygiene and processing

Research Division Plasmas for Materials & Energy



- **Renewable Energy and Plasma Assisted Surface Technologies**
 - Materials for Fuel Cells, Solar Power Generation, Functional Layers, Optical Technologies
- **Energy-efficient processes**
 - Arc welding, switching arcs, light sources
- **Plasma-chemical processes**
 - Plasma-chemical processes, plasma diagnostics, plasma monitoring, trace gas analysis

Your industry:

instrument
manufacturer
coating technology
semiconductor
manufacturing
solar cell production
security technology
engine manufacturer
laser manufacturer
and user

**Our research
division**

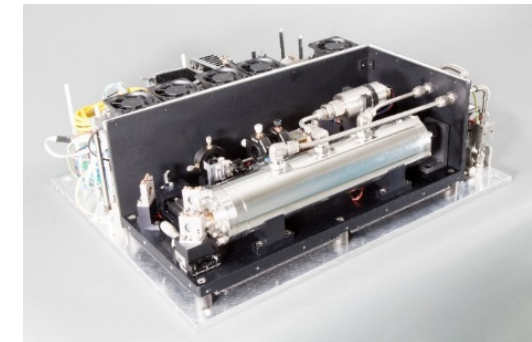
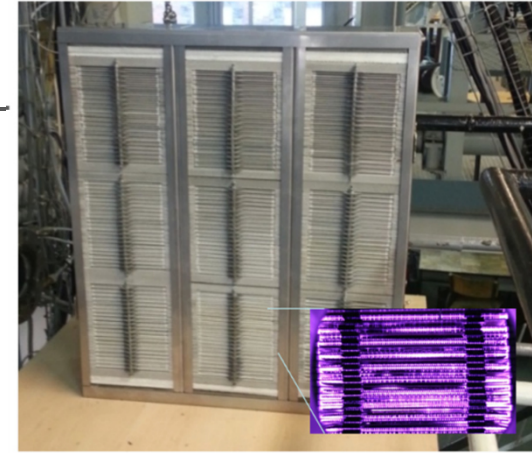
**Plasma Chemical
Processes**

- basic research
- applied research
- prototypes (test reactor)

You are looking for a strong partner in the field:

- Highly sensitive gas analysis, especially for molecular gases
- Emission spectroscopy and imaging techniques
- Design and testing of plasma-chemical reactors
- Process control for surface processing processes (e.g. etching)
- Detection of hazardous or problematic substances (trace gas analysis)
- Process control and optimization

Stack reactor (Air pollution control)



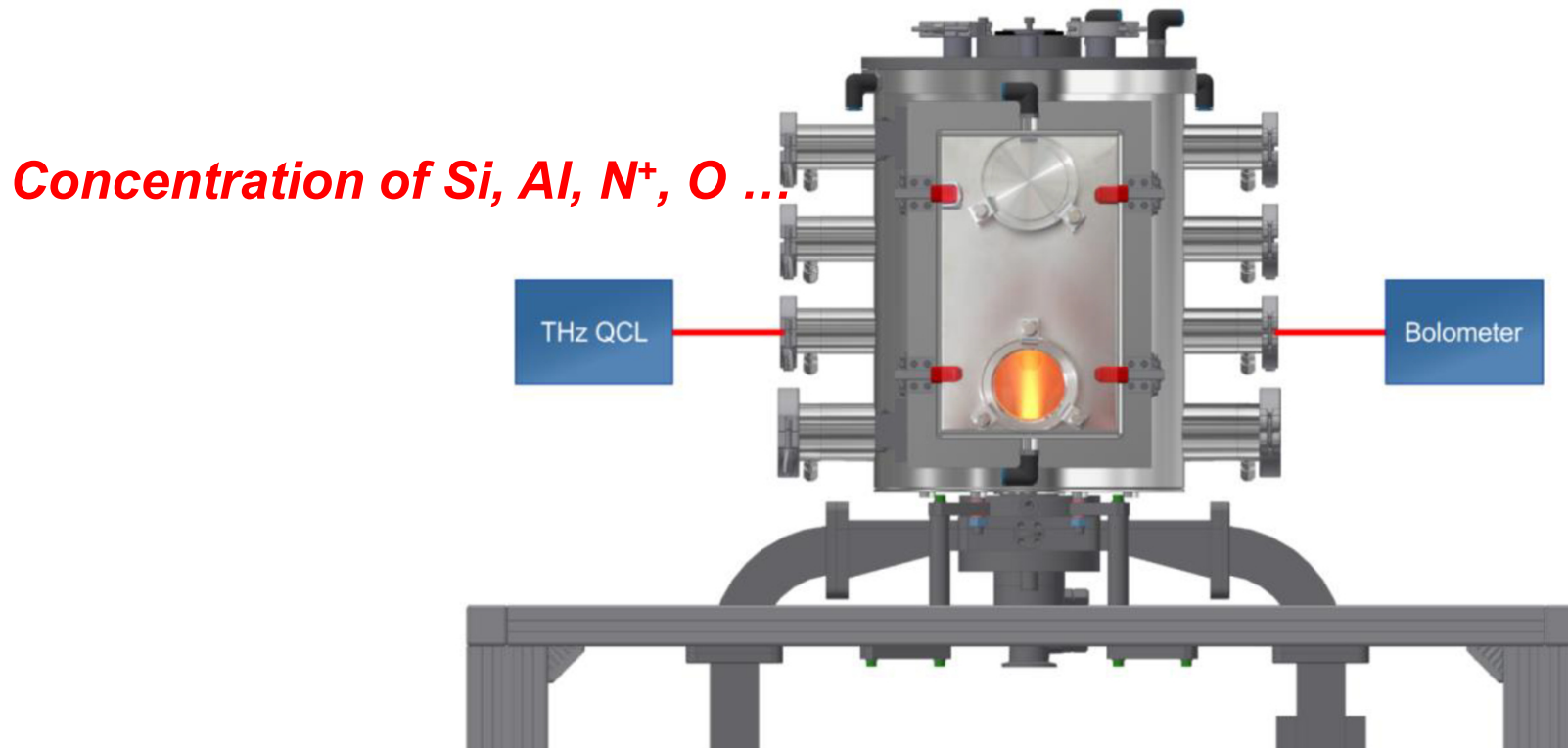
CELISE (Highly sensitive gas analysis)



*RES-Q-Trace
(Trace gas
detection)*

Terahertz Flagship Research

**Terahertz detection of atoms in plasma processes
for improved layer deposition**

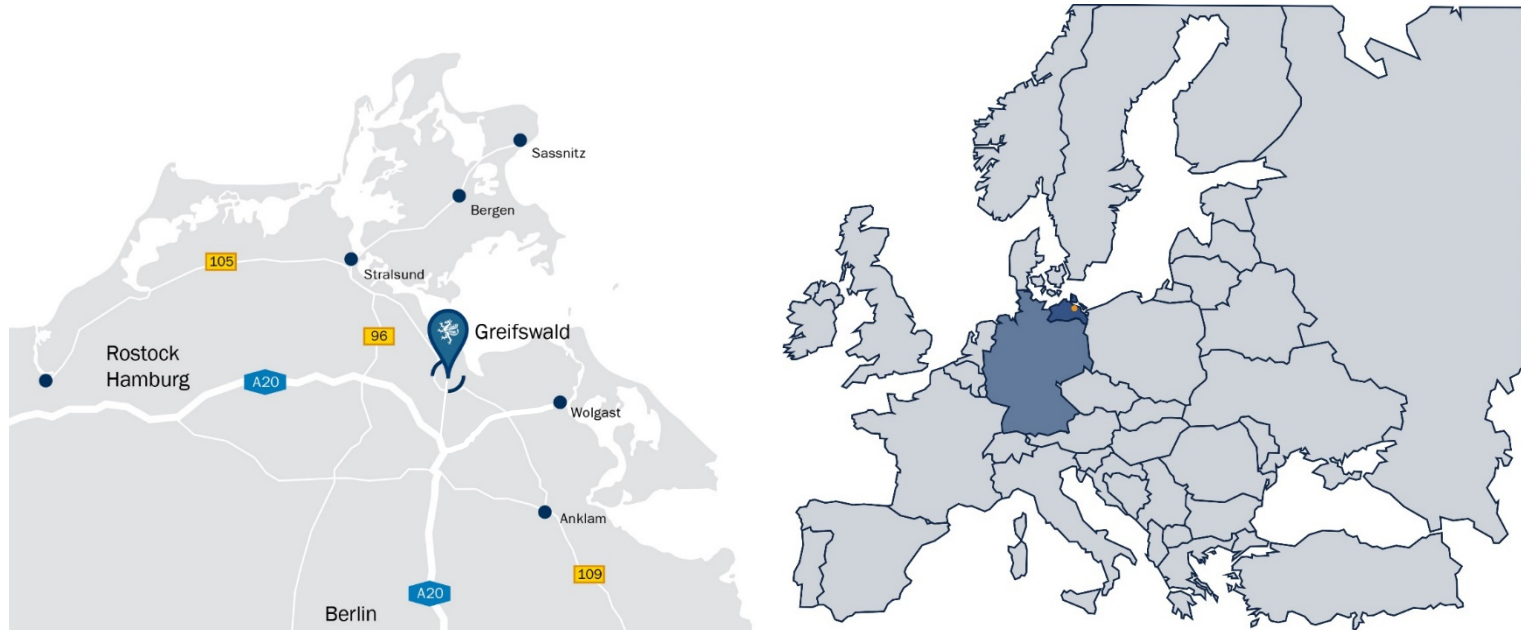


Plasma reactor for layer deposition

e.g. for Si-based films, AlN layers, ...

In cooperation with Paul-Drude-Institute Berlin

Contact



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