

**SEMINAR:
Plasma Process Technology**

**Location of the
PLASMA SEMINAR and WORKSHOP:** **NETWORKING DINNER**
SENTECH Instruments GmbH **At 19:00 Restaurant IL Porto**
Schwarzschildstrasse 2, Berlin-Adlershof Semmelweisstrasse 104a, Berlin-Adlershof
On Wednesday + Thursday, May 06 + 07, 2026 **On Wednesday evening, May 06, 2026**

SEMINAR PROGRAM

09:00 **Welcome and introduction of the program, organisation, and SENTECH employees**
Friedrich P. Witek, SENTECH GmbH, Krailling and SENTECH Instruments GmbH, Berlin

Etching:

09:10 **SENTECH Plasma Process Technology –
Latest developments in etching of SiC, super conductive metals, and stress-controlled ICPECVD**
Marcel Schulze, SENTECH Instruments GmbH, Berlin
Friedrich P. Witek, SENTECH GmbH, Krailling and SENTECH Instruments GmbH, Berlin

09:40 **Silicon for Einstein (telescope): High-Aspect-Ratio Cryo-DRIE Applications**
Thomas Siefke, Friedrich-Schiller-Universität Jena, Jena, Germany

10:10 **Coffee break and time for discussions**

10:45 **Process Transfer of GaAs and InP ICP-RIE for HBT and HEMT Transistors in Telecommunication and
micro/nano Optoelectronics**
Giuseppe Di Gioia, Université des Sciences et Technologies de Lille, l'Institut d'Electronique - de Microélectronique et
de Nanotechnologie IEMN, Lille, France

11:15 **High-Performance Carbon Nanotube Thin-Film Transistors via Atomic Layer Etching-Assisted Fabrication**
Yu Cao, Peking University PKU, Beijing/Shanxi, China

11:45 **DNA assisted Stencil Lithography for Nanoelectronics**
Ciaran Fowley, Helmholtz-Zentrum Dresden - Rossendorf (HZDR), Institute of Ion Beam Physics and Materials
Research, Dresden, Germany

12:15 **Lunch and time for discussions**

13:45 **Highly Precise Plasma Etching Processes for Future 2D Electronics**
Claudia Bock, Ruhr-Universität Bochum (RUB), Fakultät für Elektrotechnik und Informationstechnik, Lehrstuhl für
Mikrosystemtechnik, Bochum, Germany

Deposition:

14:15 **ALD super-cycle Processing for Conductive and Wide Band Gap Materials (AZO, IGZO, AlGaN)**
Ludwig Marth / Paul Plate, SENTECH Instruments, Berlin

14:45 **Coffee break and time for discussions**

15:15 **Deposition of different Oxide / Nitride-Isolators by PEALD for Quantum Electronic Circuit Applications**
Oliver Kieler, Physikalisch-Technische Bundesanstalt PTB, Braunschweig, Germany

15:45 **Amorphous Silicon (a-Si) ICPECVD and High-Rate Deposition of Si₃N₄ and SiO₂ using 100% SiH₄**
Benjamin Schumann, SENTECH Instruments GmbH, Berlin, Germany

16:35 **All participants of the seminar are invited to visit the application laboratories at SENTECH Instruments**

17:30 **End of the Seminar**

**WORKSHOP:
Plasma Process Technology****Date:** May 07, 2026**Location:** SENTECH Instruments GmbH,**Entrance:** Johann-Hittorf-Str./James-Franck-Str., 12489 Berlin-Adlershof**Please note:**

Your own laptop will be required for this workshop. Please ensure to bring one with you! A special license for the SIA operating software will be provided by SENTECH Instruments GmbH for the duration of the workshop. Sessions include practical elements with hands-on experience.

WORKSHOP PROGRAM:

- 09:00** **Welcome to the Workshop**
By SENTECH
- 09:10** **The Plasma Physics behind SENTECH PTSA – a unique ICP Plasma Source**
A pathway to precision
- 09:30** **Fundamentals of Plasma Physics and Chemistry**
Principles and process theory
- 10:00** **Coffee break and time for discussions**
- 10:30** **Setting-up an End Point for Laser Interferometer SLI**
Of transparent and opaque layers
- 11:00** **Setting-up an End Point for Optical Emission Spectroscopy (OES)**
For etching and for chamber cleaning
- 11:30** **The SIA V3 user Tool Box**
Ease of use for operators, form view and advanced editor, implementing and modifying recipe logic and EPD, analysing data-logging, ...
- 12:30** **Lunch and time for discussions**
- 14:00** **Practical hands-on challenges in Plasma Process Development**
Group session
- 15:30** **Coffee break and time for discussions**
- 16:00** **Tutorial on Process set-up for Atomic Layer Deposition (ALD)**
Including AL Real Time Monitoring of layer deposition, process uniformity, ...
- 16:30** **Tutorial and insights on Atomic Layer Etching (ALE)**
Materials, chemistry, and process modes
- 17:00** **End of Workshop**