SENTECH
Erfolg durch Leistung

Experts in Plasma Process Technology and Thin Film Metrology

SENTECH Thin Film Metrology Seminar and Workshop

Thin Film Metrology Seminar

Date: **On Wednesday, 9th October 2024**

Host: **SENTECH Gesellschaft für Sensortechnik mbH,**
Konrad-Zuse-Bogen 13, 82152 Krailling

Location: **SENTECH Instruments GmbH**,
Entrance: Johann-Hittorf-Str./James-Franck-Str., 12489 Berlin-Adlershof

Networking dinner: **Il Porto,** Semmelweisstraße 104 A, 12524 Berlin-Adlershof

SEMINAR PROGRAM:

Pos.	Time	Talk
1.	9:00	**Welcome and SENTECH thin film metrology products** Friedrich P. Witek, SENTECH GmbH, Krailling and SENTECH Instruments GmbH, Berlin
2.	9:35	**Optical constants by VUV ellipsometry using synchrotron radiation compared to UV-VIS ellipsometry** Mattia Mulazzi, Physikalisch-Technische Bundesanstalt (PTB), Berlin
3.	10:10	**Adhesion layer analysis by spectroscopic ellipsometry in backend of line, packaging** Uwe Richter, SENTECH Instruments GmbH, Berlin
	10:35	***Coffee Break***
4.	11:15	**In-situ spectroscopic ellipsometric monitoring for high-κ dielectrics atomic layer deposition on Silicon Carbide** Bruno Galizia, CNR-IMM, Catania, Italy
5.	11:40	**Quality control of SiC based technology and of gratings by SENDURO® MEMS** Sven Peters, SENTECH Instruments GmbH, Berlin
	12:15	***Lunch break***
6.	13:45	**FTIR spectroscopic analysis of thin film chemical composition using SENDIRA** Alexander Treffer, SENTECH Instruments GmbH, Berlin
7.	14:20	**Inline monitor for curing and drying processes - feedback control for industrial applications** Johanna Reck, SENTECH Instruments GmbH, Berlin
	14:45	***Coffee Break***
8.	15:15	**In-situ analysis of thin ALD films combining XPS and spectroscopic ellipsometry** Carlos Morales Sánchez, Brandenburg University of Technology Cottbus-Senftenberg, Cottbus
9.	15:40	**Combining Ellipsometry and Transmission measurement (CET) for the characterization of the electric percolation in thin metallic film** Sven Peters, SENTECH Instruments GmbH, Berlin
10.	16:15	**End of Seminar.** **Everyone is kindly invited to visit the SENTECH Thin Film Metrology Application Laboratory and Plasma Process Technology Application Laboratory.**
	19:00	**Networking dinner at Il Porto Restaurant,** Semmelweisstraße 104 A, 12524 Berlin

Thin Film Metrology Workshop

Date: **On Thursday, 10th October 2024**

Host: **SENTECH Gesellschaft für Sensortechnik mbH,** Konrad-Zuse-Bogen 13, 82152 Krailling

Location: **SENTECH Instruments GmbH**,

Entrance: Johann-Hittorf-Str./James-Franck-Str., 12489 Berlin-Adlershof

WORKSHOP PROGRAM:

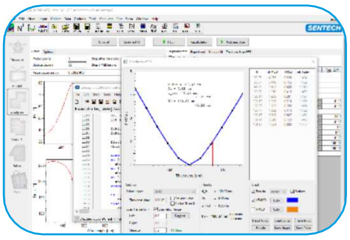
Pos.	Time	Event
1.	9:00	**Introduction to spectroscopic ellipsometry – Complex sample analysis in a wide spectral range from DUV to NIR** Alexander Treffer, SENTECH Instruments GmbH, Berlin
2.	9:50	**How to recognise and push limits in spectroscopic ellipsometry** Sven Peters, SENTECH Instruments GmbH, Berlin
	10:40	***Coffee Break***
3.	11:00	**First Block of Workshops**
	12:10	***Lunch Break***
4.	13:30	**Second Block of Workshops**
5.	14:40	**Third Block of Workshops**
	15:40	***Coffee Break***
6.	16:00	**Fourth Block of Workshops**
	17:00	**End of Workshops**

Please choose four topics in advance and notify us with your registration for the Workshop. This will help in advance with distributing everyone accordingly into teams of eight maximum. You will find the topics on the next page. If you are interested in Topic 3 and want to bring your own sample, check corresponding box.

Extra Notice:

Please take care not to bring confidential samples or samples under NDA for the Workshop "**Live measurements of customer samples on SENDIRA and SENresearch**" as these measurements are done in groups.

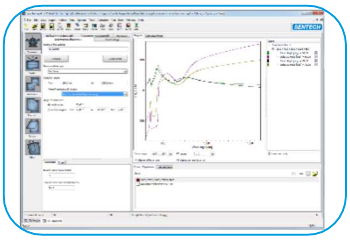
Topics:



1. **Programming of scripts for spectroscopic ellipsometry for automation and integration of external hardware**

   With Uwe Richter

   Location: Presentation room



2. **Workflow of spectroscopic ellipsometry with SpectraRay/4 - introduction to advanced operation**

   With Alexander Treffer

   Location: Conference room

3. **Live measurements of customer samples on SENDIRA and SENresearch 4.0**

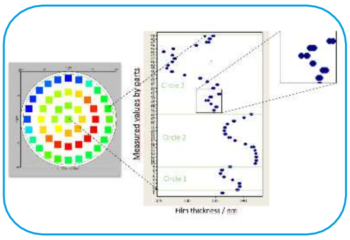
   With Sven Peters

   Location: Metrology Application Laboratory, Main Room

4. **Automation of spectroscopic ellipsometry in production and quality control, SENDURO MEMS**

   With Georg Dittmar

   Location: Metrology Application Laboratory, Automation Room



5. **Intuitive approach to quality control and statistical analysis: Measurement System Analysis (MSA)**

   With Alexander Treffer

   Location: Presentation room

6a. Benefits of reflectometry adding to ellipsometry for small spot size, fast mapping
6b. Evaluation of optical models in terms of fitting quality and parameter correlation

With Alexander Treffer

Location: Metrology Application Laboratory, Preparation Room