

77. BHT – FREIBERGER UNIVERSITÄTSFORUM 2026 – FACHKOLLOQUIUM 1
FREIBERG SILICON DAYS

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| Date 08. – 09. June 2026 | Language English | Colloquium Office Dr. André Stapf Institute of Inorganic Chemistry +49 3731 39-3583 Andre.Stapf@chemie.tu-freiberg.de |
| Venue UBH 0204 (A) Winklerstraße 3 | Chairpersons Prof. Dr. Edwin Kroke Prof. Dr. Johannes Heitmann Prof. Dr. Daniel Hiller | |

Monday, 08. June 2026

09:00 – 10:20 Keynote

Frank Bösenberg (Silicon Saxony) - *Saxony in the Global Semiconductor Race: Where Freiberg Makes the Difference*

Anke Lemke (ESMC) - *ESMC - A European Lighthouse Project*

10:40 – 12:20 Nano Devices I: Group IV Elements

Moritz Brehm (JKU Linz) - *Ultra-Low Temperature Epitaxy: A Vehicle for Next-Generation Silicon-Based Devices*

Walter Weber (TU Wien) - *SiGe(Sn) on SOI Transistors: from Functionality Enhancement to Cryogenic Operability*

Yonder Berencén (HZDR) - *From Passive to Functional Silicon: Ion-Beam Engineering for Telecom Photonics*

Elke Erben (GlobalFoundries) - *Gate Stack Optimization in High-k Metal Gate Technologies*

13:30 – 15:10 Quanten Devices / Optics

Paul Räckel (Fraunhofer IISB) - *Single Ion Implantation for Colour Centre-based Quantum Technologies*

Pascal Muster (Infineon) - *High Fidelity and High Speed Single Electron Shuttling in Industrially Fabricated Spin Qubit Devices: Towards a Scalable Quantum Computer Architecture*

Meik Panitz (Jenoptik) - *Electron Beam Writing of Effective Index Based Meta Materials*

Max Steudel (TU Bergakademie Freiberg) - *²⁸SiC: Challenges in the Synthesis of an Emerging Quantum Material*

15:30 – 17:10 Etching, Coating, Deposition

Friedrich Schaaff (Silicon Products) - *Chemical Vapor Deposition as a Flexible Method to Obtain Application-Focused SiC*

Nils Schubert (TU Bergakademie Freiberg) - *HF-Br₂ Mixtures for Isotropic Wet-Chemical Etching of (100)Si Wafer*

Karsten Korth (Evonik) & Fabian Zschocke (Total Energies) - *Glasskote Base 1 - A New Glass Container Coating Based on Silicon Technology*

Merislava Anguelova (Wacker Chemie) - *Relevance of Ultra-Trace Element Analysis in Polysilicon Manufacturing*

17:10 – 18:10 Postersession

from 18:15 BBQ & Get Together

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Tuesday, 09. June 2026

08:40 – 10:20 Precursor Chemistry

Andreas Krause (NorcSi) - *100% Silicon Anodes: Industrializing the Post-Graphite Li-Ion Cell*

Ralf Tonner-Zech (Universität Leipzig) - *Area-Selective ALD Modelling on Dielectrics: Synergistic Application of Computational Chemistry and Machine Learning*

Gerd Lippold (PSC Polysilane Chemistry) - *High Purity, Silicon Based Electronic Precursor Materials for ALD/CVD and Beyond*

Stefanie Wahl (Fraunhofer CSP) - *Contaminants Under Control: High-Sensitivity Silane Analysis for Stable and Efficient Production Processes*

10:40 – 12:20 Nano Devices II

Aashi Gupta (Tyndall National Institute, Cork) - *Challenges of Device Fabrication and Pulsed Laser Annealing of 2D TMDs*

Joachim Knoch (RWTH Aachen) - *Ultralow Power Cryogenic CMOS Devices*

Thomas Mikolajick (NaMLab) - *The Journey of the RFET from Lab to Fab*

Michele Perego (CNR-IMM, Istituto per la microelettronica e microsistemi) - *Doping of Ultra-thin Silicon films: from Fundamental Studies to New Functionalities*

13:30 – 15:10 Photovoltaics I

Angelika Harter (Helmholtz-Zentrum Berlin) - *Towards Industry-Compatible Perovskite/Silicon Tandem Solar Cells*

Beyza Durusoy (Freiberg Instruments) - *New Metrology Approaches for Perovskite Materials*

Don Clugston (Wavelabs Eternal Sun) - *It is Not a Constant - Decomposing Series Resistance into Distributed and Non-Distributed Components*

Susanne Richter (Fraunhofer CSP) - *The Material Passport for Sustainable PV-Recycling: Quality, Value and Hazardous Substance Assessment*

15:30 – 17:10 Photovoltaics II

Tom Kollek (ISC Konstanz) - *How Modern Solar Cells are Made: TOPCon and IBC Technologies from Europe*

Felix Kaule (HTWK Leipzig) - *FEM-Based Sticking Prediction for Carrier Pitch Optimization in Wet Chemical Processing*

Thomas Pernau (centrotherm) - *CVD Technology for Industrial Production of n-Type TOPCon and POLO solar cells*

Alina Kluge (HTWK Leipzig) - *CFD Analysis of Gas Distribution during the Low-Pressure Diffusion Process in Solar Wafer Manufacturing*

17:10

Closing Remarks