### Fraunhofer IISB @ ICSCRM 2025



Fraunhofer Institute for Integrated Systems and Device Technology IISB

#### Session 3A, Mon 10:15-11:45, Auditorium

**1\_227** Self-heating in 4H-SiC avalanche-photodiodes and its impact on spectral responsivity measurements Felix Beier (Fraunhofer IISB, sglux GmbH)

### Session 3B, Mon 10:15-11:45, Convention Hall 1F

**4\_326** Scalable fabrication and electrical characterization of lateral pin-diodes on 4H-SiC a-plane wafers for functionalization of vsi Jannik Schwarberg (FAU Erlangen-Nürnberg)

### Session 5B, Mon 14:45-16:00, Convention Hall 1F

**3\_244** Impact of current density, accumulated injected charge and temperature on bipolar degradation in 4H-SiC pin-diodes Rijuta Bagchi

## Poster Session 6, Mon 16:15-18:00, Exhibition Hall 1 1F

**P22\_325** Evaluation of oxide processing steps using contactless corona-based cv measurements Robin Karhu

**P28\_514** Minority charge carrier lifetime for evaluating 4H-SiC epitaxial growth by microwave detected photoconductivity decay Christian Wißgott

**P37\_305** Reduction of sidewall roughness in SiC trench formation by improvement of photoresist mask Alesa Fuchs

**P40\_391** Extraction of trench sidewall capacitance by linear component separation towards wafer level evaluation Maximilian Szabo

**P53\_536** Influence of different contact lengths on 4H-SiC tlm test structures Maximilian Ley

**P52\_387** The tunneling field-effect transistor as novel device concept for high-frequency hard-switching power electronics Jan Frederik Dick (FAU Erlangen-Nürnberg)

## Poster Session 12, Tue 16:30-18:30, Exhibition Hall 1 1F

**P42\_276** Utilizing SiO2 reflow for corner rounding to prevent cracking in passivation layers above 500 °C Julien Koerfer

#### Session 15A, Wed 13:00-14:15, Auditorium

**2\_438** Parametrization of emitter photoluminescence and color center quantification with neural network Christian Gobert

# Poster Session 17, Wed 16:30-18:30, Exhibition Hall 1 1F

**P09\_265** Growth and characterization of "IsoPure" epitaxial layers for quantum applications Birgit Kallinger

**P18\_601** Prediction of wafer warpage in 200mm 4H-SiC substrates during subsequent processing by residual stress measurement Paul Wimmer

**P90\_493** Transient junction temperature measurement error of SiC MOSFETs in power cycling – influence of cryogenic temperatures Lukas R. Farnbacher

**P79\_327** Towards a fully integrated 4H-SiC a-plane quantum-chip – transistors and light emitters

Jannik Schwarberg (FAU Erlangen-Nürnberg)

**P76\_217** A simulation study of electronic device designs for the control of silicon vacancies in 4H-SiC as spin qubits Fabian Jürgen Magerl (FAU Erlangen-Nürnberg)

# Poster Session 21, Thu 15:00-17:00, Exhibition Hall 1 1F

**P22\_142** Process-dependent photoluminescence behavior evolution of stacking faults in 4H-SiC Nadja Kölbel (FAU Erlangen-Nürnberg)

**P73\_386** 4H-SiC tunneling light emitter as a light-source for monolithically integrated off-resonant excitation of silicon vacancies Jan Frederik Dick (FAU Erlangen-Nürnberg)