

DKT2024 - 53. Deutsche Kristallzüchtungstagung, 6.-8. März 2024, Erlangen

Mittwoch, 6. März 2024

- 12:00 Registration Open
- 12:45 Opening Ceremony

Production of Compound Semiconductors

- 13:00 S. Eichler, Investigation of low-epd GaAs and InP
- 13:30 P. Heimann, CdTe Single Crystals for Photon Counting – A Quantum Leap in CT Medical Imaging
- 14:00 R. Eckstein, 30 Jahre Siliziumkarbid-Substrate
- 14:30 Coffee Break

(Ultra) Wide Band Gap Semiconductors

- 15:30 K. Kakimoto, Analysis of impurity and defect distributions during crystal growth of Si, SiC and Ga₂O₃
- 16:00 T. Straubinger, Growth and preparation of UWBG crystals AlN and Ga₂O₃ for next generation power electronic
- 16:20 G. Lukin, Stress free PVT growth of bulk AlN crystals
- 16:40 R. Weingärtner, Inspection of dislocation content in aluminum nitride bulk crystals for quality control in crystal growth: X-ray transmission versus reflection topography
- 17:00 J. Ihle, Importance of materials database for modeling of PVT growth process at T > 2000°C
- 17:20 K. Schuck-Bühner, Systematic evaluation of contamination behavior originated from innovative spray coated tantalum carbide coating on graphite parts used in SiC epitaxy processes
- 17:40 End
- 18:10 General Assembly of DGKK

Donnerstag, 7. März 2024

Epitaxy of Compound Semiconductors

- 08:30 O. Maßmeyer, MOCVD growth and characterization of 2D materials
- 09:00 M. Heuken, Advancements in MOCVD technology for low-cost high-quality III-As/P-based Epitaxy
- 09:20 R. Karhu, Comparison between homoepitaxial growth of 4H-SiC on a-plane and 4° off-cut c-plane substrates
- 09:40 W. Miller, Kinetic Monte Carlo simulations for study growth kinetics during epitaxial growth
- 10:00 Coffee Break

Solution Growth of Novel Crystals

- 10:40 S. Schwung, KRE(WO₄)₂ - Eine vielseitige Verbindung für optische Anwendungen
- 11:10 H. Abushammala, Single-crystal growth from high-temperature solutions of the hole-doped Mott-insulator BaCoS₂
- 11:30 C. Krellner, Interplay between 4f and 3d magnetism in LnCo₂P₂ (Ln = La – Nd) single crystals
- 11:50 D.C. Peets, Rouaite, Cu₂(OH)₃NO₃: Growth, Deuteration, Magnetic Phase Diagrams, and Dimensionality of Magnetic Interactions

Award Session

- 12:10 Lunch
- 13:30 DGKK-Young-Scientist Award
- 14:00 Award Ceremony of the School Competition
- 14:30 DGKK-Award

- 15:00 Coffee Break

Postersession (15:00-16:30)

Engineered SiC Substrates

- 16:30 P. Hens, Study on epi performance of engineered SiC substrates in a multi-wafer batch reactor
- 16:50 M. Hofmann, Silicon Carbide-on-Insulator and Diamond for Integrated Photonics and Quantum Applications
- 17:10 J. Schultheiß, Chemical Vapor Deposition of 3C-SiC on SOI substrates
- 17:30 End
- 19:15 **Conference Dinner**, Bayerischer Hof, Schuhstraße 31, 91052 Erlangen
- 23:00 End

Freitag, 8. März 2024

Special Crystals

- 08:40 A. Turchanin, Tailored growth of transition metal dichalcogenides monolayers and their heterostructures
- 09:10 M. Dragomir, Single-crystal growth and the role of crystal symmetry on the superconducting properties of Nd-LSCO
- 09:40 K. Kliemt, Czochralski growth of Eu-based intermetallic compounds
- 10:00 A.-A. Haghighirad, Crystal Growth and Properties of van der Waals Quantum Materials
- 10:20 Coffee Break

Advanced Characterization

- 11:00 S. Sandfeld, Data Mining and Deep Learning of Defects in Crystals
- 11:30 D. J. Kok, Crystal orientation quantification in less than 10 seconds
- 11:50 N. Schüler, Introducing high resolution Surface Photovoltage Spectroscopy (HR-SPS) for investigation of material quality in SiC
- 12:10 I. Tsiapkinis, Physical and numerical modeling of the Floating-Zone Process
- 12:30 M. Kabukcuoglu, Evolution of dislocations and their behavior in GaAs wafers investigated by correlative X-ray diffraction imaging
- 12:50 Closing Ceremony
- 13:00 End of DKT2024

- 14:00 Optional - Lab Tours

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