

# DKT2024

53. Deutsche Kristallzuchttagung

6.-8. März 2024, Erlangen



# DKT2024

Unter der Schirmherrschaft der  
Deutschen Gesellschaft für Kristallwachstum und Kristall-  
züchtung e.V. (DGKK)



Organisiert durch



[https://www.iisb.fraunhofer.de/de/research\\_areas/materialien/dkt2024.html](https://www.iisb.fraunhofer.de/de/research_areas/materialien/dkt2024.html)

# Sponsoren

Die Organisatoren der DKT2024 bedanken sich für die Unterstützung durch unsere Sponsoren:



# Tagungsort

Die DKT2024 findet im Hörsaalgebäude (119.01), Erwin-Rommel-Straße 60, 91058 Erlangen auf dem Campus der Technischen Fakultät der Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU) statt.

Die junge DGKK trifft sich im Vorfeld der DKT2024 am Fraunhofer IISB, Schottkystrasse 10, 91058 Erlangen.

Der Lageplan des Campus der Technischen Fakultät und des Fraunhofer-Instituts: <https://karte.fau.de/#17/49.57182/11.02944>

## Anfahrt

### Öffentliche

- Bus 20 von Nürnberg Thon und Erlangen Arcaden bis Technische Fakultät (5 Fußminuten)
- Bus 30 von Nürnberg Thon und Erlangen Hbf/Hugenottenplatz bis Erlangen Süd (10 Fußminuten)
- Bus 287 von Erlangen Hbf/Hugenottenplatz bis Technische Fakultät (5 Fußminuten)
- Bus 280 von Erlangen Paul-Gossen-Straße bis Technische Fakultät (5 Fußminuten)
- Bus 295 von Tennenlohe und Erlangen Hbf bis Erlangen Süd (10 Fußminuten)

Weitere Hinweise über die Anreise per Bus entnehmen Sie bitte dem Busfahrplan der VGN (<http://www.vgn.de>).

### Mit dem Auto

Wenn Sie mit dem Auto kommen, nutzen Sie bitte die Parkplätze in der Cauerstraße.

## Hauptveranstaltungsorte

Hörsaal H8, Hörsaalgebäude (119.01), Erwin-Rommel-Straße 60, 91058 Erlangen

- Mittwoch, 6. März: Vorträge & Mitgliederversammlung der DGKK
- Donnerstag 7. März: Vorträge

Hörsaal H10, Hörsaalgebäude (119.01), Erwin-Rommel-Straße 60, 91058 Erlangen

- Freitag, 8. März: Vorträge

Hörsaal K1, Hörsaalgebäude (119.01), Erwin-Rommel-Straße 60, 91058 Erlangen

- Mittwoch, 6. März bis Freitag, 8. März: Poster Session & Industrieausstellung
- Mittwoch, 6. März bis Freitag, 8. März: Kaffeepausen

Mensa, Hörsaalgebäude (119.01), Erwin-Rommel-Straße 60, 91058 Erlangen

- Donnerstag, 7. März: Mittagessen

Bayerischer Hof, Schuhstraße 31, 91052 Erlangen (<https://www.bayerischer-hof-erlangen.de/>)

- Donnerstag, 7. März: Konferenzdinner

# Mittwoch, 6. März 2024

12:00 Registration Open, K1

12:45 Opening Ceremony, H8

## Session 1: Industrial Production of Compound Semiconductors, H8 (Chair: Peter Wellmann)

13:00 INVITED: Investigation of low-epd GaAs and InP

S. Eichler<sup>1</sup>, D. Souptel<sup>1</sup>, M. Rosch<sup>1</sup>, U. Kretzer<sup>1</sup>, G. Leibiger<sup>1</sup>, T. Wagner<sup>1</sup>, N. Gorn<sup>2</sup> and D. Berkov<sup>2</sup>

<sup>1</sup>Freiberger Compound Materials GmbH, Am Junger Löwe Schacht 5, D-09599 Freiberg

<sup>2</sup>General Numerics Research Lab e.V., An der Leite 3b, D-07749 Jena

13:30 INVITED: CdTe Single Crystals for Photon Counting – A Quantum Leap in CT Medical Imaging

M. Arzig, I. Levchuk, B. Nahlovskyy, J. Tonn, P. Heimann, J. Wrege, U. Rückl  
*Siemens Healthineers AG, Diagnostic Imaging, Computed Tomography, Siemensstr. 1, 91301 Forchheim, Germany*

14:00 INVITED: 30 Jahre Siliziumkarbid-Substrate

R. Eckstein

*SiCrystal GmbH, Thurn-und-Taxis-Straße 20, 90411, Nürnberg*

14:30 Coffee Break, K1

## Session 2: (Ultra) Wide Band Gap Semiconductors, H8

(Chair: Michael Heuken)

15:30 INVITED: Analysis of impurity and defect distributions during crystal growth of Si, SiC and Ga<sub>2</sub>O<sub>3</sub>

K. Kakimoto

*New Industry Creation Hatchery Center (NICHe), Tohoku University, 6-6-10, Aoba, Aramaki, Aobaku, Sendai, 980-8579, JAPAN*

16:00 Growth and preparation of UWBG crystals AlN and Ga<sub>2</sub>O<sub>3</sub> for next generation power electronic

T. Straubinger, C. Hartmann, Z. Galazka, A. Klump, M. Schulze, M. Bickermann, and T. Schröder

*Leibniz-Institut für Kristallzüchtung, Max-Born-Straße 2, 12489 Berlin*

16:20 Stress free PVT growth of bulk AlN crystals

G. Lukin, A. Lesnik, B. Epelbaum, C. Röder, R. Weingärtner, S. Besendörfer, E. Meißner, and J. Friedrich

*Fraunhofer IISB, Schottkystraße 10, 91058 Erlangen, Germany*

16:40 Inspection of dislocation content in aluminum nitride bulk crystals for quality control in crystal growth: X-ray transmission versus reflection topography  
R. Weingärtner<sup>1</sup>, A. Lesnik<sup>1</sup>, G. Lukin<sup>1</sup>, M. Weisser<sup>2</sup>, E. Meissner<sup>1</sup>, S. Besendörfer<sup>1</sup>, and J. Friedrich<sup>1</sup>

<sup>1</sup>Fraunhofer Institute IISB, Schottkystraße 10, Erlangen, 91058, Germany

<sup>2</sup>Institute for Crystallography and Structural Physics ICSP, Friedrich-Alexander-Universität Erlangen-Nürnberg, Staudtstrasse 3, Erlangen, 91058, Germany

17:00 Importance of materials database for modeling of PVT growth process at T > 2000°C

J. Ihle and P. Wellmann

Crystal Growth Lab, Materials Department 6, Univ. of Erlangen-Nürnberg, Germany

17:20 Systematic evaluation of contamination behavior originated from innovative spray coated tantalum carbide coating on graphite parts used in SiC epitaxy processes

K. Schuck-Buehner<sup>1</sup>, M. Lang<sup>1</sup>, M. Trempa<sup>1</sup>, C. Reimann<sup>1</sup>, J. Friedrich<sup>1</sup>,  
D. Muetzenich<sup>2</sup>, T. Kornmeyer<sup>2</sup>

<sup>1</sup>Fraunhofer IISB, Schottkystraße 10, 91058 Erlangen, Germany

<sup>2</sup>Nippon Kornmeyer Carbon Group GmbH, Im Nassen 3a, 53578 Windhagen, Germany

17:40 End

18:10 General Assembly of DGKK, H8

# Donnerstag, 7. März 2024

## Session 3: Epitaxy of Compound Semiconductors, H8

(Chair: Ludwig Stockmeier)

08:30 INVITED: MOCVD growth and characterization of 2D materials

O. Maßmeyer<sup>1</sup>, R. Günkel<sup>1</sup>, N. Langlotz<sup>1</sup>, J. Belz<sup>1</sup>, M. Bergmann<sup>1</sup>, B. Ojaghi<sup>1</sup>, A. Beyer<sup>1</sup>, P. Klement<sup>2</sup>, S. Chatterjee<sup>2</sup>, S. Krotkus<sup>3</sup>, M. Heuken<sup>3</sup> and K. Volz<sup>1</sup>

<sup>1</sup>Philipps-Universität Marburg, Department of Physics and Materials Science Center, Hans-Meerwein-Str. 6, 35032, Marburg, Germany

<sup>2</sup>Institute of Experimental Physics I and Center for Materials Research, Justus Liebig University Giessen, Heinrich-Buff-Ring 16, Giessen 35392, Germany

<sup>3</sup>AIXTRON SE Dornkaulstraße, 52134 Herzogenrath, Germany

09:00 Advancements in MOCVD technology for low-cost high-quality III-As/P-based Epitaxy

J. Holzwarth, I. Miccoli, A.R. Boyd, T. Korst and M. Heuken

AIXTRON SE, Dornkaulstraße. 2, 52134 Herzogenrath, Germany

09:20 Comparison between homoepitaxial growth of 4H-SiC on a-plane and 4° off-cut c-plane substrates

R. Karhu<sup>1</sup>, M. Pfeffer<sup>2</sup>, J. Schwarberg<sup>3</sup>, and B. Kallinger<sup>1</sup>

<sup>1</sup>Fraunhofer IISB, Schottkystraße 10, 91058 Erlangen

<sup>2</sup>AIXTRON SE, Schottkystraße 10, 91058 Erlangen

<sup>3</sup>Friedrich-Alexander-University of Erlangen-Nürnberg, Cauerstraße 6, 91058 Erlangen

09:40 Kinetic Monte Carlo simulations for study growth kinetics during epitaxial growth

W. Miller<sup>1</sup>, and J. Fuhrmann<sup>2</sup>

<sup>1</sup>Leibniz-Institut für Kristallzüchtung (IKZ), Max-Born-Str. 2, 12489 Berlin

<sup>2</sup>Weierstrass Institute for Applied Analysis and Stochastics, Mohrenstr. 39, 10117 Berlin

10:00 Coffee Break, K1

## Session 4: Solution Growth of Novel Crystals, H8

(Chair: Matthias Bickermann)

10:40 INVITED: KRE(WO<sub>4</sub>)<sub>2</sub> - Eine vielseitige Verbindung für optische Anwendungen

S. Schwung<sup>1</sup>, A. Groß<sup>1</sup>, C. Liebald<sup>1</sup>, D. Rytz<sup>1</sup>, V. Wesemann<sup>1</sup>, A. Baillard<sup>2</sup>, A. Braud<sup>2</sup>, P. Camy<sup>2</sup>, J.-L. Doualan<sup>2</sup>, M. Fromager<sup>2</sup> and P. Loiko<sup>2</sup>

<sup>1</sup>EOT GmbH, Struthstrasse 2, D-55743 Idar-Oberstein, Germany

<sup>2</sup>Centre de Recherche sur les Ions, les Matériaux et la Photonique (CIMAP), UMR 6252 CEA-CNRS-ENSICAEN, Université de Caen Normandie, 14050 Caen, France

11:10 Single-crystal growth from high-temperature solutions of the hole-doped Mott-insulator BaCoS<sub>2</sub>

H. Abushammala, A. Kreyssig, and A. Boehmer

Institute for Experimental Physics IV - Ruhr-Universität Bochum, 44801 Bochum

11:30 Interplay between 4*f* and 3*d* magnetism in LnCo<sub>2</sub>P<sub>2</sub> (Ln = La – Nd) single crystals

M. Peters,<sup>1</sup> F. Fiedler,<sup>1</sup> K. Kliemt,<sup>1</sup> G. Poelchen,<sup>2</sup> K. Kummer,<sup>2</sup> A. Ernst,<sup>3</sup> D. V. Vyalikh<sup>4</sup> and C. Krellner<sup>1</sup>

<sup>1</sup>Goethe University, 60438 Frankfurt, Germany, <sup>2</sup>ESRF, 38043 Grenoble, France

<sup>3</sup>Johannes Kepler University, 4040 Linz, Austria, <sup>4</sup>DIPC 20018 Donostia, Spain

11:50 Rouaite, Cu<sub>2</sub>(OH)<sub>3</sub>NO<sub>3</sub>: Growth, Deuteration, Magnetic Phase Diagrams, and Dimensionality of Magnetic Interactions

A.M. Chakkingal,<sup>1</sup> A.A. Kulbakov,<sup>1</sup> M. Avdeev,<sup>2,3</sup> E. Häußler,<sup>4</sup> R. Gumeniuk,<sup>5</sup> J.R. Stewart,<sup>6</sup> J.P. Tellam,<sup>6</sup> V. Pomjakushin,<sup>7</sup> S. Granovsky,<sup>1</sup> D.S. Inosov,<sup>1</sup> and D.C. Peets<sup>1</sup>

<sup>1</sup>IFMP, Technische Universität Dresden, Häckelstr. 3, 01187 Dresden

<sup>2</sup>Australian Nuclear Science and Technology Organisation, NSW 2234, Australia

<sup>3</sup>School of Chemistry, The University of Sydney, Sydney, NSW 2006, Australia

<sup>4</sup>Anorganische Chemie II, Technische Universität Dresden, 01069 Dresden, Germany

<sup>5</sup>Institut für Experimentelle Physik, TU Bergakademie Freiberg, 09596 Freiberg, Germany

<sup>6</sup>ISIS Neutron and Muon Source, Rutherford Appleton Laboratory, Didcot OX11 0QX, UK

<sup>7</sup>Laboratory for Neutron Scattering and Imaging, Paul Scherrer Institute, Switzerland

12:10 Lunch, Mensa

## **Session 5: Award Session, H8**

**(Chair: Andreas Erb)**

13:30 DGKK-Young-Scientist Award

14:00 Award Ceremony of the School Competition  
“Wer züchtet den schönsten Kristall?”

14:30 DGKK-Award

15:00 Coffee Break

## Session 6: Postersession, K1

- 15:00 Poster 1: Chemical vapor transport of BaZrS<sub>3</sub> crystals  
Y. Tömm<sup>1</sup>, G. Gurieva<sup>1</sup> and S. Schorr<sup>1,2</sup>  
<sup>1</sup>Helmholtz-Zentrum Berlin, Hahn-Meitner-Platz 1, 14109 Berlin  
<sup>2</sup>FU Berlin, Institute of Geological Sciences, Malteserstraße 74-100, 12249 Berlin
- 15:00 Poster 2: Investigation of defects affecting minority carrier lifetime in HPGe  
Pradeep Chandra Palleti<sup>1</sup>, Alexander Gybin<sup>1</sup>, Uta Juda<sup>1</sup>, Andreas Fiedler<sup>1</sup>, Nadine Schüler<sup>2</sup>, and R. Radhakrishnan Sumathi<sup>1</sup>  
<sup>1</sup>Leibniz-Institute for Crystal Growth (IKZ), Max-Born Str. 2, 12489 Berlin, Germany  
<sup>2</sup>Freiberg Instruments GmbH, Delfter Str. 6, 09599 Freiberg
- 15:00 Poster 3: Co-doping effects on anti-Stokes fluorescence cooling in Yb:YL  
Stefan Püschel, Christian Kränkel, Hiroki Tanaka, and Matthias Bickermann  
Leibniz-Institut für Kristallzüchtung, Max-Born-Straße 2, 12489 Berlin, Germany
- 15:00 Poster 4: Growth and investigation of hexagallate-substrate crystals for strain-engineered functional oxide layers  
C. Rhode<sup>1</sup>, J. Schreuer<sup>2</sup>, M. Münchhalphen<sup>2</sup>, D. Schlom<sup>3</sup>, Y. E. Li<sup>3</sup>, R. Koc<sup>1</sup>, R. Blukis<sup>1</sup>, M. Bickermann<sup>1</sup> and C. Guguschev<sup>1</sup>  
<sup>1</sup>Leibniz Institut für Kristallzüchtung, Max Born Straße 2, 12489 Berlin  
<sup>2</sup>Institut für Geologie, Mineralogie und Geophysik, Ruhr-Universität Bochum, Universitätsstraße 150, 44801 Bochum  
<sup>3</sup>Department of Materials Science and Engineering, Cornell University, Ithaca, New York 14853-1501, United States
- 15:00 Poster 5: Fabrication of Barium Zirconium Trisulfide (BZS) thin films via Stacked Elemental Layer (SEL) Methodology  
S. Jamshaid and P. Wellmann  
Crystal Growth Lab, Materials Department 6, Univ. of Erlangen-Nürnberg, Germany
- 15:00 Poster 6: Growth of B-doped germanium crystals as substrates for high mobility p-MOSFETs  
A. Subramanian<sup>1</sup>, M. Kabukcuoglu<sup>2</sup>, C. Richter<sup>1</sup>, U. Juda<sup>1</sup>, F. Bärwolf<sup>3</sup>, N.V. Abrosimov<sup>1</sup> and R. R. Sumathi<sup>1</sup>  
<sup>1</sup>Leibniz-institut für Kristallzüchtung (IKZ), Max-Born-Straße 2, 12489, Berlin  
<sup>2</sup>Institut für Photonenforschung und Synchrotron Strahlung (IPS), Hermann-von Helmholtz-Platz 1, 76344, Karlsruhe  
<sup>3</sup>Leibniz-Institut für innovative Mikroelektronik (IHP), Im Technologiepark 25, 15236 Frankfurt (Oder)
- 15:00 Poster 7: A modular, low-cost setup for teaching the multiphysics of crystal growth  
S. Foroushani and K. Dadzis  
Leibniz-Institut für Kristallzüchtung (IKZ), Max-Born-Str. 2, 12489 Berlin, Germany
- 15:00 Poster 8: Installation of a tiltable furnace for the crystal growth of inter-metallic compound under high gas pressure  
P. Bialas, K. Kliemt, and C. Krellner  
Goethe University Frankfurt, 60438 Frankfurt am Main, Germany



15:00 Poster 9: Frustrated triangular magnetism in new copper based single crystals

A. M. Chakkingal<sup>1</sup>, C. Fuller<sup>2</sup>, D. Chernyshov<sup>2</sup>, M. Avdeev<sup>3</sup>, M. C. Rahn<sup>1</sup>, Y. Wang<sup>4</sup>, F. Pabst<sup>4</sup>, T. Doert<sup>4</sup>, D. Peets<sup>1</sup>, and D. Inosov<sup>1</sup>

<sup>1</sup>IFMP, TU Dresden, Germany,

<sup>2</sup>ESRF, Grenoble, France

<sup>3</sup>ANSTO, Sydney, Australia

<sup>4</sup>Professur für Anorganische Chemie II, TU Dresden, Germany

15:00 Poster 10: In-situ detection of crystallization processes in Fe-Sn alloys

J. Kaiser, N. Herrmann, A. Jesche

Universität Augsburg, Institut für Physik - EP VI, Germany

## Session 7: Engineered SiC Substrates, H8

(Chair: Owen C. Ernst)

16:30 Study on epi performance of engineered SiC substrates in a multi-wafer batch reactor

P. Hens,<sup>1</sup> K.M. Albrecht,<sup>1</sup> B. Kallinger,<sup>2</sup> R. Karhu<sup>2</sup> and J. Erlekampf<sup>1</sup>

<sup>1</sup>AIXTRON SE, Schottkystraße 10, 91058 Erlangen, Germany

<sup>2</sup>Fraunhofer IISB, Schottkystraße 10, 91058 Erlangen, Germany

16:50 Silicon Carbide-on-Insulator and Diamond for Integrated Photonics and Quantum Applications

M. Hofmann, M. Scharin-Mehlmann, C. Gobert, J. Förthner, and P. Berwian

Fraunhofer IISB, Schottkystraße 10, 91058 Erlangen, Germany

17:10 Chemical Vapor Deposition of 3C-SiC on SOI substrates

J. Schultheiß, J. Steiner and P. Wellmann

Crystal Growth Lab, Materials Department 6, Univ. of Erlangen-Nürnberg, Germany

17:30 End

17:46, 18:06, 18:26, 18:46, 19:06

Bus 20 von Haltestelle Technische Fakultät nach Arcaden

19:15 **Conference Dinner, Bayerischer Hof, Schuhstraße 31, 91052 Erlangen**

(<https://www.bayerischer-hof-erlangen.de/>)

23:00 End

# Freitag, 8. März 2024

## Session 8: Crystals for Special Investigations and Applications, H10

(Chair: Sabine Wurmehl)

08:40 INVITED: Tailored growth of transition metal dichalcogenides monolayers and their heterostructures

A. Turchanin

*Friedrich Schiller University Jena, Institute of Physical Chemistry, Lessingstr. 10, 07747 Jena*

09:10 INVITED: Single-crystal growth and the role of crystal symmetry on the superconducting properties of Nd-LSCO

M. Dragomir<sup>1,2</sup> Q. Ma,<sup>2</sup> and B. D. Gaulin<sup>2</sup>

<sup>1</sup>*Jožef Stefan Institute, Jamova cesta 39, 1000 Ljubljana, Slovenia*

<sup>2</sup>*McMaster University, ON L8S 4M1 Hamilton, Canada*

09:40 Czochralski growth of Eu-based intermetallic compounds

K. Kliemt, A. Kraiker, R. Möller, M. Ocker and C. Krellner

*Institute of Physics, Goethe-University Frankfurt, 60438 Frankfurt, Germany*

10:00 Crystal Growth and Properties of van der Waals Quantum Materials

A.-A. Haghighirad

*Institute for Quantum Materials and Technologies, Karlsruhe Institute of Technology, 76021 Karlsruhe, Germany*

10:20 Coffee Break, K1

## Session 9: Advanced Characterization, H10

(Chair: Jochen Friedrich)

11:00 INVITED: Data Mining and Deep Learning of Defects in Crystals

S. Sandfeld

*Institute for Advanced Simulation, Forschungszentrum Jülich GmbH, Wilhelm-Johnen-Straße, 52428 Jülich, Germany*

11:30 Crystal orientation quantification in less than 10 seconds

L. Grieger, A. Zameshin, A. Pustovarenko, and D.J. Kok

*Malvernpanalytical B.V., Lelyweg 1, 7602 EA Almelo, the Netherlands*

11:50 Introducing high resolution Surface Photovoltage Spectroscopy (HR-SPS) for investigation of material quality in SiC

N. Schüller, V. Nikonova, T. Clausen and K. Dornich

*Freiberg Instruments GmbH, Delfter Straße 6, 09599 Freiberg*

12:10 Physical and numerical modeling of the Floating-Zone Process

I. Tsiapkinis, A. Wintzer, and K. Dadzis

*Leibniz-Institut für Kristallzüchtung (IKZ), Max-Born-Str. 2, 12489 Berlin, Germany*

12:30 Evolution of dislocations and their behavior in GaAs wafers investigated by correlative X-ray diffraction imaging

M. Kabukcuoglu<sup>1,2</sup>, E. Hamann<sup>1</sup>, S. Bode<sup>1</sup>, S. Haaga<sup>1</sup>, A. Danilewsky<sup>2</sup>, T. Baumbach<sup>1</sup> and D. Hänschke<sup>1</sup>

<sup>1</sup>*Karlsruhe Institute of Technology, Institute for Photon Science and Synchrotron Radiation, Hermann-von-Helmholtz Platz 1, 76344, Eggenstein-Leopoldshafen*

<sup>2</sup>*University of Freiburg, Crystallography, Hermann-Herder-Str. 5, 79104, Freiburg*

12:50 Closing Ceremony

13:00 End of DKT2024

14:00 Optional - Lab Tours

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

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

### Production of Compound Semiconductors

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- 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 Ga<sub>2</sub>O<sub>3</sub>
- 16:00 T. Straubinger, Growth and preparation of UWBG crystals AlN and Ga<sub>2</sub>O<sub>3</sub> 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(WO<sub>4</sub>)<sub>2</sub> - Eine vielseitige Verbindung für optische Anwendungen
- 11:10 H. Abushammala, Single-crystal growth from high-temperature solutions of the hole-doped Mott-insulator BaCoS<sub>2</sub>
- 11:30 C.Krellner, Interplay between 4f and 3d magnetism in LnCo<sub>2</sub>P<sub>2</sub> (Ln = La – Nd) single crystals
- 11:50 D.C. Peets, Rouaite, Cu<sub>2</sub>(OH)<sub>3</sub>NO<sub>3</sub>: 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

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- 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 Ende
- 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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