PRELIMARY PROGRAMME (30.1.2020)

WEDNESDAY, 11.03.2020

10:00 – 10:10 **OPENING** ANDREAS DANILEWSKY, ANDREAS ERB

SESSION 1 CHAIR PROF. DR. ANDREAS DANILEWSKY

10:10 – 11:50 **PROF. OLIVIER GUILLON,** FORSCHUNGSZENTRUM JÜLICH GMBH
(INVITED) *Crystalline materials for electrochemical energy storage*
10:50 – 11:10 **DR. DIRK KOK,** RADBOUD UNIVERSITEIT NIJMEGEN, NL
Thermochemical heat storage using alcohol solvates
11:10 – 11:30 **DR-ING. MATTHIAS GERRMANN,** ISABELLENHÜTTE, DILLENBURG
VGF-Growth of Half-Heusler-material for industrial production of thermoelectric-material
11:30 – 11:50 **TOM SCHNEIDER,** TU BERGAKADEMIE FREIBERG
3D interlayer growth in the high temperature vapor phase epitaxy of GaN
11:50 – 12:10 **DR. NIKOLAY ABROSIMOV**, LEIBNIZ-INSTITUT FÜR KRISTALLZÜCHTUNG, BERLIN
Growth of ^{28}Si crystals for the preparation of Si spheres

12:10 – 13:20 LUNCHBREAK

SESSION 2 CHAIR PROF. DR. PETER WELLMANN

13:20 – 14:00 **DR. MATTHIAS SCHRECK,** UNIVERSITÄT AUGSBURG
(INVITED) *Single crystal diamond wafers by heteroepitaxy: Synthesis and potential applications*
14:00 – 14:20 **DR. LUTZ KIRSTE,** FRAUNHOFER IAF, FREIBURG
X-Ray Diffraction analysis of the defect structure of diamond substrates and Thick Diamond Films
14:20 – 11:40 **DR. STEPHAN MÜLLER,** FRAUNHOFER IISB, ERLANGEN
PVT growth of large freestanding C-doped AlN crystals
14:40 – 15:00 **DR. THOMAS STRAUBINGER,** LEIBNIZ-INSTITUT FÜR KRISTALLZÜCHTUNG, BERLIN
Growth of bulk AlN crystals: Influence of the temperature field on growth rate, optical absorption and dislocation density

15:00 – 16:30 POSTERSESSION WITH DRINKS AND SNACK

SESSION 3 CHAIR PROF. DR. ANDREAS ERB

16:30 – 17:10 **PROF. DR. GÜNTHER EGGELER,** RUHR-UNIVERSITÄT BOCHUM
(INVITED) *On mosaicity and the formation of defects during Bridgman processing of Ni-base single crystal superalloys*

17:10 – 17:30 **TIMMY REIMANN,** INNOVENT E.V, JENA
Magneto-optical Bismuth substituted rare-earth iron garnet sensor films for characterization of electrical steel sheets

17:30 – 17:50 **DARREN PEETS *PhD*,** TECHNISCHE UNIVERSITÄT DRESDEN
Self-flux growth of single crystals of BaCoSO

17:50 – 18:10 **MARIUS PETERS,** GOETHE UNIVERSITÄT FRANKFURT AM MAIN
Crystal growth of the valence fluctuating system $EuPd_2Si_2$

18:30 – 20:30 MITGLIEDERVERSAMMLUNG (GENERAL ASSEMBLY)
WITH DRINKS AND SNACK

THURSDAY, 12.03.2020

SESSION 4 — CHAIR DR. WOLFRAM MILLER

08:30 – 09:10 (INVITED) **PROF. DR. JÖRG NEUGEBAUER,** MAX-PLANCK-INSTITUT FÜR EISENFORSCHUNG, DÜSSELDORF
Material Digital (tentative title)

09:10 – 09:30 **DR. NORA WOLFF,** HELMHOLTZ-ZENTRUM BERLIN FÜR MATERIALIEN UND ENERGIE
Growth of $CuFeO_2$ single crystals by the optical floating-zone technique

09:30 – 09:50 **DR. NATALIJA VAN WELL,** LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN
Investigation of orthorhombic and tetragonal phases of $Cs_2CuCl_{4-x}Br_x$ mixed system

09:50 – 10:10 **SEBASTIAN GRUNER,** FRAUNHOFER THM FREIBERG
Investigation of facet growth in heavily doped silicon single crystals grown in the mirror furnace

10:10 – 10:40 COFFEEBREAK

SESSION 5 — CHAIR PROF. DR. MATTHIAS BICKERMANN

10:40 – 11:00 **PROF. DR. MICHAEL HEUKEN,** AIXTRON, SE HERZOGENRATH
Control of AlInN composition in closed coupled showerhead MOCVD reactors

11:00 – 11:20 **DR. ANDREAS POPP,** LEIBNIZ-INSTITUT FÜR KRISTALLZÜCHTUNG IKZ, BERLIN
Growth of modulation-doped ß-Ga_2O_3 multilayers by MOVPE

11:20 – 11:40 **DR. CARSTEN DUBS,** INNOVENT E.V, JENA
Nanometer-thin iron garnet films grown by liquid phase epitaxy

11:40 – 12:00 **MANUEL KOLLMUß,** FRIEDRICH-ALEXANDER-UNIVERSITÄT ERLANGEN-NÜRNBERG
Status of 3C-SiC bulk growth using sublimation epitaxy

12:00 – 13:00 LUNCHBREAK

SESSION 6 — CHAIR PROF. DR. MICHAEL HEUKEN

13:00 – 13:40 (INVITED) **DR. ALEXANDER KILLI,** TRUMPF LASER GMBH, SCHRAMBERG
Die Bedeutung von Kristallen in der Lasertechnik (tentative title)

13:40 – 14:00 **PROF. DR. MATTHIAS BICKERMANN,** LEIBNIZ-INSTITUT FÜR KRISTALLZÜCHTUNG, BERLIN
Crystal growth of oxides and flourides at the IKZ

14:00 – 14:20 **ANASTASIA UVAROVA,** LEIBNIZ-INSTITUT FÜR KRISTALLZÜCHTUNG IKZ, BERLIN
Growth of high-melting sesquioxides for laser applications

14:20 – 14:50 COFFEEBREAK

COMMEMORATIVE EVENT 50 YEARS DGKK A. ERB, W. MILLER, A. DANILEWSKY

14:50 – 15:00 ***OPENING***

15:00 – 15:15 GRUßWORTE - WELCOMING SPEECHES

15:15 – 16:00 GESCHICHTE DER DGKK UND DER ARBEITSGRUPPE "KRISTALLZÜCHTUNG" IN DER VFK
PROF. DR. HELMUT KLAPPER, AACHEN
PROF. DR. PETER RUDOLPH, SCHÖNEFELD

16:00 – 16:20 PRIZES FOR SCHOLAR'S COMPETITION "WER ZÜCHTET DEN SCHÖNSTEN KRISTALL?"
16:20 – 16:25 POSTER PRIZE

16:25 - 16:50 **DR. ANTON JESCHE,** UNIVERITÄT AUGSBURG
Solution Growth as a powerful tool for the solid-state physicist

16:50 – 17:20 DGKK NACHWUCHSPREIS

17:20 – 17:50 DGKK PREIS

19:00 – 22:00 GALA DINNER AT THE MUNICH TOWNHALL (RATSKELLER, ALTE KÜFEREI)

FRIDAY, 13.03.2020

SESSION 7 CHAIR LEV KADINSKI

08:30 – 09:00 **PROF DR. KOICHI KAKIMOTO,** KYUSHU UNIVERSITY, JAPAN
(INVITED) *Collaboration of experiment and numerical analysis of crystal growth of semiconductors*

09:00 – 09:20 **DR. KASPARS DADZIS,** LEIBNIZ-INSTITUT FÜR KRISTALLZÜCHTUNG, BERLIN
Model experiments for crystal growth technique

09:20 – 09:40 **STANISLAUS SCHWANKE,** FRAUNHOFER IISB, ERLANGEN
Numerical modeling of metallic impurity incorporation during directional solidification of multi-crystalline silicon assisted by experimental proof

09:40 – 10:00 **OLIVER HARDER,** LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN
Forced convection by high-speed rotation in Czochralski growth from high temperature solutions

10:00 – 10:20 **DR. D.V. BERKOV,** GENERAL NUMERICS RESEARCH LAB. , JENA
Theoretical analysis, critique and validity limits of Haasen-Alexander-Model for predicting the dislocation density

10:20 – 11:00 COFFEEBREAK

SESSION 8 CHAIR DR. JOCHEN FRIEDRICH

11:00 – 11:30 **PROF. DR. STEFAN SCHÖNERT,** TU MÜNCHEN
(INVITED) *Single crystals for experiments in Astro particle physics*

11:30 – 11:50 **DR. RADHAKRISHNAN SUMATHI** LEIBNIZ-INSTITUT FÜR KRISTALLZÜCHTUNG, BERLIN
Towards 80 mm diameter ultra-high purity germanium single crystals by Czochralski growth

11:50 – 12:10 **KEVIN-PETER GRADWOHL,** LEIBNIZ-INSTITUT FÜR KRISTALLZÜCHTUNG, BERLIN
Formation of vacancy related defects in high-purity germanium

12:10 – 12:30 **ANGELINA KINAST,** TU MÜNCHEN
$CaWO_4$ crystal growth for the CRESST dark matter search

12:30 – 12:50 **DR. THOMAS JAUß,** ALBERT-LUDWIGS UNIVERSITÄT, FREIBURG
Investigation of particle incorporation in a transparent melt system under µg conditions

12:50 – 13:00 CLOSING REMARKS

POSTERS

1 **MATTHIAS ARZIG**, FRIEDRICH-ALEXANDER-UNIVERSITÄT ERLANGEN-NÜRNBERG
Influence of the surface morphology on the defect distribution in the faceted region of 4H-SiC single crystals

2 **MICHAEL SCHÖLER**, FRIEDRICH-ALEXANDER-UNIVERSITÄT ERLANGEN-NÜRNBERG
Limitations during Vapor Phase Growth of Bulk (100) 3C-SiC Using 3C-SiC-on-SiC Seeding Stacks

3 **MELISSA RODER,** ALBERT LUDWIGS UNIVERSITY FREIBURG
X-Ray Analysis of Defects in 4H-SiC

4 **JOHANNES STEINER,** FRIEDRICH-ALEXANDER-UNIVERSITÄT ERLANGEN-NÜRNBERG
Impact of Varying Parameters on the Temperature Gradients in 100 mm Silicon Carbide Bulk Growth in a Computer Simulation Validated by Experimental Results

5 **DR. KLAUS BÖTTCHER,** LEIBNIZ-INSTITUT FÜR KRISTALLZÜCHTUNG, BERLIN
Numerical Modelling of the Czochralski Growth of Neodymium-scandate single crystals

6 **FRANZISKA GRUßLER,** UNIVERSITY OF AUGSBURG
Synthesis and characterization of the triangular antiferromagnets $NaYbO_2$, $KYbO_2$ and $NaYbS_2$

7 **ELLA SUPIK** ALBERT LUDWIGS UNIVERSITY FREIBURG
The Influence of Sodium Dodecyl Sulfate on the Growth and Properties of Triglycine Sulfate Crystals

8 **ALEXANDER ENGELHARDT,** TECHNISCHE UNIVERSITÄT MÜNCHEN
Single-crystal growth and magnetic phase diagram of $TbFeO_3$

9 **FRANZISKA BREITNER**, UNIVERSITY OF AUGSBURG
Crystal Growth of Fe-doped Li_3N

10 **GLORIA KIRSTE,** LEIBNIZ-INSTITUT FÜR FESTKÖRPER- UND WERKSTOFFFORSCHUNG, DRESDEN
Microstructural evolution of intermetallics under the influence of magnetic field annealing – exemplified by Mn_3Ga

11 **PATRIZIA FRITSCH,** LEIBNIZ-INSTITUT FÜR FESTKÖRPER- UND WERKSTOFFFORSCHUNG, DRESDEN
ZF NMR as a tool to clarify crystallographic, magnetic, and electronic structure of magnetically ordered materials

12 **DR. KRISTIN KLIEMT,** GOETHE-UNIVERSITÄT FRANKFURT
$LnMn_2Ge_2$ (Ln = Nd, Sm, Dy): Single crystal growth and characterization

13 **DR. MATTHIAS SCHUSTER,** FRIEDRICH-ALEXANDER-UNIVERSITÄT ERLANGEN-NÜRNBERG
Directly analyzing the depth dependent properties of $Cu(In,Ga)(S,Se)_2$ wedges manufactured by exfoliation and a nontoxic, adjustable etching process

14 **JIAONA ZOU,** MATERIALS RESEARCH CENTER FMF, FREIBURG
Crystal growth of (Cd,Zn)Te under microgfravity Vampir-F: Characterization of ground experiments

15 **ANDREAS-GABRIEL SCHNEIDER,** UNIVERSITY OF AUGSBURG
In-situ detection of crystallization processes and seed selection in high temperature solutions

16 **DR. WOLFRAM MILLER,** LEIBNIZ-INSTITUT FÜR KRISTALLZÜCHTUNG, BERLIN
A KMC model for homoepitaxial growth of Ga_2O_3

17 **JAN PHILLIP WÖHRLE**, ALBERT-LUDWIGS-UNIVERSITY FREIBURG
Investigation of soluto-capillary convection in Ge_xSi_{1-x} melts

18 **IRYNA BUCHOVSKA,** LEIBNIZ-INSTITUT FÜR KRISTALLZÜCHTUNG, BERLIN
Parameter study on n-type multicrystalline ingots with tailored resistivity profiles

19 **DR. FRANK M. KIESSLING**, LEIBNIZ-INSTITUT FÜR KRISTALLZÜCHTUNG, BERLIN
Investigation of directionally solidified quasi-mono silicon for future gravitational- wave detector test-mass mirrors

20 **STEFAN PÜSCHEL,** LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN
Single crystal growth of Sn- and Ge-substituted $GaPd_2$ for basic research in catalysis

21 **DR. HANS-JOACHIM ROST**, LEIBNIZ-INSTITUT FÜR KRISTALLZÜCHTUNG, BERLIN
Thermally stimulated dislocation generation in silicon crystals grown by the Floating Zone method