9:00-10:00 **Plenary Session II** — Aula

Chair: Wolfram Miller (Leibniz-Institut für Kristallzüchtung, Germany)

Crystal Research & Development by IKZ : Status & Perspective
Thomas Schröder (Leibniz-Institut für Kristallzüchtung, Germany)

10:15-14:00 **Session S7 - Growth of Nanocrystals** — Room 106

Chairs: Zbigniew R. Żytkiewicz, Lutz Geelhaar, Marta Sobańska

10:15-10:45 INVITED TALK
Crystal Growth and Nucleation of Semiconductor Nanostructures Explored by in-situ Investigations
Kimberly Dick Thelander (Lund University, Sweden)

10:45-11:00
Sc-containing axial and radial group-III nitride nanowire heterostructures
Lutz Geelhaar (Paul-Drude-Institut für Festkörperelektronik, Germany)

11:00-11:15
Growth a- and m-plane non-polar AlN pseudo-substrates by Molecular Beam Epitaxy
Amalia Fernando Saavedra (Technical University of Madrid, Spain)

Coffee Break

11:45-12:15 INVITED TALK
The Nanowire (R)evolution viewed at atomic scale: from VLS vertical systems to planar quantum networks
Sara Martí-Sánchez (Institut Català de Nanociència i Nanotecnologia, Spain)

12:15-12:30
A comprehensive study of In incorporation into $In_xGa_{1-x}N$ nanoshells grown around pencil-like GaN nanowires
Jovana Obradovic (Polytechnic University of Madrid, Spain)

12:30-12:45
Geometrical selection of GaN nanowires grown by PAMBE on polycrystalline ZrN substrates
Karol Olszewski (Institute of Physics PAS, Poland)

12:45-13:00
Electrical properties of GaN nanowires grown on ZrN buffer layers
Stanislav Tiagulskyi (Czech Academy of Sciences, Czech Republic)

13:00-13:15
Chemical bath deposition of semiconductor nanocrystals
Ondrej Cernohorský (Czech Academy of Sciences, Czech Republic)

13:15-13:30
Synthesis and characterization of ZnO/FeGa hybrid nanowires for nano magneto-electromechanical systems (NMEMS)
Wiktoria Zajkowska-Pietrzak (Institute of Physics PAS, Poland)

13:30-13:45
Selective area liquid phase epitaxy of InP on silicon as template for Zn_3P_2 growth
Riccardo Brondolin (EPFL, Switzerland)

13:45-14:00
One-pot biosynthesis of nanostructured materials as a benign and improved electrode material for high-performance asymmetric supercapacitors
Ilangovan Rajangam (University of Madras, India)

10:15-14:00 **Session S10 - Characterization and Defects in Crystalline Materials** — Room 105

Chairs: Ana Cros Stoestter, Katharina Lorenz

10:15-10:45 INVITED TALK
Nucleation layer studies of MOVPE-grown cubic GaN
Martin Frentrup (University of Cambridge, UK)

10:45-11:15 INVITED TALK
Micro-photoluminescence characterization of optical microcavities in doped β-Ga_2O_3 nanowires for temperature sensors
Emilio Nogales (Universidad Complutense de Madrid, Spain)

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Coffee Break

11:45-12:15 INVITED TALK
Large negative magnetoresistance in topological insulator candidate $CeCuAs_2$ with spin-glass-like behavior
Gang Wang (Chinese Academy of Sciences, China)

12:15-12:30
Photoluminescence Carbon Center in the Ultraviolet Range Allows to Distinguish Hexagonal and Rhombohedral Boron Nitride
Krzysztof Korona (University of Warsaw, Poland)

12:30-12:45
Automatic detection and characterization of etch pits in KOH etch images of 4H-SiC single crystals using deep learning
Georg Holub (Montanuniversität Leoben, Austria)

12:45-13:00
Mapping or residual thermally induced stress in SiC wafers and as gown SiC boules using Laue diffraction
Julian Zöcklein (Friedrich-Alexander-Universität Erlangen, Germany)

13:00-13:15
The defect structure of single-crystalline turbine blades studied by combined methods of X-ray diffraction topography and positron annihilation lifetime spectroscopy
Jacek Krawczyk (University of Silesia in Katowice, Poland)

13:15-13:30
Suggested scenario explaining the decrease in emergent dislocation density in W-doped diamond
Dov Nusimovici (SIMaP/DIAMFAB, France)

13:30-13:45
Laser Floating-zone growth of single-crystal $YTiO_3$
Yong Liu (École Polytechnique Fédérale de Lausanne, Switzerland)

13:45-14:00
Crystal orientation quantification in less than 10 seconds
Dirk Kok (Malvern Panalytical, UK)

10:15-13:45 **Session S11 - Bulk Crystal Growth** — Room 107

Chairs: Dorota Pawlak, Piotr Piotrowski

10:15-10:45 INVITED TALK
Single crystals and heterostructures for fast-timing scintillators
Oleg Sidletskiy (Ensemble^3, Poland)

10:45-11:00
High-quality single crystals grown by optical floating zone for experiments at large scale research facilities
Antonio Vecchione (CNR-SPIN, Italy)

11:00-11:15
Smart growth, from combined crystal growth methods to artificial intelligence management: control of the chemical composition and improvement of single crystal performance
Philippe R. Veber (West University Timisoara, Romania)

Coffee Break

11:45-12:00
Bulk Crystal growth of β-Ga_2O_3 from Cold Crucible
Akira Yoshikawa (Tohoku University, Japan)

12:00-12:15
Single crystal growth of the potential skyrmion host, $GdRu_2Si_2$, by the optical floating zone technique
Daniel A. Mayoh (University of Warwick, UK)

12:15-12:30
Czochralski growth and characterization of perovskite-type $(Nd,Sr)(Al,Ta)O_3$ single crystals
Christo Guguschev (Leibniz-Institut für Kristallzüchtung, Germany)