

German MBE Workshop 2021

October 14-15, 2021

GEORG-AUGUST Universität Göttingen (virtual workshop)

Thursday 14.10.2021

8:50-09:00	<i>Opening - Welcome</i>	
	<i>Session 1</i>	<i>Single Photon sources and QDs</i>
09:00 - 09:45 invited	Richard Warburton Universität Basel	A quantum dot in an open microcavity as a fast and bright source of coherent single photons
9:45 - 10:00	Piotr A. Wroński Univ. Würzburg	Metamorphic buffer layer based single-photon sources for application in quantum telecommunications
10:00 - 10:15	Christian Heyn CHyN Univ. Hamburg	Local droplet etching for self-assembled quantum structures: influence of the process parameters
10:15 - 10:45	<i>Coffee break & meet in break out rooms</i>	
	<i>Session 2</i>	<i>Heterostructures for optical devices</i>
10:45 - 11:00	Andreas Bader Univ. Würzburg	Growth of Interband Cascade Detectors for Light Detection in the Mid Infrared Spectral Band
11:00 - 11:15	Alexander Dohms Fraunhofer heinrich Herz Institut, Berlin	MBE-grown InP-based strain-free Semiconductor Saturable Absorber Mirror (SESAM) for ultrashort laser pulse generation at 1.56 μm
11:15 - 11:30	Maximilian Beiser Inst. Solid State Electronics, TU Wien	A novel method for strain balancing InAs based ICL growth
11:30 - 12:30	<i>Lunch break</i>	
12:30 - 14:30	<i>Poster Session & Exhibitors break out rooms</i>	
	<i>Session 3</i>	<i>2D Materials and Oxides</i>
14:30 - 15:15 invited	Debdeep Jena Cornell University	Ultra-high temperature epitaxy of 2D Boron Nitride and Graphene
15:15 - 15:30	Eugenio Zallo WSI TU München	Large-area van der Waals Epitaxy of Monochalcogenide Based Materials
15:30 - 15:45	Hannah Genath Leibniz Univ. Hannover	Epitaxy of Gd ₂ O ₃ layers on virtual SiGe substrates on Si(111)
15:45 - 16:00	Alex Karg Univ. Bremen	Tin-catalyzed molecular beam epitaxy of Ga ₂ O ₃
16:00 - 16:15	Wolfgang Braun MPI Solid State Research, Stuttgart	Thermal Laser Epitaxy of Metals and Oxides
16:15 - 16:30	<i>Coffee break & meet in break out rooms</i>	

	<i>Session 4</i>	<i>Topological materials</i>
16:30 - 17:15 invited	Amilcar Bedoya-Pinto Max-Planck Institute of Microstructure Physics	(Canceled) Topological semimetals and two-dimensional magnets grown by MBE: Crafting exotic physics into functional heterostructures
16:30 - 16:45	Rebecca Pons MPI Solid State Research, Stuttgart	Growth of Rare-Earth Nickelates by Oxide MBE
<i>Friday 15.10.2021</i>		
	<i>Session 5</i>	<i>in-plane nanowires and networks</i>
9:00 - 9:45 invited	Anna Fontcuberta i Morral École Polytechnique Fédérale de Lausanne (EPFL)	Selective area epitaxy of nanowires and networks: common mechanisms and differences between GaAs, Zn3P2 and Ge
9:45 - 10:00	Daria V. Beznasyuk Univ. Copenhagen	Twofold electron mobility enhancement via growth optimization of InAs selective area grown nanowires
10:00 - 10:15	Didem Dede EPFL, Lausanne	Horizontal InAs Nanowire Growth on Templates
10:15 - 10:30	Gunjan P. Nagda Univ. Copenhagen	Selective Area Growth of III-V Nanowires on High-Index GaAs Substrates
10:30 - 11:00	<i>Coffee break & meet in break out rooms</i>	
	<i>Session 6</i>	<i>Nanowires</i>
11:00 - 11:15	Akhil Ajay WSI, TU München	Highly uniform selective area epitaxy of non-VLS GaAsSb:Si nanowires
11:15 - 11:30	Gregor Koblmüller WSI, TU München	Epitaxial type-I and type-II InAs-AlAsSb core-shell nanowires for on-chip mid-infrared emitters
	<i>Session 7</i>	<i>III-N Heterostructures</i>
11:30 - 11:45	Jagadish Mahato TU Braunschweig	Optical and structural properties of GaN/AlGaIn Multi-Quantum Wells using Plasma Assisted MBE
11:45 - 12:00	S. Schmult TU Dresden	Suppression of parasitic Conductivity in ultra-pure GaN/AlGaIn Heterostructures by Carbon delta-Doping
12:00 - 12:10	Announcement & Closing	

Poster Session

1	Ahmed Alshaikh Univ. Hamburg	Masked droplet etching for site-controlled quantum structures: concepts and simulations
2	Miriam Giparakis TU Wien	Growth, Design, and Characterisation of an InAs/AlAsSb-based QCD at 2.7 μm
3	Ahsan Hayat BTU Cottbus-Senftenberg	Ge-capped and uncapped Ge _{1-y} Sn _y /Si (001) quantum dots grown by Molecular Beam Epitaxy (MBE)
4	Constantin Hilbrunner Univ. Göttingen	Nucleation of hBN on HOPG in conventional MBE
5	Shyjumon Ibrahimkutty Rigaku Europ SE	Compound Semiconductor Material Evaluation by High Resolution X-ray Diffraction
6	Stefania Isceri TU Wien	Epitaxy of YbRh ₂ Si ₂ on Ge(001)
7	Marvin Marco Jansen Forschungszentrum Jülich	Investigation and Characterization of ZnSe/ZnMgSe Multi-Shell Growth on Phase-Pure GaAs Nanowires
8	Vinayakrishna Joshi Univ. Kassel	Epitaxial growth of InP-based 1.3 μm quantum dots
9	Anagha Kamath Humboldt Univ. Berlin	Catalyst free selective area growth of InP nanowires on Si nanotips
10	Ranbir Kaur Univ. Kassel	Telecom wavelength InP-based quantum dots: Growth and characterization
11	Falco Meier Univ. Paderborn	Selective area growth of cubic gallium nitride on 3C-silicon carbide (001)
12	Kevin Meyer Clausthal University	Growth of GaN films for different UV photodetector concepts by MBE
13	Jenny Norberg Leibniz Univ. Hannover	Investigation of the temperature stability of germanium-rich SiGe layers on Si(111) substrates
14	Christoph Ringkamp Forschungszentrum Jülich	Selective Area Epitaxy of Bi-based 3D Topological Insulators on Sapphire
15	Begum Yavas-Aydin Univ. Würzburg	InGaAs Based Resonant Tunnelling Diodes Barrier and Spacer Layer Structure by Grown Gas Sources Molecular Beam Epitaxy
16	Eugenio Zallo WSI TU München	Epitaxial growth capabilities for 2D layered materials and their heterostructures