

Session Program

13-17 Sept 2021

**EUROPEAN CONGRESS AND EXHIBITION ON
ADVANCED MATERIALS AND PROCESSES -
EUROMAT 2021**

***A3_Nanowires and nanotubes: From growth
phenomena to devices***

Virtual

Wednesday 15 September

17:30

A3_Nanowires and nanotubes: From growth phenomena to devices: A3_1_Nanowire Synthesis I

Session | **Location:** Room 3

17:30-17:50

Growth of Biaxial Nanowire Heterostructures by Two-Phase Seed Particles

Speaker

Dr Michael Seifner

17:50-18:10

Formation mechanism and band offsets in III-V heterostructure nanowires grown by selective area epitaxy

Speaker

Bruno Grandier

18:10-18:30

Exploration of growth paremeters in nanowire FCCVD synthesis

Speaker

Mr Richard Schaeufele

18:30-18:50

High-throughput spectroscopy for optimizing internal quantum efficiency in Aerotaxy-grown Zn-Doped GaAs Nanowires

Speaker

Ms Ruqaiya Al-Abri

18:50

Thursday 16 September

09:50

A3_Nanowires and nanotubes: From growth phenomena to devices: A3_2_Nanowire Heterostructures

Session | Location: Room 3

09:50–10:10

Al(x)Ga(1-x)As /Al(y)Ga(1-y)As axial short-period superlattices in self-catalyzed nanowires (Highlight)

Speaker

Donovan Hilliard

10:10–10:30

Combined aberration-corrected STEM and synchrotron nano-diffraction for crystal phase engineering in GaAs nanowires

Speaker

Thomas Dursap

10:30–10:50

The role of growth temperature on the composition and electronic properties of InAs/InGaAs nanowires.

Speaker

Dr Daria Beznasyuk

10:50–11:10

InAs/InP/GaAsSb core-dual-shell nanowires: growth, strain relaxation and carrier separation

Speaker

Mr Omer Arif

11:10–11:30

Structural and chemical mechanisms governing stability of inorganic Janus nanotubes

Speaker

Mr Felix Tim Bülle

11:30

11:50

A3_Nanowires and nanotubes: From growth phenomena to devices: A3_3_Physical Properties of Nanowires: Emission

Session | Location: Room 3

11:50–12:10

Picosecond mid-infrared emission from InAs nanowire lasers

Speaker

Dr Hisashi Sumikura

12:10–12:30

Systematic investigation of InP/InAs nanowires on different platforms toward room-temperature CW lasing

Speaker

Dr Masato Takiguchi

12:30–12:50

Novel InP Heterojunction Nanowire LEDs using Transparent Conducting Oxides**Speaker**

Ms Nikita Gagrani

12:50–13:10

Studying the Photoluminescence of Doped InP Nanowires**Speaker**

Mr Lukas Hrachowina

13:10–13:30

Light-emitting InSb nanowires grown by MOVPE directly on flexible plastic substrates**Speaker**

Mr Vladislav Khayrudinov

13:30

14:40

**A3_Nanowires and nanotubes: From growth phenomena to devices:
A3_4_Single Nanowire Devices****Session** | **Location:** Room 3

14:40–15:00

Gate-control of the thermoelectric figure of merit in nanowire electric double layer transistors**Speaker**

Francesco Rossella

15:00–15:20

Morphology control and electrical characterization of free-standing InSb nanostructures**Speaker**

Dr Isha Verma

15:20–15:40

Impact of electrostatic doping on charge mobility and concentration in InAs nanowires.**Speaker**

Domenic Prete

15:40–16:00

High electron mobility in strained GaAs nanowires**Speaker**

Dr Emmanouil Dimakis

16:00–16:20

Raman Spectroscopy of gallium phosphide nanowires under 5% elastic strain**Speaker**

Mr Vladislav Sharov

16:20

16:40

**A3_Nanowires and nanotubes: From growth phenomena to devices:
A3_5_Physical Properties of Nanowires: Emission and Electronic****Session** | **Location:** Room 3

16:40–17:20

Hexagonal SiGe: A Possible Silicon Photonics Telecom Emitter? (Keynote)

Speaker

Mr Marvin Arnoud Jozef van Tilburg

17:20–17:40

Nanosecond radiative lifetime from Hexagonal Ge.**Speaker**

Victor van Lange

17:40–18:00

Gate-Tunable Negative Differential Resistance in Next-Generation Ge Nanodevices and their Performance Metrics**Speaker**

Dr Masiar Sistani

18:00–18:20

Atomic structure of NiSi₂-Si interfaces and the relationship to the Schottky barrier height**Speaker**

Mr Florian Fuchs

18:20

Friday 17 September

09:50

A3_Nanowires and nanotubes: From growth phenomena to devices: A3_6_Nanowire Quantum devices and Top Down strategies

Session | **Location:** Room 3

09:50–10:10 Hybrid double-nanowire quantum devices

Speaker

Dr Juan Carlos Estrada Saldana

10:10–10:30 Top-down Fabricated Ge-based Reconfigurable FETs

Speaker

Mr Raphael Böckle

10:30–10:50

Fabrication and Electrical Characterization of Top-Gated Silicon Nanowire Reconfigurable Field Effect Transistors

Speaker

Mr Sayantan Ghosh

10:50–11:10

Development of a robust fabrication process for single silicon nanowire-based omega gate transistors on polyamide substrate

Speaker

Tabassom Arjmand

11:10–11:30

Localised site-selective synthesis of nanowires for improved gas sensors

Speaker

Prof. Albert Romano-Rodriguez

11:30

11:50

A3_Nanowires and nanotubes: From growth phenomena to devices: A3_7_Nanowire-based Batteries and Sensors

Session | **Location:** Room 3

11:50–12:10

Towards nanoscale sensing devices: Gas sensing capability of single nanowires revealed by correlative in situ electron and light microscopy

Speaker

Lilian Vogl

12:10–12:30

Copper Silicide Current Collectors as Key Component Materials for Next-generation High-Capacity Lithium-ion Batteries

Speaker

Dr Ibrahim Saana Aminu

12:30–12:50

Activation of SixGe_{1-x} alloy NWs in Na-ion batteries

Speaker

Mr Syed Abdul Ahad

12:50–13:10

Combined soft transfer and contact printing of nanowires for single-nanowire device fabrication**Speaker**

Ms Parastoo Salimitari

13:10

14:40

A3_Nanowires and nanotubes: From growth phenomena to devices: A3_8_Nanowire Synthesis II**Session** | **Location:** Room 3

14:40–15:20

3D Nanoprinting of Functional Nanowires via Focused Electron Beams (Keynote)**Speaker**

Prof. Harald Plank

15:20–15:40

Rapid Solvent-Free Synthesis of Silicon Nanowires via Glassware-based Chemical Vapour Deposition**Speaker**

Mr Dylan Storan

15:40–16:00

Three-Dimensional Lithography on Silicon Nanowire Arrays**Speaker**

Gilles Bourret

16:00–16:20

Influence of Energy and Oxygen Content on the Shape of Zinc Oxide Nanowires Synthesized with an Atmospheric Pressure Plasma Jet**Speaker**

Dr Alexander M. Schwan

16:20

16:40

A3_Nanowires and nanotubes: From growth phenomena to devices: A3_9_Nanowires of Complex Composition**Session** | **Location:** Room 3

16:40–17:00

Growth of Vertically Aligned CsPbBr₃ Nanowire Arrays with Template-induced Crystal Phase Transition and Stability**Speaker**

Ms Zhaojun Zhang

17:00–17:20

Carrier dynamics and recombination mechanisms from high-throughput study of strained CsPbBr₃ perovskite nanowires**Speaker**

Dr Stephen Church

17:20–17:40

Switching characteristics of [Fe(abpt)₂(CNS)₂] spin crossover nanowires investigated by Raman spectroscopy

Speaker

Zoi G. Lada

17:40–18:00

Polarization dependent photoconductivity in self-assembled organic semiconductor needle networks on hexagonal boron nitride

Speaker

Dr Markus Kratzer

18:00–18:20

Silicon nanowire and carbon nanotube hybrid for room temperature multiwavelength light source

Speaker

Dr Maria Jose' Lo Faro

18:20