

Program for EMN Meeting on Nanowires 2016**May 16-19, 2016****Sunday May 15**

14:00-18:00 PM

Onsite Registration & Sign up

Monday May 16 Room A

8:40-8:50 AM

Opening Ceremony

Session: Thermoelectric Nanowires I Chair: Maria Eugenia Toimil Molares

8:50-9:15 AM

A01: Assessment of the thermoelectric properties of semiconductor nanowires

Iaria Zardo, University of Basel, Switzerland

9:15-9:40 AM

A02: Thermal transport in nanowires; scattering processes and anisotropy

Woochul Kim, Yonsei University, Korea

9:40-10:05 AM

A03: Thermal conductivity measurement of organic and inorganic nanowires for thermoelectric applications

Stéphane Grauby, University of Bordeaux, France

10:05-10:25 AM

Session Break

Session: Nanowires Growth and Characterization Chair: Iaria Zardo

10:25-10:50 AM

A04: Three-dimensional nanowire networks for energy applications: synthesis and characterization

Maria Eugenia Toimil Molares, GSI Helmholtz Center for Heavy Ion Research, Germany

10:50-11:15 AM

A05: Application of a synchrotron nanoprobe to group III nitride based nanowires

Damien Salomon, European Synchrotron Radiation Facility, France

11:15-11:40 AM

A06: Catalyst-free MBE growth of GaN nanowires

Zbigniew R. Zytewicz, Institute of Physics, Polish Academy of Sciences, Poland

11:40-12:05 PM

A07: Atomic-scale Characterization of Nanowire Surfaces and Devices

Rainer Timm, Lund University, Sweden

12:05-12:30 PM

A08: X-ray diffraction from nanowires: studies of crystal structure and strain distribution

Julian Stangl, Johannes Kepler University, Austria

12:30-13:05 PM

Lunch Break

Monday May 16 Room A Afternoon

Session: Nanowires Sensors I Chair: Rosaria A. Puglisi

13:05-13:30 PM	A09: Spectroscopy of Andreev bound states in InAs nanowire Josephson junctions	Attila Geresdi , Delft University of Technology, The Netherlands
13:30-13:55 PM	A10: GaN Lateral Nanowires Formation and Device Applications	Dipankar Saha , Indian Institute of Technology Bombay, Mumbai, India
13:55-14:20 PM	A11: Spin splitting enhancement in (Zn,Mn)Te diluted magnetic nanowires	Piotr Wojnar , Institute of Physics, Polish Academy of Sciences, Poland
14:20-14:45 PM	A12: Label-free detection of PSA using highly reproducible silicon nanowire arrays	Dipti Rani , University of Applied Sciences Kaiserslautern, Germany
14:45-15:10 PM	A13: Nanowire transistors with polymer electrolyte gates	Adam Micolich , University of New South Wales, Australia
15:10-15:25 PM	Session Break	
Session: Nanowire and nano 3D Solar Cell Chair: Attila Geresdi		
15:25-15:50 PM	A14: Photonic properties of nanowires for high efficiency single and dual junction solar cells	Esther Alarcon-Llado , FOM Institute. AMOLF, The Netherlands
15:50-16:15 PM	A15: Molecular doping applied to silicon nanowires array based solar cells	Rosaria A. Puglisi , CNR-IMM, Italy
16:15-16:40 PM	A16: Single and tandem radial junction silicon thin film solar cells	Pere ROCA i CABARROCAS , Ecole Polytechnique, France
16:40 – 17:05 PM	A17: Thin film nanorod solar cell	Yinghuan Kuang , Eindhoven University of Technology, The Netherlands
17:05 – 17:30 PM	A18: High performance GaAs nanowire Schottky Solar cells	Ning Han , Institute of Process Engineering, CAS, China
17:30 – 17:55 PM	A19: Si nanowires and their transistor properties	Douglas Paul , University of Glasgow, UK
18:00 PM	Dinner Social	

Tuesday May 17 Room A

Keynote Speech Chair: Pierre-Adrien Mante

8:10-8:45 AM	A20: Self-catalytic InP/GaInAs/InP core-multishell nanowire grown by MOVPE	Kazuhiko Shimomura , Sophia University, Japan
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Session: Nanonets Properties and Applications Chair: Pierre-Adrien Mante

8:50-9:15 AM	A21: In-depth study of percolating behavior of silicon nanonets	Cécile TERNON , University of Grenoble Alpes, France
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9:15-9:40 AM	A22: The Physics of Electronic Transport in 1D-Nanostructures: From One to a Disordered Array of Many	David McIlroy , University of Idaho, USA
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9:40-10:05 AM	A23: Fabrication of Si nanonet field effect transistor by microelectronic processes	Maxime Legallais , University of Grenoble Alpes, France
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10:05-10:25 AM	Session Break	
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Session: Nanowires Growth and Characterization II Chair: David McIlroy

10:25-10:50 AM	A24: Phonons in Semiconductor Nanowires	Pierre-Adrien Mante , Lund University, Sweden
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10:50-11:15 AM	A25: Insight on the fine structure of Nanowires down to single atom detection: correlation to their growth and morphological properties	Jordi Arbiol , Institut Catala de Nanociencia i Nanotecnologia, ICN2, Spain
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11:15-11:40 AM	A26: Local visualization of electronic states in InAs nanowires	Haim Beidenkopf , Weizmann Institute of Science, Isreal
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11:40-12:05 PM	A27: Template-free Electrochemical Growth of Nanowire and Applications	Jae Yong Song , Korea Research Institute of Standards and Science, Korea
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12:05-13:20 PM	Lunch Break	
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Tuesday May 17 Room A Afternoon

Session: Nanowires Growth and Characterization III Chair: Elisabetta Maria Fiordaliso

13:20-13:45 PM	A28: Watching nanowires grow using in situ TEM	Daniel Jacobsson , Lund University, Sweden
13:45-14:10 PM	A29: MOCVD self-assembly and characterization of chalcogenide nanowires for phase change memory applications	Massimo Longo , IMM, CNR, Italy
14:10-14:35 PM	A30: Raman scattering investigation of semiconductor nanowires	Heesuk Rho , Chonbuk National University, Korea
14:35-15:00 PM	A31: Application of Nanowires and Nanocoatings for Wear Reduction	Dae-Eun Kim , Yonsei University Seoul, Korea
	Session Break & Poster Session	
15:00-15:25 PM	P01: Development of n-GaN:Si NWs having ultrahigh density via a 3-step growth method using intermediate step by MOCVD	Dae Young Um , Chonbuk National University, Republic of Korea
	P02: Coaxial InGaN/GaN MQDs on m-plane & r-plane of n-GaN NW for blue emission devices	Ji-Hyeon Park , Chonbuk National University, South Korea
	P03: Probing the Electromechanical Properties of Template Assisted poly[(vinylidene fluoride-co-trifluoroethylene) (PVDF-TrFE) Nanowires	Yonatan Calahorra , Cambridge University, UK
Session: Nanowires Growth and Characterization IV Chair: Daniel Jacobsson		
15:25-15:50 PM	A32: Mapping electrostatic potentials across the p-n junction in GaAs nanowires by off-axis electron holography	Elisabetta Maria Fiordaliso , Technical University of Denmark, Denmark
15:50-16:15 PM	A33: In-situ biasing of semiconducting NWs in transmission electron microscopy	Martien DEN-HERTOG , Institut NÉEL – CNRS, France
16:15-16:40 PM	A34: Growth of Epitaxial Nanowires using Substrate Symmetry as well as by Symmetry Breaking	Bhupendra N. Dev , Indian Association for the Cultivation of Science, India
16:40-17:05 PM	A35: Cathodoluminescence and X-ray diffraction studies of strain distribution in GaN/Al _x Ga _{1-x} N nanowires	Anna Reszka , Institute of Physics, Polish Academy of Sciences, Poland
17:05-17:30 PM	A36: Dimensional heterostructures using nanowire template	Alexander Kelrich , Technion- Israel Institute of Technology, Israel
17:30-17:55 PM	A37: Growth, Structure and Properties of Magnetically - Doped III-V Nanowires	Pavle V. Radovanovic , University of Waterloo, Canada
17:55-18:20 PM	A38: Ternary III-V nanowires and heterostructures	Vladimir Dubrovskii , Ioffe Institute, Russia
18:20 PM	Dinner Social	

Tuesday May 17 Room B

Session: Photonic Nanowires I Chair: George T. Wang

8:50-9:15 AM	B01: Lasing without inversion in photonic nanowires	Vladimir G. Bordo , University of Southern Denmark, Denmark
9:15-9:40 AM	B02: Nitride nanowires : from rigid to flexible optoelectronic devices	Maria Tchernycheva , University of Paris-Sud, France
9:40-10:05 AM	B03: AlGaAs/GaAs NWs based single photon emitters	George Cirlin , Ioffe Physicotechnical Institute, Russian Academy of Sciences, Russia
10:05-10:25 AM	Session Break	
Session: Photonic Nanowires II Chair: Vladimir G. Bordo		
10:25-10:50 AM	B04: III-nitride nanowires for nanophotonics	George T. Wang , Sandia National Laboratories, USA
10:50-11:15 AM	B05: UV Photosensing Characteristics of Nanowire Based GaN/AlN Superlattices	Jonas Lähnemann , Institut Nanosciences et Cryogenie (INAC), France
11:15-11:40 AM	B06: Optics of a single quantum dot inside a single nanowire	Vladimir Kochereshko , IOFFE, Russian Academy of Sciences, Russia
11:40-12:05 PM	B07: Phonon Dynamics in InAs Nanowires	Anushree Roy , Indian Institute of Technology Kharagpur, India
12:05-12:30 PM	B08: Engineer thermal transport via the combination of phonon resonant and scattering effects: application for high performance thermoelectrics	Shiyun Xiong , Max-Planck Institute for Polymer Research, Germany
12:30-13:20 PM	Lunch Break	

Tuesday May 17 Room B Afternoon

Session: Photonic Nanowires III Chair: Laetitia Vincent

13:20-13:45 PM	B09: Organic-plasmonic nanofiber hybrids	Jacek Fiutowski , University of Southern Denmark, Denmark
13:45-14:10 PM	B10: Surface passivation of GaAs nanowires	Prokhor Alekseev , Ioffe Institute, Russia
14:10-14:35 PM	B11: Color control of nanowire InGaN/GaN light emitting diodes by post-growth treatment	Francois H. Julien , Institut d'Electronique Fondamentale, CNRS, France
14:35-15:00 PM	B12: Cathodoluminescence studies of nanowire-based structures for infrared to ultraviolet emitters	Anders Gustafsson , Lund University, Sweden
15:00-15:25 PM	Session Break	
Session: Silicon Nanowires I Chair: Jacek Fiutowski		
15:25-15:50 PM	B13: Phase transformation in Si and Ge nanowires for thermoelectric applications	Laetitia Vincent , University of Paris-Sud, France
15:50-16:15 PM	B14: Fabrication and characterization of silica nanowires-gold nanoparticles composites	Francesco Ruffino , University of Catania, Italy
16:15-16:40 PM	B15: Managing Thermal Transport in Nanowires	Riccardo Rurali , ICMAB, Spain
16:40-17:05 PM	B16: Silicon Nanowires: Monolithic Integration with the Microscale	B. Erdem Alaca , Koc University, Turkey
17:05-17:30 PM	B17: Bending deformation of silicon nanowires: A molecular dynamics simulation	Xiao Ru Zhuo , Inha University, Korea
17:30-17:55 PM	B18: Silicon nanowires for microsupercapacitor application	Pascal Gentile , CEA Grenoble, France
17:55-18:20 PM	B19: Si Nanowire Field-effect Transistors: From pH sensing to protein detection	Ralph Stoop , University of Basel, Switzerland
18:00 PM	Dinner Social	

Wednesday May 18 Room A

Session: Nanowires Growth and Characterization V Chair: Bruno Grandidier

8:00-8:25 AM	A39: Resonance Raman studies of the Electronic and Vibrational properties of 2 Atom Diameter Semiconductor Nanowires	David C Smith , University of Southampton, UK
8:25-8:50 AM	A40: Crystallographic Polarity Effects in Gallium Nitride Nanowire Growth	Matthew D. Brubaker , National Institute of Standards and Technology, USA
8:50-9:15 AM	A41: Axially doped Si/SiGe nanowires for TunFET applications: synthesis and characterization	Franck Bassani , LTM, CNRS, France
9:15-9:40 AM	A42: Charge trapping in semiconductor nanowires	Arkady Yartsev , Lund University, Sweden
9:40-10:05 AM	A43: Growth of core (GaAs) / shell (functional oxide) nanowires	José Penuelas , Lyon Institute of Nanotechnology, France
10:05-10:20 AM	Session Break	
Session: Nanowires Growth and Characterization VI Chair: Matthew D. Brubaker		
10:20-10:45 AM	A44: Controlling Nanowire Size and Shape by Pre-Growth Catalyst Engineering	Yonatan Calahorra , Cambridge University, UK
10:45-11:10 AM	A45: Determination of the band offset in semiconductor nanowire heterostructures	Bruno Grandidier , IEMN, CNRS, France
11:10-11:35 AM	A46: Catalyst-free growth of III-V nanowires and related heterostructures	Heidi Potts , EPFL, Switzerland
11:35-12:00 PM	A47: Ion-induced carbon nanofibers: Their applications and transformation to graphene	Masaki Tanemura , Nagoya Institute of Technology, Japan
12:00-12:25 PM	A48: Tensile Strained Germanium Nanowires Measured by Photocurrent Spectroscopy and X-ray Microdiffraction	Nicolas Pauc , CEA Grenoble, INAC, France
12:25-13:00 PM	Lunch Break	

Wednesday May 18 Room A Afternoon

Session: General Chair: Agnieszka Pieniżek

13:00-13:25 PM	A49: Nonlinear wave-mixing in lithium niobate nanowaveguides	Anton Sergejev , ETH Zurich, Switzerland
13:25-13:50 PM	A50: The richness of hybrid superconducting devices based on nanowires	Jesper Nygard , University of Copenhagen, Denmark
13:50-14:15 PM	A51: Quantum Spin Hall Effect in topological crystalline insulator thin films	Marta Galicka , Institute of Physics, PAS, Poland
14:15-14:40 PM	A52: Effect of Hydrostatic Pressure on the Band Structure of Wurtzite InP Nanowires	Nicolas Chauvin , Lyon Institute of Nanotechnology - CNRS, France
14:40-15:05 PM	A53: Defect ferromagnetism in SnO ₂ :Zn ²⁺ hierarchical nanostructures: correlation between structural, electronic and magnetic properties	Sadaf Akbar , University of Groningen, The Netherlands
15:05-15:15 PM	Session Break	
Session: Zinc Oxide Nanowires Chair: Anton Sergejev		
15:15-15:40 PM	A54: Cathodoluminescence studies of the axial heterostructure grown on ZnO microrod	Agnieszka Pieniżek , Institute of Physics, PAS, Poland
15:40-16:05 PM	A55: ZnO nanowires: Growth and field emission application	Edgar Mosquera Vargas , University of Chile, Chile
16:05-16:30 PM	A56: Photon induced oxygen “breathing” in ZnO Nanowires	Ilan Shalish , Ben-Gurion University, Israel
16:30-16:55 PM	A57: Comprehensive study of ZnO nanowires grown by hydrothermal synthesis	Thomas Demes-Cause , University of Grenoble Alpes, France
16:55-17:20PM	A58: Non-catalytic growth of ultralong ZnO nanowires and nanoarchitecture	Karuna Kar Nanda , MRC Indian Institute of Science, India
18:00 PM	Dinner Social	

Wednesday May 18 Room B

Session: Nanowires Sensors II Chair: Sandra Gibson

8:00-8:25 AM	B20: Portable silicon nanowire system with multi-parametric sensing capability	Sven Ingebrandt , University of Applied Sciences, Germany
8:25-8:50 AM	B21: Silicon nanowire-based Field Effect Transistors	Louis de Smet , Delft University of Technology, The Netherlands
8:50-9:15 AM	B22: Silver nanowires as a geometric platform for biosensing	Joanna Niedziółka-Jönsson , Institute of Physical Chemistry, PAS, Poland
9:15-9:40 AM	B23: Large-scale production of aligned long nanofibers on carbon fiber substrates and their application in the detection of biomolecules	Chi Yang , Nantong University, China
9:40-10:05 AM	B24: Integration of silicon nanowire field-effect transistors into a modified inverting amplifier configuration	Achim Müller , University of Applied Sciences Kaiserslautern, Germany
10:05-10:20 AM	Session Break	
Session: Photonic Nanowires IV Chair: Sven Ingebrandt		
10:20-10:45 AM	B25: InP Nanowire Devices for Applications in Quantum Information	Sandra Gibson , University of Waterloo, Canada
10:45-11:10 AM	B26: Radiation structure of photonic wire lasers	Ekaterina Orlova , Institute for Physics of Microstructures, RAS, Russia
11:10-11:35 AM	B27: Semiconductor Nanowire antennas: Directional emitters and absorbers of polarized light	Jaime Gomez Rivas , Dutch Institute for Fundamental Energy Research, The Netherlands
11:35-12:00 PM	B28: The Nonlinear Optics of Self-assembled Micro-/Nano- Wires	Jialiang Xu , Radboud University Nijmegen, The Netherlands
12:00-12:25 PM	B29: Quantum Optics with Nanowires	Val Zwiller , Delft University of Technology, The Netherlands
12:25-13:00 PM	Lunch Break	

Wednesday May 18 Room B Afternoon

Session: Thermoelectric Nanowires II Chair: Ming Hu

13:20-13:45 PM	B30: Enhanced phonon-drag thermopower in ballistic semiconducting single-wall carbon nanotubes near a subband edge	Margarita Tsaousidou , University of Patras, Greece
13:45-14:10 PM	B31: A T _{type} method for characterization of the thermoelectric performance of an individual nanowire	Weigang Ma , Tsinghua University, China
14:10-14:35 PM	B32: Latest results in thermoelectric nanowires fabricated by electrochemical deposition	Olga Caballero , Inst. Microelectrónica de Madrid (CSIC), Spain
14:35-15:00 PM	B33: Thermoelectric Nanowires and Surface States in Topological Insulators	Tito E. Huber , Howard University, USA
15:00-15:15 PM	Session Break	
Session: Silicon Nanowires II Chair: Olga Caballero		
15:15-15:40 PM	B34: Si-SiC core-shell nanowires: ab initio modelling of electronic properties	Michele Amato , Université Paris-Sud, France
15:40-16:05 PM	B35: Silicon Nanowires for lensing and photochemical propulsion	Borja Sepulveda , CIN2, Spain
16:05-16:30 PM	B36: Ex-situ doping of Silicon Nanowires and Interfaces by Monolayer Contact Doping	Roie Yerushalmi , The Hebrew University of Jerusalem, Israel
16:30-16:55 PM	B37: Ab initio analysis of hyperfine structure in chalcogen-doped silicon and germanium nanowires: a route towards a spin based quantum computer	Alberto Debernardi , Laboratorio Nazionale MDM, CNR-IMM, Italy
16:55-17:20PM	B38: Engineering Phonon Transport in Silicon Nanowires for Advanced Energy Conversion	Ming Hu , RWTH Aachen University, Germany
17:20-17:45PM	B39: Silicon nanowire and tubes for Electrochemical Energy Storage	Maria Alfredsson , University of Kent, UK
17:45-18:10PM	B40: Nanowire transistors with polymer electrolyte gates	Damon Carrad , University of New South Wales, Australia
18:10 PM	Dinner Social	

Thursday May 19

One day academic exchange & excursion