Graphene Week 2025 - Schedule

Monday 22 September 2025

13:00-13:35 **Opening session** , *Auditorium*
Aymard De Touzalin, Belgium, European Commission, Head of Unit DG Connect;

13:35-14:45 **Plenary Session 1** , *Auditorium*
Chair: Aldo Di Carlo, Italy, CNR
Francois Peeters, Belgium, University of Antwerp; Andrea Ferrari, UK, University of Cambridge;

13:35-14:15 Mass transport through and between graphene membranes
Francois Peeters, Belgium, University of Antwerp;

14:15-14:45 Graphene And Layered Materials For Photonics and Quantum Technology
Andrea Ferrari, UK, University of Cambridge;

14:45-15:45 **Open Forum: Future Challenges to 2DM Integrations**, *Auditorium*
Chair: Elmar Bonaccurso, Germany, Airbus
Maria Abrahamsson, Sweden, Graphene Flagship Director, Chalmers University of Technology; Vincenzo Palermo, Italy, ISOF-CNR; Evgeniya Kovalska, UK, University of Exeter; Apostolos Tsolakis, Greece, Q-PLAN International;

15:45-16:15 **Coffee Break** , *Exhibition Hall*

16:15-17:00 **European Commission Session: Future Funding Opportunities** , *Auditorium*
Chair: Camilla Coletti, Italy, Istituto Italiano di Tecnologia (IIT)
Elmar Bonaccurso, Germany, Airbus; Alberto Bianco, France, CNRS, Institut de Biologie Moléculaire et Cellulaire; Francesco Bonaccorso, Italy, BeDimensional;

17:00-18:00 **Parallel Session 2DM of Tomorrow** , *Auditorium*

17:00-17:15 Operando Interferometric Scattering Microscopy for nanoscale ion transport dynamics in MXenes for high-performance energy storage
Mohsen Beladi;

17:15-17:30 Stray magnetic field imaging of thin exfoliated iron halide flakes
Rongrong Qi;

17:30-17:45 Autonomous Synthesis of 2D Materials through AI-Driven Optimization
Annalisa Coriolano;

17:45-18:00 Toward the industrial production of novel 2D Materials
Cosimo Anichini;

17:00-18:00 **Parallel Session Electronics, Photonics, Optoelectronics** , *Room B*

17:00-17:15 Investigate the origin of contact resistance in operational devices by using Raman spectroscopy on graphene-metal interface: the upside down approach with a transparent substrate
Alessandro Kovtun;

17:15-17:30 Intrinsic Bernal gap in large-angle-twisted monolayer-bilayer graphene grown by CVD
Alex Boschi;

17:30-17:45 Multiscale electro-optical investigation of monolayer MoS2 heterojunctions with GaN
Filippo Giannazzo;

17:45-18:00 Graphene and hBN multilayer laser transfer for the fabrication of Photodetectors and Modulators
Katerina Magoula;

19:00-21:00 **Welcome Reception at Teatro Olimpico and Bar Borsa**, *Social Programme*

Tuesday 23 September 2025

09:00-10:40 **Plenary Session 2** , *Auditorium*
Chair: Camilla Coletti, Italy, Istituto Italiano di Tecnologia (IIT)

09:00-09:40 Graphene and 2D TMD-Based Electronics: from Conventional Devices to Bio-integrated Sensors
Jong-Hyun Ahn, South Korea, Yonsei University;

09:40-10:10 Lead halide 2D perovskites: 2D materials for photovoltaics and polaritonics
Emmanuelle Deleporte, France, ENS Paris-Saclay University;

10:10-10:40 Wafer-scale 2D semiconductors and dielectrics: from band engineering to applications
Amalia Patanè, UK, University of Nottingham;

10:40-10:45 **Standardisation** , *Auditorium*
Chair: Jörg Radnik, Germany, undesanstalt für Materialforschung und -prüfung (BAM)

10:45-11:15 **Exhibition & Coffee** , *Exhibition Hall*

11:15-13:15 **Graphene Flagship's work on 2D materials**, *Auditorium*

11:15-11:20 Welcome
Maria Abrahamsson, Sweden, Graphene Flagship Director, Chalmers University of Technology;

11:20-11:35 European Commission's talk: key messages about the Graphene Flagship

11:35-11:50 Hightlights of the Graphene Flagship Projects
Maria Abrahamsson, Sweden, Graphene Flagship Director, Chalmers University of Technology;

11:50-12:00 Future activities and plans. Biomedicine: MUNASET & 2D-BioPAD
Alexey Tarasov; Aristeidis Bakandritsos, Czech Republic, CATRIN, Palacky University Olomouc;

12:00-12:05 Future activities and plans. Composites: GIANCE
Ali Rezaei, The Netherlands, TNO;

12:05-12:10 Future activities and plans. Safe by Design: SAFARI
Diana Marcano, Poland, Łukasiewicz - Poznański Instytut Technologiczny;

12:10-12:20 Future plan and activities. Energy: ARMS & GRAPHERGIA
Hamed Pourkheirollah, Finland, Tampere University;

12:20-12:30 Q&A (1/2)

12:30-12:45 Future plans and activities. 2D materials of tomorrow: 2DSPIN-TECH, 2D-ENGINE, 2D-PRINTABLE
Ivan Vera Marun, UK, The University of Manchester; Athanasios Dimoulas, Greece, NCSR DEMOKRITOS; Anika Kiecana, The Netherlands, Uniresearch;

12:45-13:05 Future plans and activities. Electronics and Photonics: GATEPOST, 2DNeuralVision, Next-2DIGITS, 2D-Pilot Line
Mindaugas Lukosius, Innovations for High Performance Microelectronics (IHP); Ivana Cavaliere, Spain, ICFO; Ioanna Zergioti, Greece, National Technical University of Athens; Inge Asselberghs, Belgium, imec;

13:05-13:15 Q&A (2/2)

11:15-12:15 **IOPP Workshop "The Impact of Artificial Intelligence on Scholarly Publishing"**, *Room B*
Chair: Siddharth Jethwa, UK, IOP Publishing

13:15-14:15 **Lunch** , *Exhibition Hall*

14:15-15:15 **Innovation Forum Opening** , *Auditorium*
Chair: Sofia Öiseth, Sweden, Chalmers Industriteknik
Kari Hjelt, Sweden, Chalmers Industriteknik; Jeffrey Hunt, USA, The Boeing Company;

14:15-14:20 Opening Session
Sofia Öiseth, Sweden, Chalmers Industriteknik;

14:20-14:45 The Market landscape for 2D material innovations
Kari Hjelt, Sweden, Chalmers Industriteknik;

14:45-15:15 Graphene applications in aerospace platforms: Why would a seemingly academic curiosity be of interest to an industry that manufactures massive mobile airborne structures?
Jeffrey Hunt, USA, The Boeing Company;

14:15-15:15 **Diversity in Graphene** , *Room C*
Chair: Maria Abrahamsson, Sweden, Graphene Flagship Director, Chalmers University of Technology
Colette Schrodi, France, ESF; Mariya E. Ivanova, Bulgaria, Trakia University;

15:15-16:15 **Innovation Forum: Start-up companies** , *Auditorium*
Simone Ligi, Italy, Graphene-XT; António Vilanova, Portugal, HyCarb; Anna Carlsson, Sweden, Bright Day Graphene;

15:15-15:20 Opening
Sofia Öiseth, Sweden, Chalmers Industriteknik;

15:20-15:35 Graphene-based products: a Journey through failure and success
Simone Ligi, Italy, Graphene-XT;

15:35-15:55 HyCarb (António Vilanova)

15:55-16:15 Sustainable Graphene for Batteries and Fuel Cells: A Bio-Based Approach
Anna Carlsson, Sweden, Bright Day Graphene;

15:15-16:15 **Parallel Session Sensors** , *Room B*

15:15-15:30 2D-3D reduced graphene oxide-metal hexacyanoferrate electrodes for the analysis of different ions in body fluids
Maedeh Malekzadeh;

15:30-15:45 Quantum Transport in Ink-Jet Printed Graphene Networks
Oleg Makarovsky;

15:45-16:00 Engineering chemical vapor-deposited graphene interfaces for ultrasensitive, label-free glucose sensing
Mafalda Abrantes; *Vicente Lopes*

16:00-16:15 Field-effect transistor for biosensing applications using a graphene channel with amine-rich coatings
Trung Pham;

15:15-16:15 **Parallel Session 2DM of Tomorrow** , *Room C*

15:15-15:30 Amorphous graphene-based materials: a multiscale analysys
Andrea Liscio;

15:30-15:45 Giant photorefractive effect and all-optical control in a van der Waals semiconductor
Anton Minnekhanov;

15:45-16:00 High-throughput computational exploration of two-dimensional materials engineering through strain and stacking
Davide Campi;

16:00-16:15 Towards PtSe2 Intrinsic Properties for High-Frequency (Opto)electronics
Eva Desgué;

16:15-16:45 **Coffee Break** , *Exhibition Hall*

16:45-18:15 **Innovation Forum: Commericalisation of graphene applications** , *Auditorium*
Chair: Kari Hjelt, Sweden, Chalmers Industriteknik
Elmar Bonaccurso, Germany, Airbus; Alberto Goldoni, Italy, Medica; Rainer Adelung, Germany, Kiel University;

16:45-16:50 Commericalisation of graphene applications
Kari Hjelt, Sweden, Chalmers Industriteknik;

16:50-17:05 GICE and after (Elmar Bonaccurso)
Elmar Bonaccurso, Germany, Airbus;

17:05-17:25 Emerging contaminants: the hidden cost of progress (Alberto Goldoni)
Alberto Goldoni, Italy, Medica;

17:25-17:45 AeroGraft and Beyond: From Graphene Filters to New Energy-Efficient Pneumatics
Rainer Adelung, Germany, Kiel University;

17:45-18:15 TBC - Rainer Adelung

16:45-17:30 **Parallel Session Safe and Sustainable by Design** , *Room B*

16:45-17:00 Design of Experiment and Chemometric Approach for Bringing Order to the Synthesis of Graphene Oxide with the Tour's Method
Francesco Pellegrino;

17:00-17:15 Safety Assessment within MAX and MXene Synthesis: a Case Study
João Laranjeira, Portugal, ISQ;

17:15-17:30 Standardized Chemical Composition Analysis of Graphene Oxide Flakes with SEM/EDS and XPS Works Reliably
Vasile-Dan Hodoroaba;

16:45-18:00 **Parallel Session Energy** , *Room C*

16:45-17:00 General strategies for the development of graphene oxide-based composite membranes for water remediation
Maria Del Carmen Rial Tubio;

17:00-17:15 Engineering Graphene via Doping: Tuning Its Properties for Molecular Gas Interactions
Daniele Perilli;

17:15-17:30 Hole Transfer Dynamics in Thin Films of Mixed-Dimensional Quasi-2D Perovskites
Daniele Catone;

17:30-17:45 Computational prediction of nanoporous carbon supercapacitor performance: a perspective on state-of-the-art methodology
Maryam Amini; *Fabrizio Silveri*

17:45-18:00 Laser-Induced Graphene: A Scalable 3D Material Enhancing Proton Exchange membrane Water Electrolysers for Efficient Green Hydrogen Production
Maria Pervolaraki;

17:30-18:00 **Parallel Session 2DM of Tomorrow** , *Room B*

17:30-17:45 Band engineering of WS2 by sumanene columns
Mina Maruyama;

17:45-18:00 Phonon and Charge Transport in Intercalated van der Waals Crystals for Quantum and Nanoelectronic Applications
Maciej Wiesner;

18:30-20:00 **Poster Session A** , *Exhibition Hall*

1 A graphene star-mesh quantized Hall array resistance standard for the calibration of resistances at the GΩ level
Marta Musso;

2 A twist for tunable electronic and thermal transport properties of nanodevices
Karolina Milowska;

3 Advanced characterization of 2D material devices using scanning nitrogen vacancy microscopy
Abbas Mohtashami;

4 High-Performance Graphene Oxide–Ionic COF Hybrid Membranes for Environmental Remediation
Niaz Ali Khan;

5 Advanced Sustainable Materials Based on Carbon Nanomaterials: From Functional Coatings to Green Electronics
Agnieszka Lekawa-Raus;

6 Tailoring Wettability and Conductivity in Laser-Induced Graphene
Zahra Khajehsaeidi;

7 ALD-Optimized Al_2O_3 Gate Dielectrics on 2D MoS_2: Enabling Next-Gen ISFETs
Ananya Tiwari;

8 Beyond Room Temperature Ferromagnetic Order in Low Dimensional van der Waal Crystals for use within Magnetic Tunnel Junctions
Harvey Stanfield;

9 Catalyst free green vertically aligned graphene for clean energy applications
Muhammad Hamza;

11 Chemical Analysis of Commercial Functionalized Graphene along the Production Process
Loay Madbouly;

12 Chemical Surface Modification of MoS2 for 2D-Material Based Raindrop Triboelectric Nanogenerators (RD-TENGs)
Sina Dörr;

13 Colloidal few layered graphene–tannic acid preserves the biocompatibility of periodontal ligament cells
Teissir Ben Ammar;

14 Cycling effects on the structural and electronic properties of ionic liquid filled curved graphene electrodes
Paolo Moras;

15 Detection of MMP-9 protease activity on graphene field-effect transistors utilizing custom peptides
Felix Hempel;

16 Direct growth of h-BN thick film on Si substrate by ALD using BCl3
Takeshi Fujii;

17 DRAM Memory Devices Utilizing Two-Dimensional Semiconductors
Mingyu Kim;

18 Effect of γ-Irradiation on Printed and Membrane Hexagonal Boron Nitride Films
Jingjing (Mansun) Wang;

19 Engineering MoS_2: Sulfur Vacancy Patterning for Tunable Properties
Vasiliki Benekou;

20 Enhancement of the Thermomechanical Behaviour for Functionally Graded Nano Ceramic Composites Using Different Graphene Additions
Ali Nasser;

21 Evaluation of Contact Architectures for Large-Area CVD Graphene integration in CMOS-Compatible Photonic Platforms
Daniele Capista;

22 Exploring the use of Laser-Induced Graphene to streamline the fabrication of microelectrode arrays for biosensors
Rita Almeida;

23 Fabrication of Graphene/PtSe2 heterostructures
Michaela Sojkova;

24 GIANCE for innovation in graphene-based SHM sensors for advanced applications
Cristina Martinez Oliver;

25 Graphene Derivatives for Industrial Transformation: Scalable, Sustainable Applications in Construction, Textiles, Paints, Tires, Polymers, and Energy Storage
Jitender Kumar;

26 Graphene-Based Nanosystem for Targeted Delivery of Anti-sense miRNA-21: In Vitro and In Vivo Evaluation on Hepatocellular Car-cinoma Cells and tissue
Paola Trischitta;

27 Graphene-oxide-semiconductor devices for biomimetic photogating detectors
Shadi Nashashibi;

28 Graphene-related Supercapacitors Materials: Electrical Measurements and Challenges
Alessandro Cultrera;

29 Graphene–β-carotene hybrid phototransistors
Carlos Rodolfo Bomfim Lopes Souza;

30 High-quality vacuum-assisted semi-dry transfer of large area 2D CVD materials and vdW heterostructures
Boris Minkovich;

31 In-situ laser reduction of graphene oxide on textiles: from lab-scale optimization to roll-to-roll manufacturing
Natalia Kantouni;

32 Inert Liquid Phase Exfoliation of TaS2
Muhammad Ahmad;

33 Inkjet-Printed Multifunctional Graphene Sensors: towards flexible and wearable healthcare devices
Charles Heaton;

34 Insights on the electrical behaviour of back-gated monolayer MoS2 transistors by mapping strain uniformity of the channel
Salvatore Ethan Panasci;

35 Integration of graphene in an automated sensing platform
Melanie Meincke;

36 Investigation of directly grown graphene via PECVD on annealed and non-annealed SiO2 films of difference thickness
Muhammad Adnan Saeed;

37 Investigation of Ohmic Contacts on Wafer-Level and Few-Layer MoTe2 Synthesized via CVD
Jinn-Kong Sheu;

38 Is Graphene on the Cusp of Commercial Success?
Conor O'brien;

39 Laser assisted synthesis of NbSe2 thin films
Robert Andrei Sorodoc;

40 Laser-Enabled Upscaling of Binder-Free Graphene Electrodes for High-Performance Energy Storage: From Supercapacitors to Lithium Ion Batteries
Dorela Hoxha;

41 Laser-scribing of biodegradable poly(lactic acid)/graphene oxide composites for sustainable electrochemical sensors
Alessandra Scidà;

42 Layered high-k dielectric and antiferromagnets for electronic
Zdenek Sofer, Czech Republic, University of Chemistry and Technology Prague;

43 Low Sheet Resistance Corrugated Graphene Structures for Neural Interfaces
Maria Camarena Perez;

44 Manufacturing graphene based porous electrode to improve the performance of aluminum battery
Ruiqi Chen;

45 Metal replacement with two-dimensional materials for sustainable polymer composites
Emanuele Treossi;

46 MXene-confined organic nanowires for high-performance lithium-ion storage
Ievgen Obraztsov;

47 Near-field optical nanopatterning of graphene
Mika Pettersson;

48 Next-Generation Water Treatment: Graphene-Based Technologies for PFAS Mitigation
Adriana Augurio;

49 Non-destructive Visual Testing (VT) and Thin Film Metrology of Graphene and 2D-Materials by Imaging Spectroscopic Ellipsometry (ISE)
Peter Heinrich Thiesen;

50 On-liquid Surface Synthesis of Crystalline 2D Polyimines Thin Films
Alina Müller;

51 Optimising graphene and manganese (II, III) oxide hybrid anodes for lithium-ion batteries
Lucy Mcelhone;

52 Plasma-Tailored Graphite for Advanced Aluminium-Ion Batteries
Neelakandan Marath Santhosh;

53 Preparation and study of PtTe2/WTe2 heterostructures
Lenka Pribusová Slušná;

54 Probing Magnetic Interactions via 7-AGNRs Intercalated with Monolayer $CrCl_3$
Dominik Lüthi;

55 Quantitative Analysis of the Photoluminescence Modulation and Doping of Monolayer WS2 by Heterostructuring with Non-van der Waals 2D Bi2O2Se Quantum Dots
Abhilasha Bora;

56 Radial Rashba spin-orbit fields in commensurate twisted transition-metal dichalcogenide bilayers
Thomas Naimer;

57 Raman Spectroscopy Studies on 1L MoS2/1–5LWSe2 Heterostructures
Chenda Vong;

58 Screening LCA of 11 GIANCE Use Cases – Preliminary results
Ana Claudia Salles;

59 Self-limited synthesis of monolayer transition metal dichalcogenides
Jung Inn Sohn;

60 Solution-Gated Graphene Transistors as Molecular Communication Receivers
Ali Abdali;

61 Sorting electrochemically exfoliated WSe2 flakes by ultracentrifugation in 4-step density gradient
Petr Kupka;

62 Spectroscopy of near-magic-angle twisted bilayer graphene by chemical vapor deposition
Gianluigi Baiardi;

63 Strain-Induced Quantum Dot Engineering for Spin Qubit Realization in Graphene p-n Junctions
Myung-Chul Jung;

64 Sustainability challenges and opportunities in graphene-based smart textiles and Li-ion batteries
Matteo Maccanti, Italy, Next Technology Tecnotessile;

65 Tailoring Graphene Oxide: steps ahead in the functionalization and characterization approach
Leonardo Giaccari;

66 Theoretical Understanding of Flat Electronic Bands in 2D Silicate Monolayers
Haleem Ud Din;

67 Topological insulators: a new class of bi-dimensional materials for quantum computing applications
Filiberto Ricciardella;

68 Towards More Efficient Thermal Reduction of Graphene Oxide Flakes: The Influence of Gaseous Atmosphere in the Reduction Process on Structural Properties of Reduced Graphene Oxide
Agata Pawłowska;

69 Transparent and Reversible Graphene Oxide Coatings for the Protection of Heritage Metals
Edoardo Tartaglia;

70 Tuning Electronic Properties in Twisted Bilayer Graphene with Pressure
Gabriele Garofalo;

71 Lightning Strike Protection System for Aerospace Application
Ozlem Turkarslan;

72 PA72. Quantifying the sp3/sp2 ratio in functionalized graphene
Fabrice Piazza;

73 PA73. Cu-Doped Few-Layer MoS_2 Films grown by Thermally Assisted Conversion
Jana Hrda;

74 PA10. Ethidium Bromide COF-Functionalized Graphene Oxide Membranes: High-Flux Ion Sieving and Intrinsic Fluorescence for Biosensing
Sara Isabel Garcia Uribe;

Wednesday 24 September 2025

09:00-10:40 **Plenary Session 3** , *Auditorium*
Chair: Francesco Bonaccorso, Italy, BeDimensional

09:00-09:30 Graphene related materials and human health: Is there a risk?
Alberto Bianco, France, CNRS, Institut de Biologie Moléculaire et Cellulaire;

09:30-10:00 Excitonic quantum phases in 2D: transition metal dichalcogenide excitonic insulators
Elisa Molinari, Italy, CNR-Nano, University of Modena- Reggio Emilia;

10:00-10:40 The Neuroelectrome Era: Graphene, AI, and the BCI Race for real time precision therapeutics
Carolina Aguilar, Spain, INBRAIN;

10:40-10:45 **Roadmapping** , *Auditorium*
Chair: Henning Döscher, Germany, Fraunhofer Gesellschaft zur Forderung der Angewandten Forschung EV

10:45-11:15 **Coffee Break** , *Exhibition Hall*

11:15-13:15 **2D Quantum & Spin Materials** , *Auditorium*
Chairs: Ivan Vera Marun, UK, The University of Manchester; Jaroslav Fabian, Germany, University of Regensburg
Sergio Valenzuela, Spain, ICN2; Talieh Ghiasi, USA, Harvard University; Bernd Beschoten, Germany, RWTH Aachen University; Pierre Seneor, France, CNRS;

11:15-12:15 **Partnering for impact: Associated Members spotlight**, *Room B*
Chair: Stefania Vitale, France, ESF
Mina Namvari, Turkey, Sabanci University Nanotechnology Research and Application Center (SUNUM); Peter Bøggild, Denmark, Professor, DTU Physics, Technical University of Denmark; Anna Maria Ferrari, Italy, University of Torino;

11:15-11:35 Injectable hybrid hydrogel of graphene and alginate for improving cell integration in osteochondral repair (GRAPH-OCD)
Mina Namvari, Turkey, Sabanci University Nanotechnology Research and Application Center (SUNUM);

11:35-11:55 “Very impressive, but can you do it again?” – how we close the 2D reproducibility gap
Peter Bøggild, Denmark, Professor, DTU Physics, Technical University of Denmark;

11:55-12:15 Multiscale Modeling of Carbon Electrodes and Ionic Liquids for Stable High-Capacitance Supercapacitors
Anna Maria Ferrari, Italy, University of Torino;

11:15-13:15 **Life Cycle Assessment (LCA) Workshop**, *Room C*
Chair: Ana Claudia Nioac de Salles, Germany, Fraunhofer ICT
Johan Ek Weis, Sweden, SIO Grafen, Chalmers Industriteknik; Matteo Maccanti, Italy, Next Technology Tecnotessile; Susanna Andreasi Bassi, Joint Research Centre (JRC) European Commission; Antonio Valente, Switzerland, ecoinvent;

12:15-13:15 **Parallel Session Safe and Sustainable by Design: Production**, *Room B*

12:15-12:30 Graphene Photo Detector Production in 8” Wafer MEMS Fab
Andreas Sandin;

12:30-12:45 MOCVD Technology for 2D Materials Integration in CMOS Manufacturing
Alexander Henning, Germany, Aixtron;

12:45-13:00 CVD Graphene Synthesis on S-terminated Cu(111)/Al2O3(0001)
Stiven Forti;

13:00-13:15 Sustainable and Scalable 2D Materials for Wearable Self-Powered Sensing
Evgeniya Kovalska, UK, University of Exeter;

13:15-14:15 **Lunch** , *Exhibition Hall*

14:15-15:15 **Parallel Session Electronics, Photonics, Optoelectronics** , *Auditorium*
Chair: Amalia Patanè, UK, University of Nottingham

14:15-14:30 Optical manipulation in centrosymmetric bulk WSe2 by hidden quantum entanglement
Emmanuele Cappelluti, Italy, CNR, Istituto di Struttura della Materia;

14:30-14:45 Managing heat transport in superconductor-graphene devices
Federica Bianco;

14:45-15:00 Decoupled High-Mobility Graphene on Cu(111)/Sapphire via Chemical Vapor Deposition
Antonio Rossi;

15:00-15:15 Graphite nanoplatelets frequency-selective metasurfaces for passive wireless strain sensing
Fabrizia Cilento;

14:15-15:15 **Innovation Forum: How to raise capital for commercialisation?**, *Room B*
Chair: Francesco Bonaccorso, Italy, BeDimensional
Andrea Tovo, Italy, Confindustria; Carolina Aguilar, Spain, INBRAIN; Mamoun Taher, UAE & Sweden, Graphmatech, Khalifa University;

14:15-14:18 Introduction session
Francesco Bonaccorso, Italy, BeDimensional;

14:18-14:25 Andrea Tovo
Andrea Tovo, Italy, Confindustria;

14:25-14:50 Carolina Aguilar
Carolina Aguilar, Spain, INBRAIN;

14:50-15:15 Mamoun Taher
Mamoun Taher, UAE & Sweden, Graphmatech, Khalifa University;

14:15-16:00 **Parallel Session BioMed & Health** , *Room C*

14:15-14:30 Graphene-enabled biosensors for healthcare applications
Alexey Tarasov;

14:30-14:45 Quantum Capacitive Biosensor Based on rGO Electrodes for Naxitamab Monitoring in Neuroblastoma Immunotherapy
Andy Jesús Bruno Darder;

14:45-15:00 Covalently functionalized carbon-based nanomaterials with negatively charged polymers for virus inhibition
Ievgen Donskyi;

15:00-15:15 Graphene Enhanced BBB-on-Chip Integrating Barrier Conductivity and TEER Assessment
Ileana Armando;

15:15-15:30 3D Melt Electro-Written MXene-Reinforced Scaffolds for Tissue Engineering Applications
Mina Namvari;

15:30-15:45 A Graphene-Based Electrochemical Platform for Alzheimer’s Disease Prognosis
Ronaldo Challhua;

15:45-16:00 Integrated GFET-on-CMOS biosensing platform with high-resolution and real-time Dirac point tracking
Sadegh Kamaei;

15:15-16:15 **Parallel Session 2DM of Tomorrow** , *Auditorium*

15:15-15:30 Dynamics of intercalated molecules and reaction rates in the van der Waals gap between graphene and platinum surface
Sayed Hossein Mirdamadi;

15:30-15:45 Layer transfer and subsequent device fabrication of bismuth-capped epitaxial MoS2
Sven Dekelver;

15:45-16:00 Directional Structural Superlubricity and Levy Flights in Bismuthene/HOPG system
Paweł Kowalczyk;

16:00-16:15 CVD grown hybrid MoSe2-WSe2 monolayer lateral/vertical heterostructures with strong interlayer exciton emission
Md Tarik Hossain;

15:15-16:15 **Innovation Forum: Commercialisation Pitches** *, Room B*
Chair: Francesco Bonaccorso, Italy, BeDimensional
Apostolos Tsolakis, Greece, Q-PLAN International; Beatriz Alonso Rodríguez, Spain, KIVORO; Gianluigi Creonti, Italy, Crossfire Srl; Luciano Macera, Italy, Nanoprom Chemicals; Ali Shaygan Nia, Germany, Technical University Dresden;

15:15-15:25 TBD
Apostolos Tsolakis, Greece, Q-PLAN International;

15:25-15:35 TBD
Beatriz Alonso Rodríguez, Spain, KIVORO;

15:35-15:45 TBD
Gianluigi Creonti, Italy, Crossfire Srl;

15:45-15:55 TBD
Luciano Macera, Italy, Nanoprom Chemicals;

15:55-16:15 TBD
Ali Shaygan Nia, Germany, Technical University Dresden;

16:15-16:45 **Coffee Break** *, Exhibition Hall*

16:45-18:00 **Parallel Session Electronics, Photonics, Optoelectronics** *, Auditorium*

16:45-17:00 Sliding ferroelectricity driven charge-transfer tunablity in Graphene-twisted WSe_2 hybrid photodetector
Shaili Sett;

17:00-17:15 Topological Van der Waals Materials for Electronic and Optoelectronic Applications
Soheil Ghods;

17:15-17:30 Biodegradable Biopolymer Electrolytes for Electrolyte-Gated Graphene Devices
Toby Hallam;

17:30-17:45 Wafer-Scale Ultrathin Gold Films: Toward Two-Dimensional Metal Integration for Optoelectronic Applications.
Valentyn Volkov, UAE, XPANCEO;

17:45-18:00 Aluminum-Rich Reconstructed Sapphire as a High-Quality Growth Substrate for Tungsten Disulfide Synthesis
Vesa-Matti Hiltunen;

16:45-18:15 **Innovation Forum: Bring standards to the factory floor** *, Room B*
Chair: Jörg Radnik, Germany, undesanstalt für Materialforschung und -prüfung (BAM)
Beatriz Alonso Rodríguez, Spain, KIVORO; Miika Soikkeli, Finland, VTT; Keith Paton, UK, NPL; Johan Ek Weis, Sweden, SIO Grafen, Chalmers Industriteknik;

16:45-16:50 Introduction (Jörg Radnik, BAM, DE)

16:50-17:05 Standardisation and Regulation: SME perspective (Beatrice Alonso, Graphenea, ES)

17:05-17:20 2D-PL: Protocols for material and device characterisation (Miika Soikkeli, VTT, FI)

17:20-17:35 In-line material characterisation to improve production analysis and control (Keith Paton, NPL, UK)

17:35-17:45 The role of standards in IAM-I (Jörg Radnik, BAM, DE)

17:45-18:00 Short discussion led by Johan Ek-Weis (CIT, SE), Questions to the speakers and the audience

18:00-18:10 J&J: Wrap-up and future steps

16:45-18:00 **Parallel Session Composites** *, Room C*

16:45-17:00 Graphitised C:Nx films with tunablle nano/meso-porous morphology fabricated by Magnetron Plasma Enhanced CVD technique as a functional layer for catalytic applications
Andriy Vasin; *Nazarov Alexei*

17:00-17:15 Layered graphenic composites for tuneable gas sieving
Giacomo Foli;

17:15-17:30 Vertically Oriented Graphene Oxide in alginate hydrogel membranes for water purification
Daniele Evandri;

17:30-17:45 Thermally conductive nanocellulose/hBN-based composite films for flexible electronics
Vanja Kokol;

17:45-18:00 The expandable graphite expansion rate influence on dielectric, thermal, and mechanical properties of polyethene-based composites
Anna Lapinska;

18:30-20:00 **Poster Session B** , *Exhibition Hall*

1 Angular Dependence of Spin-Orbit Torques in 2D Materials.
Gusthavo Brizolla;

2 Applications of High-quality CVD Graphene in Electron Microscopy
Lukáš Průcha;

3 Area-selective ALD as dielectric for top-gated GFET
Maryam Naderpour;

4 Assessing sample preparation methods to enable accurate size measurement of nanoplatelets
Keith R Paton;

5 Atomistic Investigation of Ferrocene-Catalysed CNT Growth: Role of Cyclopentadienyl Ligands and Carbon Precursors
Narayan Som;

6 Autonomous Synthesis of 2D Materials through AI-Driven Optimization
Annalisa Coriolano;

7 Biocompatible rGO-Coated Cotton Fabrics for EMI Shielding Applications
Mila Milenković;

8 Contribution to an Efficient Strategy for Air Collection and Particles Characterization, directed to Risk Assessment during the Synthesis of MAX and MXene
Samuele Zambon;

9 Dynamics of the Electric Double-Layer in Electrolyte Gated Graphene FETs
Tom Badcock;

10 Doping graphene with substitutional Mn atomic dimer
Chen He;

11 Effect of Substrates and Precursor Partial Pressure on Chemical Vapor Deposition grown Single-Layer Graphene on C-Plane Sapphire
Zhaodong Wang;

12 Effect of Te flux on the CVD growth of Multilayered MoTe2
Tomoya Ebisawa;

13 Electrochemical Exfoliation of TMD Flakes for Thermoelectric Applications
Cristiana Antonella Mastropierro;

14 Electronic Design Automation Tool for hybrid graphene - silicon integrated circuits
David Jimenez Jimenez;

15 Energetics and electronic structures of nanoscrolls of atomic layer materials
Susumu Okada;

16 Engineering MoS_2 and WS_2 Nanowalls for Tunable Wettability
Rania Ennaciri;

17 Enhanced strain detection based on controlled crack structure in graphite nanoplatelets supported coatings
Pegah Zarafshani;

18 Enhancing light-matter interactions in graphene via plasmonic Sn nanoantennas and interface engineering
Zamin Mamiyev;

20 Excitonic effects in phonons: reshaping the graphene Kohn anomalies and lifetimes
Alberto Guandalini;

21 Exploring methods for surveying occupational exposure of graphene related materials
Tobias Storsjö;

22 Exploring the Effect of Low- and High-Dose Gamma Irradiation on the EMI Shielding Performance of Graphene-Based Materials in Ambient and Alcoholic Environments
Duška Kleut;

23 Fast Solid-Phase Exfoliation of Layered Double Hydroxides with Tunable Functionalization
Shana Wang;

24 Fluorinated Bilayer Graphene: Defect Engineering, Stability, and Ultrafast Carrier Dynamics
Mukesh Kumar Thakur;

25 From Polymer to Ceramics: Multifunctional Applications of Additively Manufactured Graphene-based Polymer Derived Ceramics
Adam Otabil;

26 Functionalized Graphene Cathode for High-Performance Zinc-Ion Batteries and Capacitors
Rahul Patil;

27 Functionalized Graphene derived Linear-Structure Single-Atom Gold(I) catalyst for Dehydrogenative Coupling of Organosilanes with Alcohols
Ravishankar Kadam;

28 Giant Exciton Binding Energy Driven by Dimensional Confinement and Magnetic Properties in van der Waals materials
Georgii Ermolaev;

29 Graphene and graphene-related materials as sustainable and cost-effective approach for green hydrogen production
Bruno Filipe Pinto Branco;

30 Graphene growth on patterned Cu-Ni metal thin films
Shukichi Tanaka;

31 hBN encapsulation and Sb_2O_3 passivation as methods to prevent 2D Bismuth oxidation
Klaudia Toczek;

33 Identifying Arbitrary Stacking Configurations in Moderately Thick Graphite Samples
Zoltán Tajkov;

34 In situ XRD study of MAX phase etching with HCl+LiF solution
Nicolas Boulanger;

35 Investigating the Unique Low-Frequency Raman Vibrational Mode in Two-Dimensional Tungsten Disulfide
Pu Tan;

36 Low-temperature strain-free semi-solid/liquid encapsulation for perovskite solar cells and modules
Cosimo Anichini;

37 Multifunctional graphene-family nanomaterials for combined photodynamic and photothermal therapy
Siyao Qin;

38 Multiscale Characterization of Graphene/ITO Hybrid Electrodes for Solar Cells
Noor Ul Ain Ahmed;

39 Multiscale modelling of graphene derivatives for the removal of emerging contaminants in drinking water
Alessandro Calza;

40 Novel findings in the direct amination of graphene and its oxygenated derivatives with hydroxylamine-derived reagents: an experimental and computational study.
Matteo Daino;

41 Optimizing Nanofluidic Energy Harvesting in Synthetic Clay-based Membranes by Annealing Treatment
Yozelin Viridiana Zavala Galindo;

42 Oxidation Resistant, Interlaced 3D MXene Composite for Electrochemical Biosensing
Chandan Singh;

43 PDMS as a flexible substrate for graphene biosensors
Virginia Ranaweera;

44 Plasma-engineered Nitrogen-functionalized MXene membranes for enhanced osmotic energy conversion
Jinqiu Chen;

45 Plasmonically activated photoluminescence in large-area, metal-exfoliated transition metal dichalcogenides
Adeel Bukhari;

46 Preliminary study on the removal of detergents from water by graphene oxide-coated foams
Alessandro Migliavacca;

47 Quantum confinement effects in rhombohedral and hexagonal graphite nanoribbons
Konrád Kandrai;

48 Raman spectroscopy of edge-extended graphene nanoribbons in ultra-high vacuum
Jeong Ha Hwang;

49 Reduced Graphene Oxide & CFRPs - Maximized Properties. An investigative experimental overview
Spyros Tsiotos;

50 SpectraFormer AI tool for spectroscopy unmixing
Dmitriy Poteryayev;

51 Sustainable graphene from end-of-life batteries
Ulrika Boda;

52 Sustainable, one-step graphene electrode fabrication for energy applications
Austin Prowse;

54 Temperature Dependent Swelling Transitions of Graphite Oxides in Liquid 1-Alcohols
Gui Li;

55 The development of a solution processing method to form ordered films of insulating 2D nanosheets suitable for use as dielectric layers in capacitors
Oran Brennan;

56 The out-of-plane optical constant of a two-dimensional crystal: experimental observation of an elusive quantity
Michele Merano;

57 Thermal conductivity analysis of hBN: effects of size, crystal quality, and exfoliation
Dena Pourjafari;

58 Towards Standardised Procedures for Morphology Measurement of 2D Materials by Imaging
Vasile-Dan Hodoroaba;

59 Transfer of Substitutionally Implanted Graphene
Ahmed Samir Lotfy;

60 Tunable Nanostructuring for van der Waals Materials
Gleb Tselikov;

61 Wafer-Scale Flexible Memristor Arrays Based on 2D Material with Robust Switching Behaviour and Thermal Stability
Seunghyeon Ji;

62 Wire-Print a Novel Sample Preparation Approach for Accurate Morphological Characterization of Constituent Particles for Graphene-Related 2D-Materials
Vasile-Dan Hodoroaba;

63 Direct observation of strong interlayer couplings in 2D TMDC heterostructures via low-frequency Raman spectroscopy
Ki Hoon Shin;

64 Life Cycle and Performance Assessment of Upscaled Biomass-Derived Graphene Electrodes for Supercapacitors
Fatameh Bahmei;

65 PB65. Stray magnetic field imaging of thin exfoliated iron halide flakes
Rongrong Qi;

66 PB66. Capacitance of Ionic Liquid-Based Supercapacitors based on Copper modified Graphene Nanoplatelets electrode
Michele Giordano;

67 PB67. Alignment of single layer graphene in barrier coatings for scalable application of packaging
Komal Gola;

68 PB68. Characterization of Graphene Photodetector for Enhanced Optoelectronic Sensing Applications
Yu Tian;

69 PB69. Exploring the use of Laser-Induced Graphene to streamline the fabrication of microelectrode arrays for biosensors
Rita Almeida;

Thursday 25 September 2025

09:00-10:40 **Plenary Session 4** , *Auditorium*
Chair: Vincenzo Palermo, Italy, ISOF-CNR

09:00-09:40 Epitaxial growth of wafer-scale transition metal dichalcogenides: An enabling technology for large area devices.
Joan Marie Redwing, USA, Pennsylvania State University;

09:40-10:10 Milli-Tesla Quantization enabled by Tuneable Coulomb Screening in Large-Angle Twisted Graphene
Alexey Berdyugin, Singapore, National University of Singapore;

10:10-10:40 How protected is hBN-encapsulated graphene?
Peter Bøggild, Denmark, Professor, DTU Physics, Technical University of Denmark;

10:45-11:15 **Coffee Break** , *Exhibition Hall*

11:15-12:15 **Green hydrogen technologies and the role of graphene**, *Auditorium*
Diogo Miguel Garcia Esperança, Spain, Eurecat – Technology Centre of Catalonia; Bruno Pinto Branco, Spain, Eurecat – Technology Centre of Catalonia;

11:15-13:15 **Safe and Sustainable-by-Design 2D Materials: Manufacturing Processes and Applications in Energy, Electronics, and Biotechnology** , *Room B*
Chairs: Diana Marcano, Poland, Łukasiewicz - Poznański Instytut Technologiczny; João Laranjeira, Portugal, ISQ
Kyle Matthews, USA, MXene Inc.; Nadia Bali, Greece, FORTH; Matteo Maccanti, Italy, Next Technology Tecnotessile;

11:15-11:45 From Lab to Market: Scaling the Manufacturing of High-Quality MXenes to Advance Electronics and Energy Applications
Kyle Matthews, USA, MXene Inc.;

11:45-12:05 Safe and Sustainable-by-design approach for 2D Materials: SAFARI project case study
João Laranjeira, Portugal, ISQ;

12:05-12:25 Advancing Biosensors via Sustainable MXenes: The SAFARI Project's Green and Upscaled Synthesis
Diana Marcano, Poland, Łukasiewicz - Poznański Instytut Technologiczny;

12:25-12:45 Multiscale Numerical Modeling to support SSbD Laser-Engineered Graphene-electrodes for Electrochemical Energy Storage
Nadia Bali, Greece, FORTH;

12:45-13:05 Sustainability challenges and opportunities in graphene-based smart textiles and Li-ion batteries
Matteo Maccanti, Italy, Next Technology Tecnotessile;

13:05-13:15 Discussion

11:15-13:15 2D Materials for Electronic/Photonic/Quantum Applications , *Room C*
Yujie Guo, Belgium, IMEC, Ghent University; Leonardo Del Bino, Germany, Akhetonics GmbH; Sarah Riazimehr, Germany, Oxford Instruments Plasma Technology; Theresia Knobloch, Austria, Technical University Wien; Klaas-Jan Tielrooij, The Netherlands, Eindhoven University of Technology; Pierre Morin, Belgium, imec;

11:15-11:35 Efficient 2D material-based photodetectors and modulators in the optical communication C-band for silicon photonics
Yujie Guo, Belgium, IMEC, Ghent University;

11:35-11:55 Graphene for Photonics: at the interface between Material Science and Integrated Optics
Leonardo Del Bino, Germany, Akhetonics GmbH;

11:55-12:15 Process Solutions for Clean Interface and Dielectric Growth on 2D Materials Using Plasma ALD
Sarah Riazimehr;

12:15-12:35 Reliability of Scaled Transistors Based on 2D Semiconductors
Theresia Knobloch, Austria, Technical University Wien;

12:35-12:55 Klaas-Jan Tielrooij
Klaas-Jan Tielrooij, The Netherlands, Eindhoven University of Technology;

12:55-13:15 Introducing 2D materials in a 300mm technological platform: tool, process, and material challenges
Pierre Morin, Belgium, imec;

12:15-13:15 Parallel Session 2DM of Tomorrow , *Auditorium*

12:15-12:30 Tailoring Asymmetry: Structural and Electronic Characteristics of Janus TMD Monolayers on Au(111)
Andrey Turchanin; *Julian Picker*

12:30-12:45 CVD Growth and Transfer Method for 2D-MoS_2: Heterostructures on GaN and AlGaN
Fiorenza Esposito;

12:45-13:00 High-Performance MoS2 Field-Effect Transistor through Interface Engineering
Seungmin Yang;

13:00-13:15 Infrared Photodetectors Based on 2D Material Heterostructures
Petr Rozhin;

13:15-14:15 Lunch , *Exhibition Hall*

14:15-15:45 Parallel Session Electronics, Photonics, Optoelectronics , *Auditorium*

14:15-14:30 Digital Laser Transfer of Two-Dimensional Materials for Heterostructure and Electronic Device Fabrication
Ioanna Zergioti, Greece, National Technical University of Athens;

14:30-14:45 Waveguide-integrated Graphene Photodetector for High-speed data communications
Karuppasamy Pandian Soundarapandian;

14:45-15:00 Inducing Polarization-Sensitive Photoluminescence in Monolayer TMDCs via Anisotropic ZrS_3 Heterostructures
Larionette Pearleen Lyngdoh Mawlong;

15:00-15:15 Electrical generation of surface plasmon polaritons in plasmonic heterostructures
Maxim Trushin;

15:15-15:30 Towards graphene photonic platform on 200 mm silicon wafers
Mindaugas Lukosius, Innovations for High Performance Microelectronics (IHP);

15:30-15:45 Broadband, Skin-Compatible Carbon Dots/Graphene Photodetectors for Wearable Applications
Nouha Loudhaief;

14:15-15:15 Innovation Forum: 2D-PL , *Room B*
Chair: Inge Asselberghs, Belgium, imec
Amaia Zurutuza, Spain, Graphenea; Pierre Morin, Belgium, imec; Marc Chaigneau, France, HORIBA; Alexander Henning, Germany, Aixtron; Mindaugas Lukosius, Innovations for High Performance Microelectronics (IHP);

14:15-15:15 Parallel Session 2DM of Tomorrow , *Room C*

14:15-14:30 In-Situ Heating and Growth Studies of a Copper–Benzenehexathiol Coordination Polymer via High-Resolution (Liquid-Phase) Transmission Electron Microscopy
Ute Kaiser, Germany, University ULM; *David Mücke*

14:30-14:45 Unconventional thermal conductivity of zigzag graphene nano-meshes
Tomohiro Matsui;

14:45-15:00 Catalytic growth of ultrathin SiC membranes on melted Si surfaces
Panagiota - Patapia Soukouli;

15:00-15:15 Long-term stability of nanoporous graphene
Piotr Ciochon;

15:15-16:15 **Innovation Forum: From fundamental research to innovative applications, Part I**, *Room B*
Chair: Vincenzo Palermo, Italy, ISOF-CNR
Fabrizio Tubertini, Italy, Istituto Italiano di Tecnologia (IIT); Alba Centeno, Spain, Graphenea Semiconductors; Abhishek Kumar, Italy, Leonardo Labs;

15:15-15:20 Introduction
Vincenzo Palermo, Italy, ISOF-CNR;

15:20-15:35 Innovation through the centuries
Fabrizio Tubertini, Italy, Istituto Italiano di Tecnologia (IIT);

15:35-15:55 Graphene as a Platform for Innovation: From Production to Real-World Applications
Alba Centeno, Spain, Graphenea Semiconductors;

15:55-16:15 Accelerating Materials Innovation for Aerospace and Defense Platforms- Leonardo Advanced Material Labs (Abhishek Kumar)
Abhishek Kumar, Italy, Leonardo Labs;

15:15-16:15 **Parallel Session Energy** , *Room C*

15:15-15:45 Effect of a Pt nanoalloy/Carbon Nitride/Graphene Electrocatalyst on the environmental impact of PEMFC stacks as determined by Life Cycle Assessment (LCA) methodology
Vito Di Noto;

15:45-16:00 Deposition of Active Layers for MEA Electrolyzers by Screen-Printing Technique Incorporating Reduced Graphene Oxide
Paolo Mariani;

16:00-16:15 Curvature-Encoded Catalysis in Graphene Revealed by Multimodal in-situ Microscopy
Marinos Dimitropoulos;

16:15-16:45 **Coffee Break** , *Exhibition Hall*

16:45-17:45 **Parallel Session Composites** , *Auditorium*

16:45-16:57 Graphene-based structural battery composites for future energy storage
Zhenyuan Xia;

16:57-17:09 High Performance Graphene Concrete: GrapheCrete for Field Applications
Prof Priyan Merndis;

17:09-17:21 Graphene reinforcement of Circular Recyclable Crosspreg® reactive, mass productive, composite
Gianluigi Creonti, Italy, Crossfire Srl;

17:21-17:33 Sodium carboxymethylcellulose-carbon nanotube hybrid composite: A sustainable approach to humidity detection
Dorota Biernacka;

17:33-17:45 High Performance Graphene Concrete: GrapheCrete for Field Applications
Andreas Johansson;

16:45-18:15 **Innovation Forum: From fundamental research to innovative applications, Part II**, *Room B*
Chair: Amaia Zurutuza, Spain, Graphenea
Vincent Bouchiat, France, Grapheal; Laura Rizzi, Italy, Flow-nano; Francesco Bonaccorso, Italy, BeDimensional; Valentyn Volkov, UAE, XPANCEO;

16:45-16:50 Introduction session
Amaia Zurutuza, Spain, Graphenea;

16:50-17:10 Graphene biosensors for rapid field detection of biomarkers and trace pollutants: From lab validation to mass market applications
Vincent Bouchiat, France, Grapheal;

17:10-17:30 Nanostructured Carbon Electrodes for Enhanced Performances and Cost Efficiency (Laura Rizzi)
Laura Rizzi, Italy, Flow-nano;

17:30-17:50 The route toward industrial applications of high quality 2D materials (Francesco Bonaccorso)
Francesco Bonaccorso, Italy, BeDimensional;

17:50-18:10 Wafer-Scale Ultrathin Gold Films: Toward Two-Dimensional Metal Integration for Optoelectronic Applications
Valentyn Volkov, UAE, XPANCEO;

16:45-18:00 **Parallel Session Spintronics and Quantum** , *Room C*

16:45-17:15 3D Integration of 2D Devices for Advanced Memory, Logic, and Bio-inspired Computing
Saptarshi Das;

17:15-17:30 Experimental evidence for a spin-dependent gap in graphene on a magnetic substrate
Paolo Moras; *Polina Sheverdyaeva*

17:30-17:45 Atomistic-to-moiré machine learning prediction of magnetic proximity effects in vdW heterostructures
Lukas Cvitkovich;

17:45-18:00 Quasi-Φ_0-periodic supercurrent at quantum Hall transitions
Ivan Villani;

19:30-23:30 **Conference Dinner at Villa Bonin** *, Social Programme*

Friday 26 September 2025

09:00-11:15 **Plenary Session 5** *, Auditorium*
Chair: Aldo Di Carlo, Italy, CNR
Xinliang Feng, Germany, TU Dresden; Ute Kaiser, Germany, University ULM; Zdenek Sofer, Czech Republic, University of Chemistry and Technology Prague; Lorena Manzanares, Centrale Lille, France, Institute of Electronics, Microelectronics, and Nanotechnology (IEMN);

09:00-09:40 Electronic and Quantum Properties of Organic 2D Crystals
Xinliang Feng, Germany, TU Dresden;

09:40-10:10 Manipulating and Measuring Properties of Low-Dimensional Materials at the Atomic Scale for Applications in Nano- und Quantum Technologies
Ute Kaiser, Germany, University ULM;

10:10-10:40 Layered high-k dielectric and antiferromagnets for electronic
Zdenek Sofer, Czech Republic, University of Chemistry and Technology Prague;

10:40-11:15 Single-molecule biosensing with MXene energy transfer
Lorena Manzanares, Centrale Lille, France, Institute of Electronics, Microelectronics, and Nanotechnology (IEMN);

11:15-11:45 **Closing Ceremony** *, Auditorium*