

Graphene Week 2026 - Schedule

Monday 21 September 2026

- 10:30-10:35** Registraton opens & badge collection , Auditorium
- 13:00-15:30** Graphene Flagship Forum , Room 1
- 13:00-13:15 Welcome and presentation of the programme
- 13:15-13:40 RT 1 - Scientific and Technological Frontiers for 2D Materials
- 13:40-14:10 RT 2 - Positioning 2DMs in Europe's Advanced Materials Landscape
- 14:10-14:40 RT 3 – Industrial Uptake, Scale-Up and Manufacturing
- 14:40-15:10 RT 4 – Vision, Strategic Leadership and Evolution of the 2DM Community
- 15:10-15:30 Conclusions
- 15:30-16:00** Welcome Coffee , Auditorium
- 16:00-16:30** Opening , Auditorium
- 16:30-17:05** Keynote: Andre Geim , Auditorium
- 16:30-17:05 Graphene's Next Reincarnation
Andre K. Geim, UK, The University of Manchester;
- 17:05-17:40** Keynote: Mark Hersam , Auditorium
- 17:05-17:40 Scalable Production and Application of Printable 2D Nanoelectronic Inks
Mark C. Hersam, USA, Northwestern University;
- 17:40-18:05** Invited talk: Kostas Kostarelos , Auditorium
- Kostas Kostarelos, Spain, UK, ICN2, Universitat Autònoma de Barcelona & The University of Manchester;**
- 17:40-18:05 From Bench to Brain: Getting Graphene to Interface with the Human Brain
Kostas Kostarelos, Spain, UK, ICN2, Universitat Autònoma de Barcelona & The University of Manchester;
- 18:05-18:55** Open Forum: Why Graphene Matters? , Auditorium
- Chair: Maria Abrahamsson, Sweden, Chalmers University of Technology
Andre K. Geim, UK, The University of Manchester; Andrea Ferrari, UK, University of Cambridge; Amaia Zurutuza, Spain, Graphenea Semiconductors; Cinzia Casiraghi, UK, University of Manchester & Graphene Engineering Innovation Centre (GEIC); Francesco Bonaccorso, Italy, BeDimensional;
- 19:45-21:15** Welcome Reception , Auditorium

Tuesday 22 September 2026

- 09:00-10:25** Keynote & Plenary , Auditorium
- 09:00-09:35 Keynote: Rodney Ruoff
- Rodney Ruoff, South Korea, UNIST;**
- 09:35-10:00 Invited Speaker: Jonathan Coleman
- Johnathan Coleman, Ireland, Trinity College Dublin;**
- 10:00-10:25 Machine Learning-Assisted Analysis of 2D–3D Composite Sensors in Complex Biological Matrices
Vincenzo Palermo, Italy, CNR ISOF; M. Malekzadeh; L. Malavolta; I. Bracaglia; G. Cazzador; A. Kovtun; P. Olivieri; L. Tomasi; C. Zanardi
- 10:25-10:30** Standardisation , Auditorium
- Jörg Radnik, Germany, Federal Institute for Materials Research and Testing (BAM);**
- 10:30-11:00** Exhibition & Break , Auditorium
- 10:30-11:00** Speed Networking , Exhibition
- 11:00-12:40** 2D Spintronics Science and Technology , Auditorium
- Chairs: Saroj P. Dash, Sweden, Chalmers University of Technology; Ivan Vera Marun, UK, The University of Manchester
- 11:00-11:30 2D van der Waals materials for spintronics
Stuart S.P. Parkin, Germany, Max Planck Institute of Microstructure Physics & Martin Luther University Halle-Wittenberg;
- 11:30-12:00 Multiferroicity and p-wave magnetism in the flatlan
Silvia Picozzi, Italy, University of Milan-Bicocca;

- 12:00-12:25 Manipulation of electron spin in 2D
Jaroslav Fabian, Germany, University of Regensburg;
- 12:25-12:40 Recent Advances in 2D Quantum Materials and Spintronics
Saroj P. Dash, Sweden, Chalmers University of Technology;
- 11:00-12:35 4. Chemistry, Functionalization & Interfaces , Room 1**
- 11:00-11:05 Introduction
- 11:05-11:20 Synthesis and correlative analysis of covalently functionalized 2D materials
Ievgen Donskyi; Na Xing; Chenyun Deng; Philip Nickl; Robert Schusterbauer; Vasile Dan Hodoroaba; Jörg Radnik, Germany, Federal Institute for Materials Research and Testing (BAM); Stefanie Sydlík
- 11:20-11:35 On-Chip Electrons for Reductive Chemistry
Natalie Galfé; Florian Herdl; Ksenija Arslanova; Silke Boche; Michael Bachmann; Georg S. Duesberg, Germany, University of the Bundeswehr Munich
- 11:35-11:50 Graphene-supported hand-shaking porphyrins: engineering the second coordination sphere
Michela De Col; Greta Fogar; Simone Formentin; Alessandro Namar; Matteo Jugovac; Dhaneesh Kumar Gopalakrishnan; Kelvin Anggara; Alexander Generalov; Alexei Preobrajenski; Mattia Scardamaglia; Elisabetta Iengo; Erik Vesselli
- 11:50-12:05 Electrostatic Coupling in Janus Graphene Enabled by Programmable Asymmetric Functionalization
Shishi Liu, Germany, Institute for Chemistry and Biochemistry FUB; Siegfried Eigler
- 12:05-12:20 Localized Hydrogenation of Graphene by Custom Atomic Hydrogen Sources and AFM-Based Cathodic Functionalization
Miroslav Bartošik; Jindřich Mach; Adam Novotný; Jan Vymazal; Linda Supalová; Ondřej Špaček; Jiří Richter; Martin Konečný; Tomáš Šíkola
- 12:20-12:35 Controlled Triazine-Based Covalent Functionalization of Black Phosphorus for Degradable Hybrid Materials
Jasmin Er; Sreejita Ray; Enyu Xie; Robert Schusterbauer; Na Xing; Philip Nickl; Taylor Page; Obida Bawadkji; Andreas Herrmann; Jörg Radnik, Germany, Federal Institute for Materials Research and Testing (BAM); Vasile Dan Hodoroaba; Christian Sieben; Beate Paulus; Ievgen Donskyi
- 11:00-12:35 6. Flexible, Printed & Wearable Electronics , Room 2**
- 11:00-11:20 Laser Induced Graphene on biopolymers for next generation wearable electronics
Daniela Iacopino, Ireland, Tyndal National Institute, University College Cork;
- 11:20-11:35 Printed Multiparametric Sensors with Graphene-Based Inks: From Embedded SHM Prototypes to Biomedical Applications
Cristina Martinez Oliver; Giulio Rosati; Lorenzo Garcia Garcia; Kevin Alemany Lopez; Jaime Polo Valcarcel; Pablo Gamonal Repiso; Carles Rubio Esteve; Gianluigi Creonti, Italy, Crossfire; Tobias Kuhnt; Beatriz Alonso, Spain, Graphenea SA; Cristina Casellas; Sara Keiko Murase Fernandez; Alejandra Ben Aissa Soler; Ana Moya Lara
- 11:35-11:50 Robust Flexible Micro-Supercapacitors: Integrating High-Voltage Gel Polymer Electrolyte with Laser-Induced Graphene
Apurba Ray, Germany, German Aerospace Center; Sangha Mitra; Spyros Yannopoulos, Greece, FORTH; Bilge Saruhan
- 11:50-12:05 Engineering bio-based composites for tailored laser-induced graphene: A circular approach to functional electronics
Sara Silvestre; Joana Figueira; Joana Vaz Pinto; Jonathan Claussen; Carmen Gomes; João Coelho; Rodrigo Martins; Elvira Fortunato, Portugal, Nova University Lisbon
- 12:05-12:20 Digital fabrication of sustainable bioelectronics and sensing devices from nature-derived green laser-induced graphene materials
Tomas Pinheiro; Henrique Almeida; Rodrigo Martins; Elvira Fortunato, Portugal, Nova University Lisbon
- 12:20-12:35 From Growth to Integration: Scalable Solvent-Free Transfer of Vertical Graphene for Flexible Electronics and Energy Devices
Muhammad Hamza; Muhammad Khuzaima Zaka; Thomas Strunkus; Loic Gimenez; Franziska Traeger; Alexie Nefedov; Johannes Berndt; Eva KOVACEVIC, France, GREMI CNRS&University of Orleans
- 12:35-13:30 Exhibition & Lunch , Auditorium**
- 12:35-13:30 Topic Tables , Exhibition**
- 13:10-13:55 Meet the Editors , Room 1**
Siddharth Jethwa, UK, IOP Publishing; Silvia Achilli, Frontiers in Carbon; Angela Toribio, Spain, Materials MDPI;
- 14:00-15:50 1. Quantum, Moiré & Correlated Materials , Auditorium**
- 14:00-14:15 Revealing intrinsic structure and strain patterns of moiré superlattices using substrate-free geometry
Nansi Zhou; Isaac Soltero Ochoa; Amoz Chua; Mukesh Kumar Das; Kostya S. Novoselov; Makars Šiškins; Vladimir Fal'ko; Alexey Bergyugin
- 14:15-14:30 Emergence of Robust Charge-Density-Wave Phases in One-Dimensional Nanostructures of 1T'-Phase MoTe₂
Han Zi-Yi; Ye Liangting; Li Yu-Qi; Ya-Ning Ren; Huang Bing; Lin He, China, Beijing Normal University

- 14:30-14:45 Inducing Proximity Superconductivity into Moiré Rhombohedral Graphene
Olga Popova; Xiangyu Zhou; Andrei Kudriashov; Takashi Taniguchi; Kenji Watanabe; Artur Shilov; Denis Bandurin
- 14:45-15:00 Proximitized Bilayer Graphene Quantum Dots: Continuum and Atomistic Approaches
Ivan Verstraeten; David Perkins; Bert Jorissen; Lucian Covaci; Aires Ferreira
- 15:00-15:15 Twist Formation and Moiré Superlattices in Covalent Organic Frameworks on Graphene
Manuel Melle-Franco; Veniero Lenzi; Karol Strutyński; Kunal Mali; Steven De Feyter; Aurelio Mateo-Alonso
- 15:15-15:30 Thermomagnetic properties of an above room-temperature 2D magnet
Amir Mehrnejat; Harvey Stanfield; Yi Qin; Gusthavo Brizolla; Jaroslav Fabian, Germany, University of Regensburg; Ivan Vera Marun, UK, The University of Manchester
- 15:30-15:50 Tunable Edelstein effect in intrinsic two-dimensional ferroelectric metal PtBi2
Weiyi Pan; Jaroslav Fabian, Germany, University of Regensburg
- 14:00-15:50 5. Hydrogen, Catalysis & Sustainable Energy, Room 1**
- 14:00-14:20 Single atom engineering on two dimensional materials for catalysis and energy storage
Aristides Bakandritsos, Greece, CATRIN-RCPTM, Palacký University Olomouc;
- 14:20-14:35 Screen-Printing of rGO-based Cathodes for Scalable and Sustainable Hydrogen Production in PEM Water Electrolyzers
Paolo Mariani; Pedro Machado; Diogo Miguel Esperança Garcia; Bruno Branco; Sofia Lujan; Alba Rubi; Beatriz Alonso, Spain, Graphenea SA; Tobias Kuhnt; Merkur Smajlaj; Fabio Ronci; Aldo Di Carlo
- 14:35-14:50 Laser Induced Graphene Electrodes Power Breakthrough Proton Exchange Membrane Water Electrolyzers Stacks for Scalable Green Hydrogen
Maria Pervolaraki, Greece, FORTH; Marina Polizzi; Bruno Branco; Diogo Miguel Esperança Garcia; Cristina Casellas Coll; Emmanuel Stratakis
- 14:50-15:05 Ultra-thin graphenic laminates for efficient on-board hydrogen storage
Giacomo Foli; Roberta Di Carlo; Matteo Minelli; Marco Giacinti Baschetti; Vincenzo Palermo, Italy, CNR ISOF
- 15:05-15:20 Graphene Oxide as a lever for lightweight and more sustainable hydrogen composite cylinders
Mathieu CHIRAT; Beatriz Alonso, Spain, Graphenea SA; Tobias Kuhnt
- 15:20-15:35 Graphene enabled sustainable battery manufacturing
Jinhua Sun, Sweden, Chalmers University of Technology;
- 15:35-15:50 Two-dimensional membranes for industrial gas separation
Shiqi Huang;
- 14:00-15:30 International Workshop EU-Brazil, Room 2**
Chair: Stefania Vitale, ESF, France, Session Coordinator
- 14:00-14:10 Welcome Session (Workshop Chairs)
Elvira Fortunato, Portugal, Nova University Lisbon; Rafael Furlan, Brazil, LNNano/CNPEM;
- 14:10-14:20 Welcoming Talk from the Graphene Flagship Director
Maria Abrahamsson, Sweden, Chalmers University of Technology;
- 14:20-14:35 Graphene-based thin films for sustainable energy
Aldo Zarbin, Brazil, Federal University of Paraná;
- 14:35-14:50 nano-Raman spectroscopy of graphene and other 2D materials coherence and symmetry aspects
Ado Jorio, Brazil/Portugal, INL, Federal University of Minas Gerais;
- 14:50-15:05 Graphene Oxide: Interfaces and Functional Applications
Glaura Goulart Silva, Brazil, Federal University of Minas Gerais;
- 15:05-15:20 Engineering Polymer Nanocomposites with Two-Dimensional Materials: From Synthesis to Predictive Modeling and Characterization
Guilhermino José Macêdo Fecine, Brazil, MackGraphe; Ricardo J.E. Andrade
- 15:35-16:05 Exhibition & Break, Exhibition**
- 15:35-16:05 Collaboration Marketplace, Exhibition**
- 16:05-17:30 2. Electronic Transport, Devices & Characterisation, Auditorium**
- 16:05-16:10 Introduction
- 16:10-16:23 Twist angle and pressure tuning of proximity-induced spin-orbit coupling in graphene/WSe2 heterostructures
Jonathan Eroms; Tobias Rockinger; Bálint Szentpéteri; Szabolcs Csonka; M. Marocko; Julia Amann; Z. Gan; A. George; A. Turchanin, Germany, University Jena; Kenji Watanabe; Takashi Taniguchi; Dieter Weiss; Péter Makk
- 16:23-16:36 Electrically Tunable Carrier Lifetime in Bilayer Graphene
Roshan Krishna Kumar, Spain, Catalan Institute of Nanoscience and Nanotechnology (ICN2);
Roshan Krishna Kumar, Spain, Catalan Institute of Nanoscience and Nanotechnology (ICN2)

- 16:36-16:49 Improving the Stability of MoS₂ Field-Effect Transistors via hBN Encapsulation
Dmitry Polyushkin, Austria, TU Wien; Lorenzo Pettorosso; Theresia Knobloch; Fernando De Los Santos-Prieto; Thomas Müller; Tibor Grasser
- 16:49-17:02 Hydrodynamic metal-semimetal transition
Ian Babich;
- 17:02-17:15 Morphological-chemical characterization of graphene-related 2D materials by correlative imaging - possibilities and limitations
Jörg Radnik, Germany, Federal Institute for Materials Research and Testing (BAM); Robert Schusterbauer; Paul Mrkwitschka; Mario Sahre; Deniz Hülögü; Matthias Weise; Andreas Hertwig; Kerstin Jurkschat; Elena Corrao; Alexander Doolin; Beatriz Alonso, Spain, Graphenea SA; Amaia Zurutuza, Spain, Graphenea Semiconductors; Francesco Pellegrino; Ievgen Donskyi; Vasile Dan Hodoroaba
- 17:15-17:30 Reliable Workflows for the elemental analysis of Graphene-Related 2D Materials with SEM/EDS and XPS
Paul Mrkwitschka; Mario Sahre; Elena Corrao; Francesco Pellegrino; Amaia Zurutuza, Spain, Graphenea Semiconductors; Beatriz Alonso, Spain, Graphenea SA; Jörg Radnik, Germany, Federal Institute for Materials Research and Testing (BAM); Vasile Dan Hodoroaba
- 16:05-17:30 3. Growth, Epitaxy & Heterostructures , Room 1**
- 16:05-16:10 Introduction
- 16:10-16:23 MOCVD Technology Enabling Wafer-Scale Growth of 2D Materials for Integration into Advanced Semiconductor Process Flows
NianJheng WU, Germany, AIXTRON SE; Christof Mauder; Eric Lensker; Emre Yengel; Jan Mischke; Alexander Henning
- 16:23-16:36 Data-Driven Optimization of WS₂ Growth via Gaussian Process Regression
Annalisa Coriolano; Dmitry Poteryayev; Robert Andrei Sorodoc; Vesa-Matti Hiltunen; Gaia Di Berardino; Stiven Forti; Massimiliano Pontil; Camilla Coletti; Antonio Rossi
- 16:36-16:49 Understanding the impact of defects on the van der Waals Epitaxy in MOCVD-Grown Bilayer MoS₂
APOSTOLIA MANASI; Henry Medina; Pawan Kumar; Benjamin Groven; Pierre Morin, Belgium, imec; Annelies Delabie
- 16:49-17:02 Liquid-alloy-mediated growth of ultrathin nitride phases
Melina Vavali; Nicolas P.L. Magnard; Nikoo Ghanadan; Tomoko Yokaichiya, Germany, Fritz-Haber-Institut der MPG, Berlin; Julia Czarnecka; Bárbara Canto; Thomas Sarrazin; Polychronis Tsipas; Tatiana Giannakopoulou; Hao Gao; Karsten Reuter; Athanasios Dimoulas; Gertjan J.C. van Baarle; Hendrik H. Heenen; Oleg V. Konovalov; Valentina Rein; Irene M.N. Groot
- 17:02-17:15 Controlling defects generation on 2D materials using a novel transfer method
Quentin Frisson; Paul Brunet; Lucie Le Van-Jodin
- 17:15-17:30 Growth and Transfer of SiC flakes with Liquid Metal Catalyst for electronic applications
Panagiota - Patapia Soukoulis; Alexia Toumazatou; Tatiana Giannakopoulou; Elias Sakellis; Georgios Pissanos; Athanasios Dimoulas
- 16:05-18:05 EU-Brazil Workshop: Closed Session (ONLY for registered Brazil and GF delegates), Room 2**
Chairs: Elvira Fortunato, Portugal, Nova University Lisbon; Rafael Furlan, Brazil, LNNano/CNPq
- 16:05-16:20 2D Materials at CNPq: From Theory to Devices
Rodrigo Capaz, Brazil, Brazilian National Center for Research in Energy and Materials (CNPq);
- 16:20-16:35 FAPESP: Basic Information and funding opportunities
Carlos Graeff, Brazil, Sao Paulo State University & FAPESP;
- 16:35-16:50 MSCA opportunities for EU-Brazil scientific exchanges
Stéphanie Demart, Belgium, DG-EAC;
- 16:50-17:05 From Research to Industrial Applications: The UCSGRAPHENE Innovation Ecosystem
Daniele Perondi, Brazil, UCSGRAPHENE;
- 17:05-17:20 Advanced instruments for graphene characterization
Hudson Miranda, Brazil, FabNS; Cassiano Rabelo; Taiguara Tupinambás; Gabriella Correia de Almeida
- 17:20-18:00 Dynamic Roundtable on common challenges and opportunities for sustained collaboration
Alberto Bianco, France, CNRS; Ado Jorio, Brazil/Portugal, INL, Federal University of Minas Gerais; Glaucia Goulart Silva, Brazil, Federal University of Minas Gerais; Marcos Pimenta, Brazil, Federal University of Minas Gerais; Andrea Ferrari, UK, University of Cambridge; Elvira Fortunato, Portugal, Nova University Lisbon; Rafael Furlan, Brazil, LNNano/CNPq;
- 18:00-18:05 Workshop Closing Remarks
Elvira Fortunato, Portugal, Nova University Lisbon; Rafael Furlan, Brazil, LNNano/CNPq;
- 16:40-17:35 GIANCE Workshop , Room 3**
- 16:40-16:45 GIANCE in a nutshell
Rosa Araujo, Spain, EURECAT;
- 16:45-16:55 From R&I to demonstrated solutions
Richard Fu, UK, Northumbria University;
- 16:55-17:05 From results to exploitation
Aitor Hornés, the Netherlands, Bax & Company;

- 17:05-17:15 From exploitation to market impact
Silvia Colella, Spain, PNO Digital;
- 17:15-17:25 GIANCE in the wider graphene ecosystem
Aitor Hornés, the Netherlands, Bax & Company;
- 17:25-17:30 GIANCE: What comes next?
Rosa Araujo, Spain, EURECAT;
- 17:45-19:30 Poster Session A , Auditorium**
- 1 A UHV Route to Reactive Graphene Nanoribbon Devices
Riya Sebait; Debopriya Dutta; Michel Calame; Roman Fasel; Mickael Perrin; Gabriela Borin Barin
 - 2 Investigating the low secondary electron emission of supported graphene using the energy loss function
Khaoula EL OUAZZANI; Christophe INGUIMBERT; Lorenzo SPONZA; Nicolas FIL
 - 3 Sustainable Self-Powered Flexible Electronics Based on Two-Dimensional Materials for Reconfigurable Health and Environmental Sensing
Marco Marongiu; Teresa Gatti; Ilka Kriegel
 - 4 2D Transition Metal Dichalcogenides for Breath Monitoring and Selective Gas Sensing
Muthumalai Karuppasmay, Czech Republic, University of Chemistry and Technology; Zdenek Sofer, Czech Republic, University of Chemistry and Technology Prague
 - 5 Technique-dependent oxidation metrics in Graphene Family Materials: revisiting the meaning of the O/C ratio as an absolute probe of the oxidation level
Francesco Pellegrino; Elena Corrao; Eugenio Alladio; Fabrizio Sordello; Jörg Radnik, Germany, Federal Institute for Materials Research and Testing (BAM); Vasile Dan Hodoroaba
 - 6 Formation Mechanisms of Graphene via CVD Using Pre-patterned Catalytic Metal Thin Films on Insulating Substrates
Yukihiro Tominari; Yukihiro Tominari; Hitoshi Suzuki
 - 7 Laser-induced graphene synthesis of biopolymer-based technical textiles toward wearable electronics
Gonçalo Marques; Tomas Pinheiro; Rodrigo Martins; Carla Silva; Elvira Fortunato, Portugal, Nova University Lisbon
 - 8 Synergistic Effects of Graphene Quantum Dots and 5-Fluorouracil in Glioblastoma Cells
Kacper Kręgielewski; Marlena Zielińska-Górska; Paulina Marek-Urban; Krzysztof Durka; Marta Grodzik
 - 9 Electric Field Effect on Graphene Field-Effect Transistors Functionalization
Rita Cruz Lopes; Tiago Dias; Pedro Alpuim; Jérôme Borme
 - 10 Graphene Oxide-Silver Nanoparticles Chemical degradation: Effects on Physicochemical and Biological Properties
Theodoro da Rosa Salles; Gabrielle Aguiar Dantas; Gabriela Helena da Silva; Joice Janeri Gomes; Aline Maria Zigiotto de Medeiros; Carlos Alberto Ospina; Cleyton Alexandre Biffe; Roberto Christ Vianna Santos; Diego Stéfani Teodoro Martinez
 - 11 Smart Graphene-Iron Oxide Nanostructures for Selective Magnetic Hyperthermia Cancer Therapy: Machine Learning Insights
Ahmad Umar;
 - 12 Enhanced Electrochemical Detection of Alzheimer's Disease
KALYAN VAID; Aristides Bakandritsos, Greece, CATRIN-RCPTM, Palacký University Olomouc
 - 13 Graphene biosensing platform with an ASIC-APSoC front-end for parallel quantification of multiple neurotransmitters biomarkers
Miguel Borges; Rodrigo Wrege; Mafalda Abrantes; João Piteira; Jérôme Borme; Luis Jacinto
 - 14 Safety assessment of 2D materials: insights into skin sensitization potential
Marco Pelin, Italy, University of Trieste; Michela Carlin; Silvio Sosa; Aurelia Tubaro
 - 15 Graphene-Based Coatings for Titanium Alloy Implants
Franziska Gladitz; Yasmina Reisser; Christof Neumann; Bettina Löffler; A. Turchanin, Germany, University Jena
 - 16 Graphene Field-Effect Transistors for peptide-based Detection of Leukocytes
Irin Petrou, Germany, University of Applied Sciences Kaiserslautern; Ahmar Hasnain; Felix Wetzler; Felix Hempel; Heiko Heilmann; Bernd Bufe; Monika Saumer; Alexey Tarasov
 - 17 Machine Learning and Principal Component Analysis of Electrochemical Sensor Datasets Based on 2D Graphene Oxide and 3D Metal–Organic Framework Applicable for Disease Diagnosis
Maedeh Malekzadeh; Lorenzo Tomasi; Paolo Oliveri; Chiara Zanardi; Vincenzo Palermo, Italy, CNR ISOF
 - 18 Hybrid hydrogels based on 2D MoS₂/PEGDA/PANI for application in peripheral heart rate sensors
Jenny Flores Garcia; Ariana Bertero; Luca Ceseracciu; Bartolomeo Coppola; Teresa Gatti
 - 19 Carbon Quantum Dots and 5-Aminolevulinic Acid for Phototherapy of Triple-Negative Breast Cancer
Bruno Freitas; Silvana Silva; José Ramiro Fernandes; Joana Paredes; Fernão Magalhães; Artur Pinto, Portugal, LEPABE/FEUP - University of Porto
 - 20 Kinetic Control of Carbon Diffusion: Prolonging Catalyst Lifespan in Methane Splitting
João Diaz; Nicola Verziaggi; Vítor Pereira; Bernardo Soares, Portugal, FEUP; Ricardo Coelho; Luís Alves; Paula Dias, Portugal, UPORTO - FEUP - LEPABE; Adélio Mendes

- 21 Tunable Thermoelectric and Electronic Transport in Layered Telluride Systems via Compositional Engineering
Rasmiya Shirin Chemban, Czech Republic, University of Chemistry and Technology; Niranjana Renjith Nair; Kalyan Jyoti Sarkar; Zdenek Sofer, Czech Republic, University of Chemistry and Technology Prague
- 22 From Functionalization to Doping: Tailoring Nitrogen Sites in Graphene for Improved Oxygen Reduction Activity
C. Belman-Rodríguez; Rodrigo Ponce Perez; José Manuel Ruiz Marizcal; Gabriel Alonso Nuñez; J.M. Romo-Herrera
- 23 Functionalized Conductive Graphene as Cathode Magnesium-ion Energy Storage
Mahima Khandelwal; Vishal Shrivastav; Aristides Bakandritsos, Greece, CATRIN-RCPTM, Palacký University Olomouc
- 24 Tailored Carbon-Based materials for the Ion Crystal Sulfur Cathodes in Lithium–Sulfur Batteries
Solmaz Valizadeh; Aamir Iqbal Waidha; Marek Slavik
- 25 Harnessing Renewable Energy via Tunable Hydrovoltaic Power Generation on Cobalt Intercalated Nitrogen-doped Graphene
Subhabrata Das; Monika .; Kaushik Ghosh
- 26 Tailoring 2D Carbon Nitride Properties through Carbon Doping for Photocatalytic H₂ Generation
Montserrat Gallegos-Alegria, Mexico, CICESE; J.M. Romo-Herrera; Uriel Caudillo-Flores
- 27 Synergistic Enhancement of Melting Thermokinetics and Thermal Conductivity of 2D Material-coupled Paraffin Wax/Myristic Acid Eutectic Phase Change Material for Battery Cooling
Naveen Kumar Dabbeta;
- 28 Functionalized Carbon Nanoparticles: Properties and Potential Applications
Marta Michalska-Sionkowska; Piotr Madajski; Jakub Łangowski; Krzysztof Łukowicz; Paweł Binkowski; Piotr Grzelak; Sonnur Kurtulus; Paula Alejandra Bautista Arcila; Andrzej Olejniczak; Piotr Kamedulski
- 29 Safe and sustainable by design (SSbD) production of Niobium MAX Phases and MXenes
Valeria Acevedo García; Ana Fuentes Moldes; Daniel Otero Calleiras
- 30 Sustainable graphene electrode fabrication for energy applications: from shear force to electrochemical exfoliation
Austin Prowse; Monica F. Craciun, UK, University of Exeter; Evgeniya Kovalska
- 31 Laser-assisted continuous and patterned graphene-on-textile electrodes for energy harvesting and micro-flexible energy storage
Markos Anagnostakos; Spyros Yannopoulos, Greece, FORTH
- 32 Designing Graphene Surfaces through Noncovalent Functionalization with Aromatic Organic Molecules
C. Belman-Rodríguez; Odalys Sofía Bolaños Duran; Tomás Alberto Torres Murillo; J.M. Romo-Herrera
- 33 Overcoming Kinetic Limitations in α -Fe₂O₃ Photoanodes Using 2D NiFe Layered Double Hydroxides
Sofia Gonçalves; Sara C. Freitas; Adélio Mendes; Célio T. Sousa; João Araújo; Arlete Apolinário
- 34 Wettability Tuning of Laser-Induced Graphene for Thermal Applications
Gonçalo Rodrigues; Joana Figueira; Joana Vaz Pinto; Rodrigo Martins; Sara Silvestre; Elvira Fortunato, Portugal, Nova University Lisbon
- 35 Understanding Carbon Morphology Selectivity in Methane Splitting over Bulk Metallic Alloy Catalysts
Bernardo Soares, Portugal, FEUP; João Díaz; Luís Alves; Vítor Pereira; Ricardo Coelho; Paula Dias, Portugal, UPORTO - FEUP - LEPABE; Adélio Mendes
- 36 Magnetically Programmed Layer-by-Layer Orientation of Graphene Heterostructures for Tunable Anisotropic Properties
Ases Akas Mishra; Soumili Sahoo; Roland Kádár
- 37 Direct transfer to obtain clean graphene on flexible polydimethylsiloxane (PDMS)
Virginia Ranaweera, Finland, University of Jyväskylä; Mika Pettersson; Andreas Johansson
- 38 Electromechanical and dielectric properties of polyamide/poly(ether-block-amide) blends with incorporated graphene nanoplatelets
Mariana Martins da Silva; Peter Nockemann; Tony McNally; Oana Istrate
- 39 Microstructural Effects on the Electrical Response of rGO Aerogels
Sean Mallia, Malta, University of Malta; Anthea Agius Anastasi; Brian Zammit; Daniel A. Vella
- 40 Low-temperature synthesis of graphitic carbon supported on sepiolite clay
Ana Barra; Geanina Mihai; Oana Lazăr; Cristina Ruiz-García; Margarita Darder; Pilar Aranda; Marius Enăchescu; Cláudia Nunes; Paula Ferreira; Eduardo Ruiz-Hitzky
- 41 Graphene based Triboelectric Nanogenerators in Aerospace structures for real time mechanical monitoring
Spyros Tsiotos; Ioannis Paraskevopoulos; Despoina I. Batsouli; Antonios Vavouliotis; Spyros Yannopoulos, Greece, FORTH
- 42 Hydrodynamic exfoliation of graphene nanoplatelets by Transonic Flow Focusing
Francisco José Galindo-Rosales, Portugal, CEFT/ALiCE, Department of Chemical and Biological Engineering, Faculty of Engineering of the University of Porto; Alberto Ponce-Torres; Alejandro Rubio; José María Montanero; Miguel Ángel Herrada

- 43 Electronic Design Automation Tool for hybrid graphene - silicon integrated circuits
David Jiménez; *Francisco Pasadas; Nikolaos Mavredakis; Aníbal Pacheco-Sánchez; Pedro C. Feijoo; Ferney Chaves*
- 44 Wafer-Scale Waveguide-Integrated Graphene-based Optoelectronic Mixers
Parhizkar Shayan, Germany, AMO GmbH; *Delphine Pommier; Emmanuel Baudin; Stephan Suckow; Pierre Legagneux; Max C. Lemme*
- 45 Laser-Induced Graphene Directly Produced on Modified Polyurethanes for Dual-Mode Sensing of Physiological Parameters and Biomarkers
Vanja Vojnović; *Marko Spasenović; Kristina Radinović; Stefan Ilić; Gordana Tovilović-Kovačević; Biljana Šljukić; Marija V. Pergal*
- 46 Interference-corrected Optothermal Raman Spectroscopy for Accurate Thermal Conductivity Measurements of Suspended Graphene
Ibrahim Arsy; *Jakob Ziewer; Mike Hardy; Robert Bowman*
- 47 Substituent-Modulated BODIPY Molecular Semiconductors Integrated for Dual-Mode Optoelectronic and Gas Sensing Applications
Nikita Chaudhary; *Kaushik Ghosh*
- 48 Ultra-Sensitive Phototransistor for Weak Light Sensing and Imaging
Fida Ali; *Youqiang Huang; Fooqia Khalid; Zhipei Sun*
- 49 Real-time, accurate and precise parallel Dirac Point tracking of an array of electrolyte-gated graphene FETs for sensing applications
Andrey Nikolaenko;
- 50 Photonic crystal integrated Graphene-Silicon Schottky Diodes for IR-photodetection
Lorenzo Pettorosso; *Dmitry Polyushkin, Austria, TU Wien; Michael Horodyski; Thomas Müller*
- 51 Electrochemical Control of High-Contrast Emissivity on Graphene Nanoplatelet Surfaces
Ana Beatriz Campos Bonfim; *Laurent Divay; Julian Peiro; Marie-Blandine Martin; Bruno Dlubak; Pierre Seneor*
- 52 Flexible Heart Rate Sensor Using Laser-Induced Graphene on PDMS/PEO-b-PPO-b-PEO Substrate
Andela Gavran; *Teodora Vičentić; Marija V. Pergal; Miona Tomić; igor A. Pašti; Danica Bajuk-Bogdanović; Marko Spasenović*
- 53 Wafer Scale Plasma Enhanced Al₂O₃ Deposition on Graphene and MoS₂ using In Situ Deposited Interfacial Layer
Amir Ghiami, Germany, Oxford Instruments Plasma Technology; *Sarah Riazimehr, Germany, Oxford Instruments Plasma Technology; Harm Knoops*
- 54 From Optical Domains to Resistive Switching: Ion Migration in Single-Crystalline KxWO₃ Nanobelts
Amir Parsi; *Abdulsalam Aji Suleiman; Hafiz Muhammad Shakir; Hamid Reza Rasouli; Doruk Pehlivanoglu; Talip Serkan Kasirga*
- 55 19-dB Modulation Depth in a Double-Layer Graphene-on-Silicon-Nitride Micro-Ring Electro-Optic Modulator
Ashrafur Islam Raju; *Rasuole Lukose; Pawan Kumar Dubey; Aleksandra Kroh; Anna Peczek; Daniele Capista; Christian Wenger; Andreas Mai; Mindaugas Lukosius, Germany, IHP*
- 56 Rheology-controlled magnetic alignment of graphene epoxy nanocomposites for strain sensing
Soumili Sahoo; *Ases Akas Mishra; Roland Kádár*
- 57 Developing 2D-material detectors for applications in high-energy physics
Bauke Van Der Vorm;
- 58 Robust solution-based printed 2D memristors for Edge Computing
Alexandre Santos; *Miguel Franco; Carolina Parreira; Pedro Gabriel Moreira; Jonas Deuermeier; Rodrigo Martins; Elvira Fortunato, Portugal, Nova University Lisbon; Asal Kiazadeh; Emanuel Carlos, Brazil, State University of São Paulo*
- 59 Electrochemical sensing of water quality based on ion-selective carbon nanocomposite electrode
JH Park;
- 60 Laser-Induced Functionalization of Flexible Polyimide-Carbon Fiber for Real-time Multimodal Physiological Monitoring of Chronic Wounds
Tahir Raza; *Sergii Golovynskyi; Muneeba Basharat; Abdul Majid; Afzal Ali; Iuliia Golovynska; Amanishahen Maitusong; Mingwei Tian; Qiuyi Han; Shanduan Zhang*
- 61 From Graphene to Quantum Photonics: Thickness-Driven Light Emission in Two-Dimensional Metal Phosphochalcogenides
Berna Akgenc Hanedar;
- 62 Laser-Induced Graphene Electrodes for Sustainable Memristive Devices
Pedro Pinto; *Maria Morais; Miguel Franco; Sara Silvestre; Rodrigo Martins; Emanuel Carlos, Brazil, State University of São Paulo; Elvira Fortunato, Portugal, Nova University Lisbon*
- 63 Transfer-Free Multilayer Graphene Based Acetone Sensor With Ultraviolet Activation
Yukun Lian, the Netherlands, TU Delft; *Sten Vollebregt*
- 64 Supramolecular Chemical Sensing of Ions in Aqueous Medium Employing Molecularly Engineered Electrolyte-gated Transistors
Gabrielle Lelis; *Paolo Samorì, France, University of Strasbourg; Rafael Furlan*

- 65 Humidity-dependent electronic properties of graphene locally hydrogenated by atomic force microscopy
Jan Vymazal; Martin Konečný; Miroslav Bartošik; Jindřich Mach; Linda Supalová; Jakub Piastek; Tomáš Šikola
- 66 Transconductance monitoring as indicator of graphene Field Effect Transistor stability: SPICE and mathematical modelling
Alejandro Castro Expósito; Telma Campos Domingues; Davide Campagnol; Virginia Cendán Castillo; Miguel Cuerva Vidales; Amaia Zurutuza, Spain, Graphenea Semiconductors; Alba Centeno; Jesus Mosquera Mosquera; Alejandro Criado Fernandez
- 67 Ultracompact on-chip coiled waveguide-integrated photodetectors enabled by 2D materials with enhanced responsivity
Fooqia Khalid; Maaz Qureshi; Harri Lipsanen
- 68 Low Power Solution-based 2D Memristors using Green Solvents
Alexandre Santos; Pedro Gabriel Moreira; Carolina Parreira; Elvira Fortunato, Portugal, Nova University Lisbon; Rodrigo Martins; Asal Kiazadeh; Miguel Franco; Emanuel Carlos, Brazil, State University of São Paulo
- 69 Computationally Efficient Characterization of Electrolyte-gated Graphene Field-Effect Transistors
Benjamin Strauß; Ruben Lanche; Felix Hempel; Klaus-Ingmar Pfrepper; Karsten Seidl; Alexey Tarasov; Jenny Kehrbusch
- 70 Low-power 2D carbon-based carbon monoxide sensors
Aku Lampinen; Natalie Galfe; Johannes Ostermair; Tanja Stimpel-Lindner; Georg Duesberg
- 71 Skyrmionic Transport and First Order Phase Transitions in Twisted Bilayer Graphene Quantum Hall Ferromagnet
Vineet Pandey; Vidya Kochat
- 72 Synthesis and Electrochemical Performance of Silicane and Germanane Electrodes for Magnesium-Ion Batteries
Filipe Rocha; Zdenek Sofer, Czech Republic, University of Chemistry and Technology Prague; Tomáš Hartman
- 73 Catalyst-Controlled Aspect Ratio Engineering of Electrical Transport in Upcycled Graphene
Nihan Birgun, Türkiye; Havva Baskan-Bayrak; Israr Ahmed; Ebrahim Al Hajri; Yahya Zweiri; Yarjan Abdul Samad; Burcu Saner Okan, Turkey, Euronova
- 74 Preparation and structural and functional properties investigation of NbSe₂ thin films fabricated via Liquid exfoliation.
Bartosz Wrześniewski; Anna Lapinska; Anna Magnuszewska
- 75 Unveiling blue phosphorene as a potential contender for the Pt (II)-based anticancer drug delivery application
Dhara Raval; Frantisek Karlicky
- 76 Electrical switching Berry phase in Bernal bilayer graphene quantum dots
Ke Lv;
- 77 Energetics and morphologies of transition-metal dichalcogenide nanoscrolls
Susumu Okada; Yanlin Gao; Maruyama Mina; Yasumitsu Miyata
- 78 Energetics and electronic structures of graphene sandwiched by monolayer hexagonal boron nitride
Maruyama Mina; Susumu Okada
- 79 Energetics of hexagonal boron nitride nanoflakes on hexagonal boron nitride sheet
Nadia Sultana; Yanlin Gao; Maruyama Mina; Susumu Okada
- 80 Field-screening Ability of Pentagonal sp² Carbon Networks
Minori Tachibana; Maruyama Mina; Yanlin Gao; Susumu Okada; Tomoe Yayama
- 81 Energetics and electronic structure of NbS₂ nanoscroll
Yanlin Gao; Maruyama Mina; Susumu Okada
- 82 Thermoelectric Studies of Heavy Fermion Physics in Magic-Angle Twisted Bilayer Graphene
Ranit Dutta; Yuxiao Wu; Carl Hudeczek; Egor M. Agapov; Giorgio Di Battista; Dmitri K. Efetov
- 83 Imaging Spectroscopic Ellipsometry with Clustering for 2D Materials
Sebastian Schaper;
- 84 Tunable excitonic emission and valley polarization in nanodiamond functionalized monolayer MoS₂
Akanksha Agarwal; Rajarshi Roy; František Hájek; Dhananjay K Sharma; Štěpán Potocký; Alexander Kromka
- 85 Graphene-Encapsulated Transition-Metal Iodides as Tunable van der Waals Heterostructures
Mirali Jafari; Anna Dyrda
- 86 Grain Boundary-Driven Transport Characteristics in Polycrystalline Graphene Field Effect Transistors
Eun Kyung Lee; Taejun Gu; Dongmok Whang; Byoung Lyong Choi
- 87 Influence of Li and Cu Doping on the Structural and Electrical Properties of MoS₂ Films
Michaela Sojková; Igor Piš; Jana Hrdá; Timea Krajčovičová; Karol Vegso; Peter Siffalovic; Lenka Pribusová Slušná; Martin Hulman; Edmund Dobročka; Federica Bondino

- 88 Tuning interlayer coupling in twisted bilayer graphene at an atomic level
Yueyang Wang; Hongxia Xue; Dong-Keun Ki
- 89 Phagocytosis-Mediated Microglial Activation at Graphene Surfaces
Pratika Rai; Robert Subirana Slotos; Ahmar Hasnain; Marina Mantellatto Grigoli; Irini Petrou, Germany, University of Applied Sciences Kaiserslautern; Mario Dejung; Jia-Xuan Chen; Oliver Tüscher; Alexey Tarasov; Kristina Endres
- 90 Deep-UV bleaching of charge disorder in encapsulated graphene
Ned Hayward; Daniil Domaretskiy; Van Huy Nguyen; Simone Benaglia; Kornelia Indykiewicz; Hadrien Vignaud; Jing Zhang; Kenji Watanabe; Takashi Taniguchi; Vladimir Fal'ko; Laura Fumagalli; Leonid A. Ponomarenko; Irina V. Grigorieva; Andre K. Geim, UK, The University of Manchester
- 91 Wafer-Scale Metal-Organic Chemical Vapor Deposition (MOCVD) of hBN/WSe₂ Heterostructures
Yibing Wang; Zhaodong Wang; Songyao Tang; Yingfang Ding; Tobias Deußen; Susanne Hoffmann-Eifert; Michael Heuken; Andrei Vescan; Holger Kalisch
- 92 Preparation and structural and functional characterization of NbSe₂/MoS₂ heterostructures obtained by liquid-phase exfoliation
Anna Magnuszewska; Bartosz Wrzeźniewski; Anna Lapinska
- 93 2D, or Not 2D, That Is the Question: Insights Into the Stability of Novel 2D Materials
Tomoko Yokaichiya, Germany, Fritz-Haber-Institut der MPG, Berlin; Karsten Reuter; Hendrik H. Heenen
- 94 Protein functionalization of femtosecond laser processed graphene surface
Satu Sutinen; Aku Lampinen; Andreas Johansson; Stefanie Sydlik; Mika Pettersson
- 95 Density functional theory simulations of hydrogenated graphene supported by machine learning
Jiří Richter; Miroslav Bartošík; Ondřej Špaček; David Nezval; Petr Šesták; Miroslav Černý; Tomáš Šíkola
- 96 Transmission Electron Microscopy Study of Graphene-Mediated Growth of Few-Layer Platinum Diselenide
Timea Krajčovičová; Peter Kotrusz; Igor Piš; Viera Skákalová; Agáta Laurenčíková; Martin Hulman; Kimmo Mustonen; Michaela Sojková
- 97 Selective Nanostructure Growth on Suspended Graphene Membranes
Jindřich Mach; Adam Novotný; Miroslav Bartošík; Linda Supalová; Vojtěch Mikerásek; Jakub Šťastný; Ondřej Špaček; Marek Kostka; Tomáš Šíkola
- 98 Graphene-based magnetoelastic biosensor for COVID-19 serodiagnosis
W.R.F. Silva; W.R.F. Silva; L.C.P. Monteiro; M.C. Costa; R.V.A. Boaventura; E.N.D. de Araújo; R.O.R.R. Cunha; T.A. de O Mendes; R.G. Lacerda

18:05-19:30 EU-Brazil Collaboration: Brazilian Institutional Posters , Exhibition

- 1 FAPESP - one of Brazil's leading research funding agencies
Carlos Graeff, Brazil, Sao Paulo State University & FAPESP;
- 2 CTNANO/UFMG - Technology Center for Nanomaterials and Graphene of Federal University of Minas Gerais - EMBRAP II Unit
Glauro Goulart Silva, Brazil, Federal University of Minas Gerais;
- 3 Advanced Instruments for Graphene Characterization
Hudson Miranda, Brazil, FabNS;
- 4 Brazilian National Institute of Science and Technology (INCT) for Nanocarbon and 2D Materials
Marcos Pimenta, Brazil, Federal University of Minas Gerais;
- 5 From Research to Industrial Applications: The UCSGRAPHENE Innovation Ecosystem
Daniele Perondi, Brazil, UCSGRAPHENE;
- 6 Brazilian Graphene and Advanced Materials Ecosystem
Rafael Furlan;
- 7 Mackenzie Institute for Research in Graphene and Nanotechnologies
Benedito G. Aguiar Neto; Camila Maroneze; Guilhermino José Macêdo Fachine, Brazil, MackGraphe;

Wednesday 23 September 2026

07:00-07:45 Graphene Week Social Run , Exhibition

09:00-10:25 Keynote & Plenary , Auditorium

09:00-09:35 Graphene for Future Electric Grids

Anna M. Andersson, Sweden, ABB;

09:35-10:00 Graphene Bioelectronics, Electronic Tattoos, and Biosensors

Dmitry Kireev, USA, The University of Massachusetts;

10:00-10:25 Graphene based biosensors: controlling the interface

Georg S. Duesberg, Germany, University of the Bundeswehr Munich;

09:35-10:30 How to get published , Room 1

Siddharth Jethwa, UK, IOP Publishing;

- 10:25-10:30 Innovation , Auditorium**
Kari Hjelt, Sweden, Chalmers Industriteknik;
- 10:30-11:00 Exhibition & Break , Auditorium**
- 11:00-12:35 7. Next2Digits: Photonics & Optoelectronics , Auditorium**
- 11:00-11:20 Preparation for Mass Production of Graphene-based Devices in Silex 200 mm Wafer MEMS Fab
Andreas Sandin, Sweden, Silex Microsystem; Ebba Edqvist; Peter Ågren; Lucas Held; Gregory Pandraud; Yu Tian; Stephan Schröder; Gustav Lindgren; Niklas Svedin
- 11:20-11:35 Advanced transfer techniques based on wafer scale CVD Graphene for next-generation electronics and photonics applications
Alba Centeno; Amaia Zurutuza, Spain, Graphenea Semiconductors; Amaia Rebollo; Elias Torres; Amaia Pesquera; Katerina Magoula; Filimon Zacharatos; Ioanna Zergioti
- 11:35-11:50 Coherent detection using graphene photodetector gating
Gregory Pandraud;
- 11:50-12:05 Wafer-scale graphene electro-absorption modulators integrated on SiN waveguides with high-speed operation
Rodolfo Canet Albiach; Suvi-Tuuli Varjamo, Finland, VTT; Tarusisko Hirvenoja; Kimmo Rutanen; Markku Kapulainen; Amaia Zurutuza, Spain, Graphenea Semiconductors; Alba Centeno; Miika Soikkeli; Olli-Pekka Kilpi
- 12:05-12:20 Technology Platform for Wafer-Scale Integration of Dual Single-Layer Graphene E/O Modulators on SiN Waveguides
Rasuole Lukose; Ashrafal Islam Raju; Pawan Kumar Dubey; Daniele Capista; Marco Lisker; Andreas Mai; Mindaugas Lukosius, Germany, IHP
- 12:20-12:35 Wafer-scale high speed optoelectronic graphene mixers
Delphine Pommier; Parhizkar Shayan, Germany, AMO GmbH; Emmanuel Baudin; Stephan Suckow; Pierre Legagneux; Max Lemme
- 11:00-12:35 8. Manufacturing, Scale-Up & Industrialisation , Room 1**
- 11:00-11:20 A self-reliance framework for identifying strategic advanced materials
Adam G. Kelly, Portugal, CENIMAT, Nova University Lisbon; Cristina Teixeira; Cian Gabbett; Kevin Synnatschke; Jonathan N. Coleman; Zdenek Sofer, Czech Republic, University of Chemistry and Technology Prague; Manuel J. Mendes; Elvira Fortunato, Portugal, Nova University Lisbon; Rodrigo Martins; Luis Pereira
- 11:20-11:35 Laser-patterning and synthesis of graphene and graphene-based materials
Alexandre F. Carvalho, Portugal, i3N / University of Aveiro; Ana Almeida; Edgar Bamberg; Rita Matos; António José S. Fernandes; Florinda M. Costa
- 11:35-11:50 Laser patterning of graphene goes nanoscale
Mika Pettersson; Gour Mohan Das; Eero Hulkko; Pasi Myllyperkiö; Andreas Johansson
- 11:50-12:05 Wafer-scale integration of Graphene in a CMOS compatible fab
Tae Jin Yoo; Steven Brems; Inge Asselberghs, Belgium, imec; Deniz Sabuncuoglu Tezcan
- 12:05-12:20 Plasma-Engineered Vertical Graphene and Hybrid Nanocarbons for High-Performance Aluminium-Ion Batteries
Uroš Cvelbar; Neelakandan Marath Santhosh, Slovenia, Jožef Stefan Institute; Ruiqi Chen; Janez Zavašnk; Jinhua Sun, Sweden, Chalmers University of Technology; Eva KOVACEVIC, France, GREMI CNRS&University of Orleans
- 12:20-12:35 Area-Selective Atomic Layer Deposition of Metals on Laser-Oxidized Graphene
Aleix Villegas Gomez; Maryam Naderpour; Sundas Ismaeel; Mikko Ritala; Andreas Johansson; Mika Pettersson
- 11:00-11:10 Innovation Forum Opening Session , Room 2**
Chair: Kari Hjelt, Sweden, Chalmers Industriteknik
Ana Cristina Pires, Portugal, Member of the Board of Directors of the Northern Region of the Order of Engineers, INESC TEC Researcher, First Portuguese Woman Scientist-Astronaut, CAMões Mission Commander;
- 11:10-12:35 Innovation Forum: Commercialisation of Graphene Applications , Room 2**
Chair: Kari Hjelt, Sweden, Chalmers Industriteknik
Elvira Villaro, Spain, Avanzare; Jan Wahlberg, Sweden, TetraPak; Erik Johansson, Sweden, ABB; Paulo Lage, Portugal/UK, Airbus; Francesco Bonaccorso, Italy, BeDimensional; Siim-Erik Alamaa, Estonia & Germany, Skeleton Technologies;
- 11:10-11:27 Making graphene mainstream: avanzare's journey towards mass adoption
Elvira Villaro, Spain, Avanzare; Julio Gómez; Mónica Martínez; Carlota Eguiluz
- 11:27-11:44 Graphene – from interesting material to application
Jan Wahlberg, Sweden, TetraPak;
- 11:44-12:01 Graphene in Switching Devices: Lessons Learned and Opportunities Beyond the CircuitBreakers Spearhead Project
Erik Johansson, Sweden, ABB; Su Zhao; Anna Andersson

- 12:01-12:18 The aero-structures conductivity properties challenge
Paulo Lage, Portugal/UK, Airbus; Paulo Lage, Portugal/UK, Airbus
- 12:18-12:35 The route toward industrial production of few-layer graphene
Francesco Bonaccorso, Italy, BeDimensional;
- 12:35-13:30 Exhibition & Lunch , *Exhibition*
- 12:45-14:20 EU Funding Matchmaking Session , *Exhibition*
- 1 EU Funding Matchmaking Topic: Energy systems and climate transition technologies
Anna Aleksandrova, Germany, HU Berlin; Beatriz Alonso, Spain, Graphenea SA; Anna M. Andersson, Sweden, ABB; Ivana Cavaliere, Spain, ICFO; Atasi Chatterjee, Germany, National Metrology Institute of Germany, PTB Braunschweig; Rasmiya Shirin Chemban, Czech Republic, University of Chemistry and Technology; Silvia Colella, Spain, PNO Digital; Pedro Costa, Portugal, INL; Claudia Delgado SIMAO, Belgium, University of Antwerp; Paula Dias, Portugal, UPORTO - FEUP - LEPABE; Marlene Faria, Portugal, FI Group by EPSA Portugal; Bruno Figueiredo, Portugal, Graphenest SA; Aristotelis Folas, Greece, Q-PLAN INTERNATIONAL ADVISORS PC; Bruna Fonseca, Portugal, FI Group by EPSA Portugal; Michael Gibney, UK, Royce Institute Catalyst Programme; Daniil Karnaushenko, Germany, Research Center MAIN TU Chemnitz; Adam G. Kelly, Portugal, CENIMAT, Nova University Lisbon; Sree Raj Kootumvathukkal Anil Raj, Czech Republic, University of Chemistry and Technology Prague; Eva KOVACEVIC, France, GREMI CNRS&University of Orleans; Jitender Kumar, India, TACC Limited; Kerli Liivand, Estonia, Jälle Technologies; Sean Mallia, Malta, University of Malta; Thuany Maraschin, Brazil, XGraphene; Neelakandan Marath Santhosh, Slovenia, Jožef Stefan Institute; Eduardo Marques, Portugal, Faculty of Sciences - University of Porto; Maria Martins, Portugal, Citeve; Roshen Mathura, the Netherlands, GraphenePioneer BV; Šarūnas Meškinis, Lithuania, Institute of Materials Science of Kaunas University of Technology; Mina Namvari, Türkiye, Sabanci University SUNUM; Marco Pelin, Italy, University of Trieste; Pablo Pou Álvarez, Spain, Universidade de Vigo; Virginia Ranaweera, Finland, University of Jyväskylä; Apurba Ray, Germany, German Aerospace Center; Maite Riaño Junquera, Spain, CSIC; Sascha Sadewasser, Portugal, INL; Gilda Santos, Portugal, CITEVE - Technological Centre for the Textile and Clothing Industries of Portugal; Manuel Ferreira dos Santos, Portugal, FCT; Abhay Shivayogimath, Denmark, 2D; Vikash Singh, India, IIT ROPAR; Bernardo Soares, Portugal, FEUP; Jinhua Sun, Sweden, Chalmers University of Technology; Thais Tasso Guaraldo, UK, Coventry University; Joana S. Teixeira, Portugal, REQUIMTE/LAQV - Department of Chemistry and Biochemistry, Faculty of Sciences - University of Porto; Stefania Vitale, ESF, France, Session Coordinator; Ioana Carmen Vladu, Austria, RHP-Technology GmbH; Laura von Lüders, Germany; Tomoko Yokaichiya, Germany, Fritz-Haber-Institut der MPG, Berlin; Aldo Zarbin, Brazil, Federal University of Paraná;

2 EU Funding Matchmaking Topic: Manufacturing and industrial innovation

Anna Aleksandrova, Germany, HU Berlin; Inge Asselberghs, Belgium, imec; Tom Badcock, UK, Paragraf; Nihan Birgun, Türkiye; Ana Luiza C. Pereira, Brazil, University of Campinas - UNICAMP; Alexandre F. Carvalho, Portugal, i3N / University of Aveiro; Ivana Cavaliere, Spain, ICFO; Silvia Colella, Spain, PNO Digital; Gianluigi Creonti, Italy, Crossfire; Claudia Delgado SIMAO, Belgium, University of Antwerp; Paula Dias, Portugal, UPORTO - FEUP - LEPABE; Bruno Figueiredo, Portugal, Graphenest SA; Bruna Fonseca, Portugal, FI Group by EPSA Portugal; Amir Ghiami, Germany, Oxford Instruments Plasma Technology; Armin Gholizadeh, UK, University of Leeds-Bragg Centre for Materials Research at university of leeds; Meriem Gouasmi, Italy, University of Turin (unito); Francesco Greco, Italy, Sant'Anna School of Advanced Studies; Facundo Gutierrez, Germany, BORN GmbH; Daniil Karnaushenko, Germany, Research Center MAIN TU Chemnitz; Ronald Klomp, the Netherlands, NLR - Netherlands Aerospace Centre; Eva KOVACEVIC, France, GREMI CNRS&University of Orleans; Jitender Kumar, India, TACC Limited; Paulo Lage, Portugal/UK, Airbus; Kerli Liivand, Estonia, Jälle Technologies; Maria Macedo, Portugal, FI Group by EPSA Portugal; Thuany Maraschin, Brazil, XGraphene; Diana Marcano, Poland, Łukasiewicz Research Network; Mateusz Marczewski, Poland, Łukasiewicz Research Network - Poznań Institute of Technology; Maria Martins, Portugal, Citeve; Roshen Mathura, the Netherlands, GraphenePioneer BV; Šarūnas Meškinis, Lithuania, Institute of Materials Science of Kaunas University of Technology; Hudson Miranda, Brazil, FabNS; Abbas Mohtashami, the Netherlands, TNO; Artur Pinto, Portugal, LEPABE/FEUP - University of Porto; Babita Negi, Germany, RWTH Aachen University; Marco Pelin, Italy, University of Trieste; Rui Pereira, Portugal, HyCarb; Irini Petrou, Germany, University of Applied Sciences Kaiserslautern; Dmitry Polyushkin, Austria, TU Wien; Virginia Ranaweera, Finland, University of Jyväskylä; Apurba Ray, Germany, German Aerospace Center; Maite Riaño Junquera, Spain, CSIC; Sarah Riazimehr, Germany, Oxford Instruments Plasma Technology; Irek Rosłoń, the Netherlands, Soundcell; Sascha Sadewasser, Portugal, INL; Andreas Sandin, Sweden, Silex Microsystem; Burcu Saner Okan, Turkey, Euronova; Gilda Santos, Portugal, CITEVE - Technological Centre for the Textile and Clothing Industries of Portugal; Manuel Ferreira dos Santos, Portugal, FCT; Maksim Sargsyan, Armenia, Yerevan State University; Abhay Shivayogimath, Denmark, 2D; Vikash Singh, India, IIT ROPAR; Jinhua Sun, Sweden, Chalmers University of Technology; Harriet van der Vliet, UK, Oxford Instruments Plasma Technology; Gerard J. VERBIEST, the Netherlands, TU Delft; Elvira Villaro, Spain, Avanzare; Ioana Carmen Vladu, Austria, RHP-Technology GmbH; Laura von Lüders, Germany; NianJheng WU, Germany, AIXTRON SE; Sofia Öiseth, Session Chair, Chalmers Industriteknik, Sweden;

- 3 EU Funding Matchmaking Topic: Materials for sustainable industry and circular economy
Anna Aleksandrova, Germany, HU Berlin; Beatriz Alonso, Spain, Graphenea SA; Anna M. Andersson, Sweden, ABB; Nihan Birgun, Türkiye; Ana Luiza C. Pereira, Brazil, University of Campinas - UNICAMP; Davide Campi, Italy, University of Milano-Bicocca; Alexandre F. Carvalho, Portugal, i3N / University of Aveiro; Ivana Cavaliere, Spain, ICFO; Atasi Chatterjee, Germany, National Metrology Institute of Germany, PTB Braunschweig; Rasmiya Shirin Chemban, Czech Republic, University of Chemistry and Technology; Silvia Colella, Spain, PNO Digital; Gianluigi Creonti, Italy, Crossfire; Volodymyr Deineka, Latvia, University of Latvia; Claudia Delgado SIMAO, Belgium, University of Antwerp; Paula Dias, Portugal, UPORTO - FEUP - LEPABE; Marlene Faria, Portugal, FI Group by EPSA Portugal; Aristotelis Folas, Greece, Q-PLAN INTERNATIONAL ADVISORS PC; Bruna Fonseca, Portugal, FI Group by EPSA Portugal; Armin Gholizadeh, UK, University of Leeds- Bragg Centre for Materials Research at university of Leeds; Michael Gibney, UK, Royce Institute Catalyst Programme; Glauro Goulart Silva, Brazil, Federal University of Minas Gerais; Francesco Greco, Italy, Sant'Anna School of Advanced Studies; Joana Guerreiro, Portugal; Facundo Gutierrez, Germany, BORN GmbH; Daniela Iacopino, Ireland, Tyndal National Institute, University College Cork; Daniil Karnaushenko, Germany, Research Center MAIN TU Chemnitz; Adam G. Kelly, Portugal, CENIMAT, Nova University Lisbon; Eva KOVACEVIC, France, GREMI CNRS&University of Orleans; Jitender Kumar, India, TACC Limited; Paulo Lage, Portugal/UK, Airbus; Simone Leva, Italy, Kerakoll SpA; Kerli Liivand, Estonia, Jälle Technologies; Shishi Liu, Germany, Institute for Chemistry and Biochemistry FUB; Maria Macedo, Portugal, FI Group by EPSA Portugal; Thuany Maraschin, Brazil, XGraphene; Neelakandan Marath Santhosh, Slovenia, Jožef Stefan Institute; Mateusz Marczewski, Poland, Łukasiewicz Research Network - Poznań Institute of Technology; Eduardo Marques, Portugal, Faculty of Sciences - University of Porto; Maria Martins, Portugal, Citeve; Roshen Mathura, the Netherlands, GraphenePioneer BV; Kalaiarasan Meganathan, Czech Republic, University of Chemistry and Technology; Šarūnas Meškinis, Lithuania, Institute of Materials Science of Kaunas University of Technology; Hudson Miranda, Brazil, FabNS; Artur Pinto, Portugal, LEPABE/FEUP - University of Porto; Mina Namvari, Türkiye, Sabanci University SUNUM; Andreia Oliveira, Portugal, Graphenest; Radmila Panajotovic, Serbia, Institute of physics Belgrade; Marco Pelin, Italy, University of Trieste; Rui Pereira, Portugal, HyCarb; Dmitry Polyushkin, Austria, TU Wien; Pablo Pou Álvarez, Spain, Universidade de Vigo; Virginia Ranaweera, Finland, University of Jyväskylä; Apurba Ray, Germany, German Aerospace Center; Maite Riaño Junquera, Spain, CSIC; Burcu Saner Okan, Turkey, Euronova; Gilda Santos, Portugal, CITEVE - Technological Centre for the Textile and Clothing Industries of Portugal; Manuel Ferreira dos Santos, Portugal, FCT; Maksim Sargsyan, Armenia, Yerevan State University; Abhay Shivayogimath, Denmark, 2D; Mariana Silva, UK, Queen's University Belfast; Bernardo Soares, Portugal, FEUP; Jinhua Sun, Sweden, Chalmers University of Technology; Thais Tasso Guaraldo, UK, Coventry University; Joana S. Teixeira, Portugal, REQUIMTE/LAQV - Department of Chemistry and Biochemistry, Faculty of Sciences - University of Porto; Harriet van der Vliet, UK, Oxford Instruments Plasma Technology; Elvira Villaro, Spain, Avanzare; Stefania Vitale, ESF, France, Session Coordinator; Ioana Carmen Vladu, Austria, RHP-Technology GmbH; Laura von Lüders, Germany; Junhua Xu, Finland, Geological Survey of Finland; Spyros Yannopoulos, Greece, FORTH; Sofia Öiseth, Session Chair, Chalmers Industriteknik, Sweden;
- 4 EU Funding Matchmaking Session Topic: Built environment and constructions
Anna Aleksandrova, Germany, HU Berlin; Beatriz Alonso, Spain, Graphenea SA; Silvia Colella, Spain, PNO Digital; Marlene Faria, Portugal, FI Group by EPSA Portugal; Bruna Fonseca, Portugal, FI Group by EPSA Portugal; Daniil Karnaushenko, Germany, Research Center MAIN TU Chemnitz; Jitender Kumar, India, TACC Limited; Simone Leva, Italy, Kerakoll SpA; Kerli Liivand, Estonia, Jälle Technologies; Maria Macedo, Portugal, FI Group by EPSA Portugal; Roshen Mathura, the Netherlands, GraphenePioneer BV; Virginia Ranaweera, Finland, University of Jyväskylä; Manuel Ferreira dos Santos, Portugal, FCT; Elvira Villaro, Spain, Avanzare;

- 5 EU Funding Matchmaking Session Topic: Digital, AI, and emerging technologies
Anna M. Andersson, Sweden, ABB; Inge Asselberghs, Belgium, imec; Maria Camarena Perez, the Netherlands, TU Delft; Alexandre F. Carvalho, Portugal, i3N / University of Aveiro; Davide Campi, Italy, University of Milano-Bicocca; Ivana Cavaliere, Spain, ICFO; Rasmiya Shirin Chemban, Czech Republic, University of Chemistry and Technology; Silvia Colella, Spain, PNO Digital; Saroj P. Dash, Sweden, Chalmers University of Technology; Claudia Delgado SIMAO, Belgium, University of Antwerp; Roberta Fabbri, Italy, Institute for Organic Synthesis and Photoreactivity (ISOF)-National Research Council of Italy (CNR); Marlene Faria, Portugal, FI Group by EPSA Portugal; Bruna Fonseca, Portugal, FI Group by EPSA Portugal; Amir Ghiami, Germany, Oxford Instruments Plasma Technology; Michael Gibney, UK, Royce Institute Catalyst Programme; Joana Guerreiro, Portugal; Daniil Karnaushenko, Germany, Research Center MAIN TU Chemnitz; Adam G. Kelly, Portugal, CENIMAT, Nova University Lisbon; Olaf Kievit, the Netherlands, TNO; Eva KOVACEVIC, France, GREMI CNRS&University of Orleans; Jitender Kumar, India, TACC Limited; Samuel Lara-Avila, Sweden, Chalmers University of Technology; Yukun Lian, the Netherlands, TU Delft; Eduardo Marques, Portugal, Faculty of Sciences - University of Porto; Maria Macedo, Portugal, FI Group by EPSA Portugal; Maria Martins, Portugal, Citeve; Kalaiarasan Meganathan, Czech Republic, University of Chemistry and Technology; Šarūnas Meškinis, Lithuania, Institute of Materials Science of Kaunas University of Technology; Hudson Miranda, Brazil, FabNS; Abbas Mohtashami, the Netherlands, TNO; Elena Molokanova, USA, University of California Irvine / NeurANO; Andreas Sandin, Sweden, Silix Microsystem; Ana Nioac de Salles, Germany, Fraunhofer Institute for Chemical Technology ICT; Andreia Oliveira, Portugal, Graphenest; Dmitry Polyushkin, Austria, TU Wien; Jörg Radnik, Germany, Federal Institute for Materials Research and Testing (BAM); Apurba Ray, Germany, German Aerospace Center; Maite Riaño Junquera, Spain, CSIC; Sarah Riazimehr, Germany, Oxford Instruments Plasma Technology; Irek Rosłoń, the Netherlands, Soundcell; Gilda Santos, Portugal, CITEVE - Technological Centre for the Textile and Clothing Industries of Portugal; Manuel Ferreira dos Santos, Portugal, FCT; Abhay Shivayogimath, Denmark, 2D; Daniel Steinmeyer, Germany, Volkswagen AG; Ivan Vera Marun, UK, The University of Manchester; Gerard J. VERBIEST, the Netherlands, TU Delft; Stefania Vitale, ESF, France, Session Coordinator; Ioana Carmen Vladu, Austria, RHP-Technology GmbH; Tomoko Yokaichiya, Germany, Fritz-Haber-Institut der MPG, Berlin;

7 ERC Synergy Grants

Anna Aleksandrova, Germany, HU Berlin; Tom Badcock, UK, Paragraf; Maria Camarena Perez, the Netherlands, TU Delft; Davide Campi, Italy, University of Milano-Bicocca; Alexandre F. Carvalho, Portugal, i3N / University of Aveiro; Atasi Chatterjee, Germany, National Metrology Institute of Germany, PTB Braunschweig; Silvia Colella, Spain, PNO Digital; Pedro Costa, Portugal, INL; Claudia Delgado SIMAO, Belgium, University of Antwerp; Paula Dias, Portugal, UPORTO - FEUP - LEPABE; Roberta Fabbri, Italy, Institute for Organic Synthesis and Photoreactivity (ISOF)-National Research Council of Italy (CNR); Rafael Furlan, Brazil, LNNano/CNPEM; Francisco José Galindo-Rosales, Portugal, CEFT/ALiCE, Department of Chemical and Biological Engineering, Faculty of Engineering of the University of Porto; Montserrat Gallegos-Alegria, Mexico, CICESE; Michael Gibney, UK, Royce Institute Catalyst Programme; Francesco Greco, Italy, Sant'Anna School of Advanced Studies; Vilhelmiina Hännikäinen, Finland, University of Tampere; Daniil Karnaushenko, Germany, Research Center MAIN TU Chemnitz; Muthumalai Karuppasamay, Czech Republic, University of Chemistry and Technology; Eva KOVACEVIC, France, GREMI CNRS&University of Orleans; Jitender Kumar, India, TACC Limited; Samuel Lara-Avila, Sweden, Chalmers University of Technology; Yukun Lian, the Netherlands, TU Delft; Sean Mallia, Malta, University of Malta; Šarūnas Meškinis, Lithuania, Institute of Materials Science of Kaunas University of Technology; Artur Pinto, Portugal, LEPABE/FEUP - University of Porto; Mina Namvari, Türkiye, Sabanci University SUNUM; Susanna Narkilahti, Finland, University of Tampere; Pablo Pou Álvarez, Spain, Universidade de Vigo; Virginia Ranaweera, Finland, University of Jyväskylä; Apurba Ray, Germany, German Aerospace Center; Maite Riaño Junquera, Spain, CSIC; Noelia Rubio Carrero, Spain, University of Alcalá (Madrid); Sascha Sadewasser, Portugal, INL; Burcu Saner Okan, Turkey, Euronova; Manuel Ferreira dos Santos, Portugal, FCT; Maksim Sargsyan, Armenia, Yerevan State University; Mariana Silva, UK, Queen's University Belfast; A. Turchanin, Germany, University Jena; Gerard J. VERBIEST, the Netherlands, TU Delft;

14:00-15:35 9. Spintronics & Quantum Technologies , Auditorium

14:00-14:20 Two-Dimensional Magnetic and Dielectric Materials: Growth, Modification, and Applications in Electronics
Zdenek Sofer, Czech Republic, University of Chemistry and Technology Prague;

14:20-14:35 Tuning the magnetic properties of liquid-phase processed graphene through solvent-assisted boron doping
Yenny Hernandez; Sergio Morales; Johans Canaval; Viviana Gomez; Gustavo A. Orozco

14:35-14:50 Magnetic characterization of 2D magnets by X-ray spectroscopies
Giuseppe Buccoliero; Marli dos Reis Cantarino; Alois Arrighi; Pâmella Vasconcelos Borges Pinho; Roberto Sant; Tristan Riccardi; Anita Polli; Rachel Nickel; Johann Coraux; Nicholas B. Brookes

14:50-15:05 High-throughput searches for low-periodic substructures in crystalline solids
Davide Campi, Italy, University of Milano-Bicocca; Pavel Zolotarev; Davide Proserpio

- 15:05-15:20 Polymer-Free Assembly of van der Waals Heterostructures for Scanning Tunneling Microscopy with Muscovite Mica Stamps
Han Xuan Wong; Junjie Yu; Adam Cronin; Felix Fischer
- 15:20-15:35 Encapsulation techniques to improve the long-term stability of Graphene based Quantum Hall Resistance standards
Atasi Chatterjee, Germany, National Metrology Institute of Germany, PTB Braunschweig; Mattias Kruskopf; Johanna Lengsfeld; Peer Lars Heydolph; Mariela Menghini; Manuel R. Osorio; Fernando J. Urbanos; Enrique Canovas; Daniel Granados; Hansjörg Scherer
- 14:00-15:35 10. Bioelectronics & Neural Interfaces , Room 1**
- 14:00-14:20 Laser Induced Graphene for Soft Sensors and Robotic
Francesco Greco, Italy, Sant'Anna School of Advanced Studies;
- 14:20-14:35 Flexible Electrolyte-Gated Graphene FET Arrays For Wearable and Implantable Neurochemical Sensing
Tiago Dias; Tiago Pereira; Mafalda Abrantes; Mohammadmahdi Faraji; João Mouro; Pedro Alpuim; Jérôme Borme; Luis Jacinto
- 14:35-14:50 From Laser-Induced Graphene to Porous Boron-Doped Diamond: Opportunities in Neural Interfacing
Ana Rita Almeida; Nizar Ben Moussa; Gaëlle Lissorgues; António José S. Fernandes; Florinda M. Costa; Clément Hébert; Anne Quesnel-Hellmann; Blaise Yvert; Alexandre F. Carvalho, Portugal, i3N / University of Aveiro; Lionel Rousseau
- 14:50-15:05 Nanotexturised transfer-free, multilayer graphene as neural electrodes
Maria Camarena Perez, the Netherlands, TU Delft; Christos Pavlou; Jay Husband; Katarina Kovačević; Zhenyu Gao; Lukas Holzapfel; Yifeng Zhao; Olindo Isabella; Elena Pinilla Cienfuegos; Sten Vollebregt; Vasiliki Giagka
- 15:05-15:20 Graphene Optoelectronics for Activity-Driven, Light-Controlled Accelerated Maturation of Human Stem Cell-Derived Neural Systems
Alex Savtchenko; Teng Zhou; Pragna Vasupal; Honieh Hemati; Alysson R. Muotri; Elena Molokanova, USA, University of California Irvine / NeurANO
- 15:20-15:35 Graphene oxide-based bioelectronic interfaces for glial cell modulation
Roberta Fabbri, Italy, Institute for Organic Synthesis and Photoreactivity (ISOF)-National Research Council of Italy (CNR); Alessandra Scidà; Emanuela Saracino; Giorgia Conte; Alessandro Kovtun; Andrea Candini; Denisa Kirdajova; Diletta Spennato; Valeria Marchetti; Chiara Lazzarini; Aikaterini Konstantoulaki; Paolo Dambruoso; Marco Caprini; Michele Muccini; Mauro Ursino; Miroslava Anderova; Emanuele Treossi; Roberto Zamboni; Vincenzo Palermo, Italy, CNR ISOF; Valentina Benfenati
- 14:20-15:35 Innovation Forum Roundtable: Portugal – A One-Stop Shop for the Graphene Value Chain, Room 2**
Chair: António Vilanova, Portugal, HyCarb
Paula M. Vilarinho, Portugal, CICECO; Ado Jorio, Brazil/Portugal, INL, Federal University of Minas Gerais; José Gonçalves, Portugal, CENTI, Graphenest; Sara Barros, Portugal, Graphenest;
- 15:35-16:05 Exhibition & Break , Exhibition**
- 16:05-17:55 11. Biosensors, Diagnostics & Theranostics , Auditorium**
- 16:05-16:20 Multiplexed detection of dopamine, serotonin, and glutamate on single graphene field-effect transistor array aptasensors
Mafalda Abrantes; Tiago Pereira; Carolina Castro; Margarida Falcão; Liliana Luz; Pedro Alpuim; Patricia Monteiro; Jérôme Borme; Luis Jacinto
- 16:20-16:35 2D molecular materials for multiplex sensing of respiratory viruses using surface plasmon resonance spectroscopy
Ghazaleh Eshaghi; Hamid Reza Rasouli; David Kaiser; Dominik Gary; Tobias Fischer; Abhishek Sharma; Katrin Frankenfeld; A. Turchanin, Germany, University Jena
- 16:35-16:50 Enhanced Liquid-Gated GFET Biosensing through Controlled SIP Fragmentation
Davide Campagnol; Telma Campos Domingues; Alejandro Castro Exposito; Miguel Cuerva Vidales; Marcos Lequerica Mateos; Tea Carletti; Alessandro Silvestri; Alba Centeno; Amaia Zurutuza, Spain, Graphenea Semiconductors; Amaia Rebollo; Elias Torres; Jesus Mosquera Mosquera; Alejandro Criado Fernandez
- 16:50-17:05 pH-dependence in suspended electrolyte-gated graphene field-effect transistors
João Mouro; Mariana Fernandes; Beatriz Oliveira; Sérgio Carvalho; Tiago Pereira; Rui Campos; Jérôme Borme
- 17:05-17:20 Multifunctional MoS₂-Fe₃O₄ Nanocomposites for Combined Magnetic Hyperthermia and Photothermal Therapy Against Gastric Cancer
Miguel Campos; Fernão Magalhães; José Ramiro Fernandes; Manuel Bañobre; José das Neves; Artur Pinto, Portugal, LEPABE/FEUP - University of Porto
- 17:20-17:35 Targeted MXene-Antibody Complex for Selective Photothermal Cancer Therapy
Volodymyr Deineka, Latvia, University of Latvia; Yevheniia Husak; Marks Truhins; Anastasia Konieva; Oleksiy Gogotsi; Veronika Zahorodna; Igor Iatsunskiy; Oksana Sulaieva; Acelya Yilmazer; Maksym Pogorielov

- 17:35-17:55 Graphene and Emerging 2D Nanomaterials for Cancer Photothermal Therapy, Magnetic Hyperthermia, and Tissue Regeneration
Artur Pinto, Portugal, LEPABE/FEUP - University of Porto; Filipa Silva; Miguel Campos; Bruno Freitas; Joana Paredes; Maria José Oliveira; José Ramiro Fernandes; Bruno Sarmento; Susana G. Santos; Fernão Magalhães; José das Neves
- 16:05-17:40 How can 2D materials reshape the future of photonics? (2D-PL & GATEPOST), Room 1**
- 16:05-16:10 2D-PL & GATEPOST introduction
- 16:10-16:25 2D Materials as an enabler for THz Computing
Michael Kissner, Germany, Akhetonics;
- 16:25-16:40 Energy-efficient devices and architectures leveraging silicon photonics-enhanced platforms for next-generation computing systems
Fabio Pavanello, France, CNRS;
- 16:40-16:55 van der Waals Silicon Photonics Platform
Victor Funk, Germany, Linque;
- 16:55-17:10 Two-Dimensional Materials for Integrated Photonics
Parhizkar Shayan, Germany, AMO GmbH;
- 17:10-17:40 Panel Discussion
Michael Kissner, Germany, Akhetonics; Fabio Pavanello, France, CNRS; Mindaugas Lukosius, Germany, IHP; Cedric Huyghebaert, Germany, Black Semiconductor; Victor Funk, Germany, Linque; Parhizkar Shayan, Germany, AMO GmbH;
- 16:05-17:35 Innovation Forum: Commercialisation pitches , Room 2**
Hamed Pourkheirollah, Finland, University of Tampere; Michael Schneider, Germany, BORN GmbH; Gianluigi Creonti, Italy, Crossfire; Amaia Zurutuza, Spain, Graphenea Semiconductors; Ines C. Gonçalves, Portugal, INEB - Institute of Biomedical Engineering;
- 16:05-16:20 Elevating Circular Crosspreg® Vitrimers with Graphene Oxide
Gianluigi Creonti, Italy, Crossfire;
- 16:20-16:35 2D materials to boost ferroelectric integrated photonics
Amaia Zurutuza, Spain, Graphenea Semiconductors;
- 16:35-16:50 Next-Generation Supercapacitors Through Atomic Layer Deposition
Hamed Pourkheirollah, Finland, University of Tampere;
- 16:50-17:05 GOCap: when GRAPHENE meets LIGHT to fight infection.
Ines C. Gonçalves, Portugal, INEB - Institute of Biomedical Engineering;
- 17:05-17:20 Graphene-enabled smart textiles for self-powered wearable applications
Michael Schneider, Germany, BORN GmbH;
- 17:20-17:35 Intelligent Urban Mining
Kerli Liivand, Estonia, Jälle Technologies;
- 17:35-17:55 2D Market Analysis , Room 2**
Thomas Bithell, UK, IDTechEX;
- 17:45-18:45 Innovation Forum Networking Session , Room 2**
- 17:45-19:30 Poster Session B , Exhibition**
- 1 The Last Straw - and Every Other Plastic: Converting Municipal Waste into Graphene at Scale
GANESH H ARALIKATTI; Avhijit Nair; Manjunath Krishnappa
 - 2 Valorization of Renewable Graphitic Carbon Produced from Catalytic Methane Splitting
Vitor Gomes; Rui Pereira, Portugal, HyCarb; Cristina Correia; Andreia Oliveira, Portugal, Graphenest; Joana Lopes; Paula Dias, Portugal, UPORTO - FEUP - LEPABE; Adélio Mendes
 - 3 Low-Cost Arc-Welder-Based Flash Joule Heating Synthesis of Turbostratic Graphene
Armin Gholizadeh, UK, University of Leeds- Bragg Centre for Materials Research at university of Leeds; Rik Drummond-Brydson; Robert Menzel; Leon Black
 - 4 Layer-Controlled Graphene TEM Grids with Advanced Protective Grid Boxes
Lukáš Průcha; Jakub Piňos; Jiří Sýkora; Matěj Vašíček; Petr Šemora; Eliška Materna Mikmeková
 - 5 Graphene-Enabled Technologies for Renewable Energy Harvesting and Conversion: From Materials to Industrial Applications
Nuno Soares Domingues; Manuel Ferreira dos Santos, Portugal, FCT
 - 6 Functionalized graphene oxide as an additive for transformer's insulation systems
Maysa Marques; Estácio Wanderley Neto; Maria Elena González
 - 7 From Graphene to Beyond: Building Standards and Metrology for the Next Generation of 2D Materials
JINGJING (Mansun) Wang; Keith Paton; Andrew Pollard
 - 8 Effect of hydrogen-driven catalyst regeneration on methane splitting produced carbon allotropes
Paula Dias, Portugal, UPORTO - FEUP - LEPABE; Luís Alves; Vitor Pereira; João Díaz; Bernardo Soares, Portugal, FEUP; Ricardo Coelho; Adélio Mendes

- 9 Closed-form optical–electrical modelling of multilayer graphene transparent electrodes for space photovoltaic front surfaces
Yazan Badour; Samer Hakawati
- 10 Taming Toxic Heavy Metals by Single-Atom Immobilization on Nanographene Acid
Mohini Verma; David Panáček; Zdeněk Baďura; Tomáš Pluháček; Tomáš Malina; Radek Zbořil
- 11 Sustainable Soft skin Bioelectronics for Cystic Fibrosis Diagnosis Leveraging Laser-Induced Graphene
Pedro Franco; Tomas Pinheiro; Rodrigo Martins; Elvira Fortunato, Portugal, Nova University Lisbon
- 12 Solution-gated graphene field-effect transistors as measurement devices for detecting in vitro sympathetic neuronal activity
Vilhelmiina Hännikäinen, Finland, University of Tampere; Kardelen Yilmaz; Olli Rissanen; Andreas Johansson; Mika Pettersson; Pasi Kallio; Susanna Narkilahti, Finland, University of Tampere
- 13 Pulmonary Surfactant Modulates the Graphene Oxide Effects in Lung Cells
Matheus Alves Siqueira De Assunção; Theodoro da Rosa Salles; Gabriela Helena da Silva; Romana Petry; Luelc Souza da Costa; Ohanna Maria Madeiro Menezes da Costa; Diego Stéfani Teodoro Martinez
- 14 New WS2 Thermosensitive Enemas combined with LED Devices for Selective Photothermal Therapy of Rectal Cancer
Cristina Sofia De Jesus Almeida; Pedro Fernandes; Filipa Silva; José Ramiro Fernandes; Fernão Magalhães; Maria José Oliveira; Artur Pinto, Portugal, LEPABE/FEUP - University of Porto
- 15 Nanostructured graphene oxide interfaces in SPR biosensors for enhanced sensitivity of biomolecular interactions
Tomasz Kruk; Lilianna Szyk-Warszyńska; Michał Szuwarzyński; Anna Chrzęszcz; Rafał Szostecki; Agata Pomorska-Gawel
- 16 MoB MBenes: A Novel Class of Two-Dimensional Boride Nanomaterials for Cancer Photothermal Therapy
Pedro Miguel Dias Fernandes; José Ramiro Fernandes; Fernão Magalhães; Rúben Pereira; Susana Santos; Artur Pinto, Portugal, LEPABE/FEUP - University of Porto
- 17 Low-cost portable electrochemical platform for the detection of human nasopharyngeal secretion samples and RNA samples extracted from SARS-CoV-2.
Ana Champi; Miguel Lozada; Pedro Holland; Erika Saeki; Ivana Barros; Elaine Yudice
- 18 Graphitic carbon nitride as a photosensitizer for cancer therapy
Rita A. M. Barros; Maria Bravo; Steven Huysecom; Beatrice Fortuni; Cláudia G. Silva; Susana Rocha; Joaquim L. Faria
- 19 Graphene/PDMS Coatings Reduce Uropathogenic Biofilms
Francisca Sousa-Cardoso; Rita Teixeira-Santos; Luciana C. Gomes; Rita Vieira; Brian A. Korgel; Olívia S. G. P. Soares; Filipe J. Mergulhão
- 20 Flexible Graphene Field-Effect Transistor (GFET) devices for nerve interfacing: fabrication, multimodal characterization, and in vivo prototype assessment
Gianluca Visagli; Olli Rissanen; Jarkko Jokihäärä; Henriikki Rönkkö; Pasi Myllyperkiö; Virginia Ranaweera, Finland, University of Jyväskylä; Andreas Johansson; Mika Pettersson
- 21 Advanced Evaluation of Graphene-Based Materials for Biomedical Applications
Sarka Hradilova; Miquel Madrid-Gimeno; Tana Zavodna; Ariana Opletalova; Zuzana Chaloupkova; Katerina Polakova
- 22 A multifunctional GO/Ni-ZnO/TRAIL nanoplateform for synergistic and selective anticancer therapy via apoptosis induction, ROS generation, and photothermal activation
Salah OUDJERTLI;
- 23 MXene/MnO₂ cathode on carbon fiber for aqueous zinc-ion batteries
Ruiqi Chen; Komal Gola, Sweden, Chalmers University of Technology; Jinhua Sun, Sweden, Chalmers University of Technology
- 24 Molecular Precursor-Induced Electronic Reconstruction of 2D Graphitic Carbon Nitride for Efficient Visible Light-Driven Peroxymonosulfate Activation
Radek Zbořil; Lukáš Zdražil; Štěpán Kment; Radek Zbořil
- 25 Industrial-scale laser-modification of graphene and graphitic anodes for high-capacity and fast-charging in Lithium-ion battery cells
Konstantinos Mylonas; Chistos Fragkogiannis; Dorela Hoxha; Athanasios Masouras; Dimitra Roumelioti; Michail Athanasiou; Antonios Vavoulitis; Spyros Yannopoulos, Greece, FORTH
- 26 Improving the thermal aging resistance of kraftpaper based transformer insulation using reduced graphene oxide
Maria Elena Leyva Gonzalez; Maria Elena Leyva Gonzalez
- 27 Graphene-MXene Nano-architecture for Energy Harvesting
Supriya Kodali; Raj Kishora Dash
- 28 Graphene Technologies for Renewable Energy Storage: A Technology Readiness, Sustainability and Industrial Adoption Roadmap
Nuno Soares Domingues; Manuel Ferreira dos Santos, Portugal, FCT

- 29 GRAPHENE OXIDE-REINFORCED STARCH-PECTIN BIOFILMS FOR SUSTAINABLE AND BIOMEDICAL APPLICATIONS
Aline Roberta S. C. Matos; Vinícius H. S. Seraphim; Leticia S. Matos; Erik Poloni; Ausdinir D. Bortolozzo; Giovana S. Padilha; Ana Luiza C. Pereira, Brazil, University of Campinas - UNICAMP
- 30 Exploring the Annealing Effect of Ultra-Thin Ti3C2Tx MXene Coated Copper-Substrate Towards Lithium Metal Batteries.
Sree Raj Koottumvathukkal Anil Raj, Czech Republic, University of Chemistry and Technology Prague; Bing Wu; Zdenek Sofer, Czech Republic, University of Chemistry and Technology Prague
- 31 Engineering Spin Polarization for Enhanced Photoelectrochemical Water Oxidation
Simrjit Singh;
- 32 Energy Harvesting and Self-Power Sensing using h-BN functionalised wood Triboelectric Nanogenerators
Dhari Alshammari; Liya Antony; Antonella Giuri; Evgeniya Kovalska; Siva Kumar Reddy; Saverio Russo; Carola Esposito Corcione; Rosanna Mastria; Aurora Rizzo; Monica F. Craciun, UK, University of Exeter
- 33 Amine-modulated graphitic material enabling C–H oxidation of arenes
AJAY KUMAR SHARMA; Sudip Bhattacharjee; Rajenahally V. Jagadeesh; Radek Zbořil
- 34 High pressure plasma cleaning of polymer residues on graphene surfaces
Sjoerd van der Werf; Bart Macco
- 35 Wafer-scale pulsed laser deposition of hexagonal boron nitride on silicon and sapphire substrates
Daniel Klenkert; Benedikt Winter; Raimund Förg; Jens Ebbecke
- 36 Transport Studies of Low-Cost Roll-to-Roll Exfoliated SnSe2 Flake Networks for Scalable Electronic Applications
Niranjana Renjith Nair; Kalyan Jyoti Sarkar; Zdenek Sofer, Czech Republic, University of Chemistry and Technology Prague
- 37 Multi-Layer Expanded Graphene as a Versatile Material Platform for Flexible Energy Devices
Tiago Cabeça; Sara Silvestre; João Coelho; Rogério Valentim Gelamo; Elvira Fortunato, Portugal, Nova University Lisbon; Rodrigo Martins; Joana Figueira; Joana Vaz Pinto
- 38 LCD 3D Printing of Flexible Reduced Graphene Oxide-Based Photocurable Composites
Ana Luiza C. Pereira, Brazil, University of Campinas - UNICAMP; Aline Roberta S. C. Matos; Leticia S. Matos; Laís P. Gabriel; Erik Poloni
- 39 Introduction of carbon doping into hexagonal boron nitride by pulsed laser deposition
Benedikt Winter; Daniel Klenkert; Jens Ebbecke; Günther Ruhl; Raimund Förg
- 40 Graphene nanoplatelet additives for flame resistant carbon fiber reinforced polymer composites
Young Hyun Kim; Jung Jae Yoo; Seok Hun Shin
- 41 Exotic Biopolymers-Derived Laser-Induced Graphene for Bioelectronics
Bianca Pedrosa; Gerson Monteiro; Tomas Pinheiro; Rodrigo Martins; Henrique Almeida; Elvira Fortunato, Portugal, Nova University Lisbon
- 42 Dual-configuration symmetric supercapacitors derived from cobalt oxide anchored laser-induced graphene
Gargi Dhiman;
- 43 Cleanroom-Free Manufacturing of 2D MoS2 Memristors for 6G Wireless Applications
Miguel Pires; Raquel Azevedo Martins; Maria Morais; Miguel Franco; Adam G. Kelly, Portugal, CENIMAT, Nova University Lisbon; Tomás Mingates; Carlos Silva; Elvira Fortunato, Portugal, Nova University Lisbon; Rodrigo Martins; Asal Kiazadeh; Emanuel Carlos, Brazil, State University of São Paulo; Jonas Deuermeier
- 44 Time-resolved photocurrent microscopy for understanding hot-carrier dynamics in graphene-based devices
Wieneke Sijtsma; Klaas-Jan Tielrooij
- 45 Strong mid-infrared absorption in graphene at low Fermi energy by coupling to nanostructured SiC
Pablo Pou Álvarez, Spain, Universidade de Vigo; Hugh Paynter; Griffin Stacey; Haoyi Yu; Chi Li; Haoran Ren; Linnan Jia; Baohua Jia; Michael S. Fuhrer; Stefan Maier
- 46 Solution-Processed 2D V2O5 via Liquid-Phase Exfoliation for Memristor Devices
Mahla Forghani; Pedro Gabriel Moreira; Raquel Azevedo Martins; Jonas Deuermeier; Elvira Fortunato, Portugal, Nova University Lisbon; Rodrigo Martins; Carlo Ricciardi; Asal Kiazadeh; Emanuel Carlos, Brazil, State University of São Paulo
- 47 Photogalvanic Effect in Graphene Structures Driven by Electron Spin Resonance
I. Yahniuk; C. Bray; L. E. Golub; M. Marocko; C. Consejo; B. Benhamou-Bui; Z. Gan; A. George; A. Turchanin, Germany, University Jena; Petro Sadovyi; Kenji Watanabe; Takashi Taniguchi; Jonathan Eroms; F. Teppe; S. D. Ganichev
- 48 Modulating 2D Material Optoelectronics through Localized Strain for High-Efficiency Miniaturized Spectrometers
shreya Rajeevan; Fooqia Khalid; Saida sharmin; Harri Lipsanen
- 49 Optimization of Laser-Reduced Graphene Oxide Electrodes for Flexible Humidity Sensors
Daniel F. Gomes; Leticia S. Matos; Erik Poloni; Ana Luiza C. Pereira, Brazil, University of Campinas - UNICAMP

- 50 Laser induced graphene in potentiometric sensors for ion detection in agriculture
Tomas Duarte; *Domenico De Rosi; Marta Corvo; Rodrigo Martins; Tomas Pinheiro; Emanuel Carlos, Brazil, State University of São Paulo; Elvira Fortunato, Portugal, Nova University Lisbon*
- 51 Impact of Delay Time on Morphology and Device Performance of Rac-MBA₂PbI₄
Bhagyanath Paliyottil Kesavan;
- 52 Graphene-Silver Nanowire Hybrid Substrate for Tunable Surface Enhanced Raman Spectroscopy Application
Shweta Deshmukh; *Lekshmi J; Padmnabh Rai*
- 53 Heterogeneous Integration of 256 Electrolyte Gated Graphene Field-Effect Transistor arrays with CMOS readout for Sensing Applications
Tiago Pereira; *João Mouro; Rodrigo Wrege; Manuel Bäuscher; Moritz Hubl; Jérôme Borme; João Piteira; Pedro Alpuim*
- 54 Graphene-Assisted WO₃ Nanocomposites for High-Performance Chemiresistive Acetone Sensors
Jasmeet Kaur;
- 55 Gas-Sensitive Defect Engineering of Graphene by Femtosecond Laser Irradiation
Anna Wojsiat Soosaar; *Tauno Kahro; Martin Vondráček; Jaroslav Otta; Valter Kiisk; Artjom Berholts; Raivo Jaaniso*
- 56 Graphene Hall probes with Integrated Passive Magnetic Amplifiers
Linda Supalová; *Vojtěch Švarc; Miroslav Bartošík; Tomáš Šikola*
- 57 Gallium-enhanced light scattering of Gallium Nitride/Graphene ultra-violet light detectors
Marek Kostka; *Jindřich Mach; Miroslav Bartošík; Vojtěch Čalkovský; Vojtěch Mikerásek; Tomáš Šikola*
- 58 Critical-Coupling Engineering in Graphene Electro-Optic Micro-Ring Modulator
Mindaugas Lukosius, Germany, IHP; *Ashraful Islam Raju; Rasuole Lukose; Pawan Kumar Dubey; Daniele Capista; Christian Wenger*
- 59 Electrostatic modulation of photoluminescence using muscovite mica
Fedor Lipilin; *Aljoscha Söll; Kalyan Jyoti Sarkar; Kalaiarasan Meganathan; Bing Wu; Jan Luxa; Zdenek Sofer, Czech Republic, University of Chemistry and Technology Prague*
- 60 Displacement-field-induced ionization of defect states in high-quality hBN
Ilya Begichev; *Daria Belotckerkovtceva; Iakov Reznikov; Sergey Slizovsky; Weijie Lu; Nansi Zhou; Ian Babich; Makars Šiškins; Kostya S. Novoselov; Vladimir Fal'ko; Kenji Watanabe; Takashi Taniguchi; Alexey Bergyugin*
- 61 Development of plasma-based SERS sensors
Muhammad Khuzaima Zaka; *Muhammad Hamza; Barthelemy Aspe; Loic Gimenez; Eva KOVACEVIC, France, GREMI CNRS&University of Orleans; Jean Francois Bardeau; Johannes Berndt*
- 62 Borophene-Based Ultrasensitive and Broadband Photodetectors
Alireza Eskandary;
- 63 Area-selective ALD on high quality graphene
Maryam Naderpour; *Mika Pettersson; Andreas Johansson*
- 64 Antibody conjugation on amine-rich coatings on GFET for biosensor applications
Trung PHAM; *Jean-François Colomer; José-Ignacio Veytia-Bucheli; Benjamin Ledoux; Henri-François Renard; Laurent Houssiau; Laurent A. Francis; Stéphane Vincent; Robert Sporken*
- 65 An Automated 16-Channel Multiplexer Platform for Scalable Graphene Field-Effect Transistor Biosensing
Ruben Lanche; *Benjamin Strauß; Felix Hempel; Klaus-Ingmar Pfrepper; Jenny Kehrbusch; Alexey Tarasov*
- 66 Advanced Optical Waveguide Design via Encapsulation of 2,4,6-Triphenylpyrylium Chloride in Oxide Glasses
Eleni Agapaki; *Ioannis Konidakis; Egor Evlyukhin; Klytaimnitra Katsara; Georgios Kenanakis; David King; Haesook Han; Pradip K. Bhowmik; Emmanuel Stratakis*
- 67 A Systematic Comparison of Laser, Thermal, and UV Reduction of Graphene Oxide for Tailored Multi-Functional Applications
Leticia S. Matos; *Aline Roberta S. C. Matos; Daniel F. Gomes; Ana Champi; Erik Poloni; Ana Luiza C. Pereira, Brazil, University of Campinas - UNICAMP*
- 68 Visualizing nanoscale replica quasibound states in graphene driven by electron-phonon coupling
Hui-Ying Ren; *Xing-Jian Yi; Ke Lv; Yu-Chen Zhuang; Ya-Ning Ren; Qing-Feng Sun; Lin He, China, Beijing Normal University*
- 69 Towards General Design Principles for Surfactant-Assisted Liquid-Phase Exfoliation of Graphene and Beyond-Graphene 2D Materials
Eduardo Marques, Portugal, Faculty of Sciences - University of Porto; *Bárbara Abreu; Carolina Pedro; Elsa Loureiro; Isabel Oliveira*
- 70 The excitonic instability in 2D materials with nontrivial electronic topology
Rui Miranda; *Vítor Pereira*
- 71 Synthesis of dense two-dimensional MoSe₂ nanoflakes via Chemical Vapor Deposition methods
Dimitre Dimitrov; *Blagovest Napoleonov; Vera Marinova*

- 72 Synthesis and Characterization of Graphene Oxide Decorated with Silver Nanoparticles for Use as an Antimicrobial Additive in Thin Films
Daniele Perondi, Brazil, UCSGRAPHENE; Paula Sartori; Jordana Bortoluz; Mariana Roesch-Ely; Marcelo Giovanela; Janaina da Silva Crespo
- 73 Symmetry-driven transitions between flat bands and Dirac cones in bilayer kagome lattices
Engin Durgun; Taylan Gorkan; Dogukan H. Ozbey; Cem Sevik; Milorad V. Milosevic
- 74 Study of the Electrical Properties of Shear-Exfoliated MXene Nanosheet
Asif Raza; Raj Kishora Dash
- 75 Spin-orbit torque in the 2D ferromagnetic metals Fe_3GeTe_2 and Fe_3GaTe_2 from first principles
Gusthavo Brizolla; Stepan S. Tsirkin; Yaroslav Zhumagulov; Jaroslav Fabian, Germany, University of Regensburg
- 76 Room temperature ice-like heterostructure formation of nano-confined water at graphene-polymer interface.
Farzaneh Bouzari; Mohammad Bagheri; Juan C. Arias-Munoz; Kai Liu; Nianze Shang; Pekka Koskinen; Seyed Hossein Hosseini-Shokouh; Zhipei Sun
- 77 Role of Trace Oxygen in the Kinetics of Graphene Growth by Low-Pressure CVD
Pierre L. Levesque; Daniel Shteinbok; Alex Curie; Saman Choubak; Philippe Gagnon; Sacha Schwarz; Patrick Desjardins; Richard Martel
- 78 Robustness and real-space chiral rotation of flat bands in twisted trilayer graphene moiré quasicrystal
Chenyue Hao;
- 79 Probing Optical Properties of Ultrathin TMD Films through Fabry-Perot Interference
Martin Hulman; Michaela Sojková; Lenka Pribusová Slušná; Timea Krajčovičová; Marian Precner; Igor Piš
- 80 Polymer Blister Nanoengineering of TMDC Monolayers: Interfacial, Optical, and Mechanical Investigations
Vikash Singh, India, IIT ROPAR; Rakesh Kumar
- 81 Phase stability of MoTe_2 during CVD growth
Vijayan C;
- 82 PdSe_2 as a New Two-Dimensional Material for Triboelectric Energy Harvesting
Atallah Alruwaili; Siva Kumar Reddy; Francesca Langiano; Evgeniya Kovalska; Aurora Rizzo; Saverio Russo; Rosanna Mastria; Monica F. Craciun, UK, University of Exeter
- 83 Integration of two dimensional precious metal dichalcogenides in optoelectronic devices
Vera Marinova; Dimitre Dimitrov
- 84 Low-temperature growth of GaN nanocrystals on $\text{Si}(111) 7 \times 7$ using low-energy (20-50 eV) nitrogen ions
Jakub Štátný; Jindřich Mach; Vojtěch Mikerásek; Marek Kostka; Miroslav Bartošík; Tomáš Šíkola
- 85 Modeling magnetotransport across folded graphene
Kamil Sočko; Ming-Hao Liu; Alina Mreńca-Kolasińska
- 86 How to functionalise graphene before it is grown
Andreas Johansson; Lauri Paajanen; Aku Kaasinen; Olli Rissanen
- 87 Gate Tunable Dimensional Crossover of Quantum Confined Dirac Fermions
Lin He; Lin He
- 88 Etching and Oxidation of Single-Layer Graphene by Thermal Energy Atomic Oxygen on SiO_2/Si Substrates
Vojtěch Mikerásek; Jindřich Mach; Jakub Piastek; Adam Novotný; Marek Kostka; Miroslav Bartošík; Tomáš Šíkola
- 89 Effects of Correlations and Strain in ABCA Graphene
João Cardoso; Eduardo Castro; Vítor Pereira
- 90 Delamination and Transfer of Wafer Scale Single Crystalline Graphene from Silicon Carbide
Joyal Jain Palakulam; Johanna Udén; Awse Salha; Per Hyldgaard; Elsebeth Schröder; Magnus Hårdensson Berntsen; Oscar Tjernberg; Manasi Shah; Rodrigo Martinez-Duarte; Hans He; Johannes Hofmann; Thilo Bauch; Naveen Shetty; Samuel Lara-Avila, Sweden, Chalmers University of Technology
- 91 Displacement field dependent spin transport in bilayer graphene/ WSe_2 heterostructures
Marina Marocko; Bohdan Sadovyi; Petro Sadovyi; Dieter Weiss; Jonathan Eroms
- 92 DFT study of atomic hydrogen adsorption on graphene under charge doping and perpendicular electric field
Ondřej Špaček; Jiří Richter; David Nezval; Linda Supalová; Jan Vymazal; Miroslav Bartošík
- 93 Choices of Gas Phase Precursors for 2D Materials
Kalaiarasan Meganathan, Czech Republic, Universtity of Chemistry and Technology; Zdenek Sofer, Czech Republic, University of Chemistry and Technology Prague
- 94 Correlating Chemical Vapor Deposition Growth Dynamics with Defects in Hexagonal Boron Nitride
Sakshi Chandola; Srinivasan Raghavan
- 95 Colloidal Stabilization of Graphene Nanoplatelets via Surfactant-Assisted Exfoliation for Quantum Applications
Elsa Loureiro; Carolina Pedro; José Pereira; Isabel Oliveira; Neenu Lekshmi; Armandina Lopes; João Araújo; Eduardo Marques, Portugal, Faculty of Sciences - University of Porto

- 96 Bubble-Free Interfaces Reveal Intrinsic Excitonic and Interlayer Coupling in CVD TMDCs
Sudipta Majumder; Rahul Chand; Pradeepa H L; Meghasree Basu; Avinash Mahapatra; Sweta Verma; Sagnik Chatterjee; Ashutosh Shukla; Kenji Watanabe; Takashi Taniguchi; Pavan Kumar G V; Atikur Rahman
- 97 Linking Nanosheet Geometry to Junction Resistance in Printed MoS₂ Networks
Conor Burke; Emmet Coleman; Jonathan N. Coleman

Thursday 24 September 2026

09:00-10:25 Keynote & Plenary , Auditorium

09:00-09:35 Keynote: Andras Kis

Andras Kis, Switzerland, EPFL;

09:35-10:00 Interfacing functions: supramolecular chemistry enabling high-performance pressure sensors and neuromorphic computing

Paolo Samori, France, University of Strasbourg;

10:00-10:25 Invited Speaker: Samuel Lara Avila

Samuel Lara-Avila, Sweden, Chalmers University of Technology;

10:30-11:00 Exhibition & Break , Exhibition

11:00-12:35 12. Biomedical Applications by MUNASET & 2D-BioPAD , Auditorium

11:00-11:05 Introduction

11:05-11:20 Selective detection of matrix metalloproteinase activity using peptide-functionalized graphene field-effect transistors

Felix Hempel; Irini Petrou, Germany, University of Applied Sciences Kaiserslautern; Pratika Rai; Chandan Singh; Alexey Tarasov

11:20-11:35 2D Material Integration on Si CMOS Back-End-of-Line for Biosensors

Miika Soikkeli; Anton Murros; Arto Rantala; Leire Morillo; Alba Centeno; Amaia Zurutuza, Spain, Graphenea Semiconductors

11:35-11:50 rGO Nanocomposite Interfaces for Practical Electrochemical Sensing in Health and the Environment

Ruslan Alvarez-Diduk; Andy Bruno; Danilo Echeverri; Marianna Rossetti; Arben Merkoçi

11:50-12:05 Electrochemical Nanobiosensors Based on Laser-engraved Reduced Graphene Oxide (rGO) electrodes for the Detection of Alzheimer's Disease Biomarkers

Danilo Echeverri; Ruslan Alvarez-Diduk; Marianna Rossetti; Arben Merkoçi

12:05-12:20 Controlled Oxidation of Ti₃C₂Tx -MXene for Enhanced Electrochemical Biosensing

Chandan Singh; Alexey Tarasov

12:20-12:35 CRISPR/Cas12a-Powered Graphene-Based Electrochemical Platform for High-Risk HPV Screening

Marianna Rossetti; Alexia Rubio Román; Ruslan Alvarez-Diduk; Arben Merkoçi

11:00-12:20 13. Sustainable Materials, Membranes, Composites & Circularity , Room 1

11:00-11:05 Introduction

11:05-11:20 Scalable and green production of 2D-crystal membranes for selective ion transport

Siva Sankar NEMALA; Pedro Diogo Silva; Beatriz Silva; Vicente Lopes; Lisa Buttò; Andrea Capasso

11:20-11:35 Upcycling terephthalate polystyrene waste into graphene oxide-like turbostratic carbon for efficient nanoplastic removal

Francisco Javier Xix Novelo; Rocío Martínez-Flores; Geonel Rodríguez-Gattorno

11:35-11:50 Can Graphite and Polymer Waste Enable Advanced Thermally Conductive Composites, with Perspectives for FDM 3D Printing?

Anna Lapinska; Andrzej J. Panas; Anna Czajka - Warowna; Paweł Durałek; Natalia Grochowska; Michał Misiak

11:50-12:05 Development of graphene modified Carbon-Polyimide powder-coated semi-preg for high temperature composite applications

Ronald Klomp, the Netherlands, NLR - Netherlands Aerospace Centre; Beatriz Alonso, Spain, Graphenea SA; Tobias Kuhnt; Eytan Mazor; Talena Rambarran

12:05-12:20 Production of an economic innovative, circular recyclable lightweight automotive aerodynamic shield by the addition of Graphene Oxide

Gianluigi Creonti, Italy, Crossfire; Daniele Pullini; Marco Marchi; Beatriz Alonso, Spain, Graphenea SA; Ana Nioac de Salles, Germany, Fraunhofer Institute for Chemical Technology ICT; Ahmed Elmarakbi; Ali Rezaei; Pelin Uzun; Eva Barbeito Faro; Luciano Macera; Matteo Basso

11:00-12:35 How to Accelerate the REACH Registration of Graphene and Other 2D Materials, Room 2

Chair: Jörg Radnik, Germany, Federal Institute for Materials Research and Testing (BAM)

Stephen Hodge, UK, Cambridge Advanced Materials; Radek Bombiera, Finland, European Chemical Agency; Blanca Suarez-Merino, Belgium, Nanotechnology Industries Association;

- 11:00-12:35 Beyond the Manufacturer: REACH Registration and Safe Use of Graphene Across the Value Chain
Stephen Hodge, UK, Cambridge Advanced Materials;
- 12:35-13:30 **Exhibition & Lunch** , *Exhibition*
- 12:35-13:30 **Topic Tables** , *Exhibition*
- 13:10-14:10 **Diversity in Graphene** , *Room 3*
Chair: Samuel Lara-Avila, Sweden, Chalmers University of Technology
Raysa Rocha, UK/ the Netherlands, University of Essex, Vrije Universiteit Amsterdam; Lauren Connolly, UK, Genius Within;
- 13:30-15:35 **Innovation Forum: From Lab to Society – Commercialisation Journeys**, *Room 2*
Chair: Sofia Öiseth, Session Chair, Chalmers Industriteknik, Sweden
Kari Hjelt, Sweden, Chalmers Industriteknik; Amaia Zurutuza, Spain, Graphenea Semiconductors; Cedric Huyghebaert, Germany, Black Semiconductor; Tapani Ryhänen, Finland; Tony Pearce, UK, Paragraf; Axel Fanget, Switzerland, Melexis;
- 13:30-13:50 Commercialisation of 2D materials, where are we today?
Kari Hjelt, Sweden, Chalmers Industriteknik;
- 13:50-14:10 Integration of Graphene with CMOS for Advanced Photonic and Electronic Systems
Amaia Zurutuza, Spain, Graphenea Semiconductors;
- 14:10-14:30 Graphene allows a different approach to connect advanced AI systems
Cedric Huyghebaert, Germany, Black Semiconductor;
- 14:30-14:50 Graphene in Image Sensors
Tapani Ryhänen, Finland;
- 14:50-15:10 Creating the Graphene Electronics Device Foundry from University Spin Out to Global Manufacturing Company
Simon Thomas, UK, Paragraf;
- 15:10-15:35 GFET-on-CMOS: The Next Generation of Integrated Biosensing
Axel Fanget, Switzerland, Melexis; Sadegh Kamaei; Thanh Giang Bui; Raed El Hage Ali; Bhawna Nagar; Gael Close
- 14:00-15:35 14. Nanoelectronics, Integration & Processing** , *Auditorium*
- 14:00-14:05 Introduction
- 14:05-14:20 Electrodeposition of Transition Metal DiChalcogenides
Julie MacPherson; Julie MacPherson
- 14:20-14:35 Scalable Solution-Processed MoS₂ Memristors for Non-Volatile RF Switching in Reconfigurable Intelligent Surfaces at D-Band
Tomás Mingates; Mohamed E. Ghatas; Jonas Deuermeier; Adam G. Kelly, Portugal, CENIMAT, Nova University Lisbon; Joseph Neilson; Jonathan N. Coleman; Luís Mendes; João C. Vaz; Sérgio Matos; Luca Lucci; Antonio Clemente; Zdenek Sofer, Czech Republic, University of Chemistry and Technology Prague; Luís M. Pessoa; Asal Kiazadeh; Elvira Fortunato, Portugal, Nova University Lisbon; Rodrigo Martins
- 14:35-14:50 A Systematic Electrical Comparison of Metal-Seeded Encapsulation Strategies for Graphene Field-Effect Transistors
Anni Virta; Anton Murros; Miika Soikkeli; Leire Morillo; Alba Centeno; Amaia Zurutuza, Spain, Graphenea Semiconductors; Olli-Pekka Kilpi
- 14:50-15:05 Neuromorphic devices based on ion migration in 2D crystals
Vicente Lopes; Yooncheol Bae; Sushmitha Veeralingam; Shusmitha Kyatam; Gabriel Barbosa; Deji Akinwande; Andrea Capasso
- 15:05-15:20 Template-Free Synthesis of Conformal 2D/3D Vertical Graphene Architectures for Energy Conversion, Storage, and Microelectronics
Eva KOVACEVIC, France, GREMI CNRS&University of Orleans; Muhammad Hamza; Fernando Núñez Gálve; Loic Gimenez; Franziska Traeger; María Carmen Lopez; Ana Isabel Borrás Martos; Johannes Berndt
- 15:20-15:35 Tailored 3D Graphene-Carbon Architectures Derived from Natural Jet for Advanced Energy and Multifunctional Technologies
Piotr Kamedulski; Piotr Madajski; Marta Michalska-Sionkowska; Sonnur Kurtulus; Paweł Binkowski; Piotr Grzelak; Andrzej Olejniczak; Paula Alejandra Bautista Arcila; Julia Pachniewska
- 14:00-15:35 15. Energy Storage & Sustainable Energy** , *Room 1*
- 14:00-14:05 Introduction
- 14:05-14:20 MXene Supercapacitors with Stacked Architectures and Long-term Stability for Sustainable Self-Powered IoT Applications
Pedro Gabriel Moreira; Sara Silvestre; Juha Häkkinen; David Carvalho; Ana Pimentel; Rodrigo Martins; Elvira Fortunato, Portugal, Nova University Lisbon; Joana Vaz Pinto; João Coelho; Emanuel Carlos, Brazil, State University of São Paulo

- 14:20-14:35 Electrochemical and Defect Characterization of APTES-Functionalized Ti3C2Tx MXene for Supercapacitor Devices
Mina Namvari, Türkiye, Sabanci University SUNUM; Ahmet Gungor; Amina Ben Ayed; Emre Erdem
- 14:35-14:50 Plasma-Engineered 2D Metallic Nanostructures for High-Performance Supercapacitors
Neelakandan Marath Santhosh, Slovenia, Jožef Stefan Institute; Laura Martinčič; Anjana Baby; Uroš Cvelbar
- 14:50-15:05 Hybrid high-entropy metal oxide@carbon electrode material for new thermally-powered textile supercapacitors
Rúben Feiteira; Joana S. Teixeira, Portugal, REQUIMTE/LAQV - Department of Chemistry and Biochemistry, Faculty of Sciences - University of Porto; Ginesa Blanco; José M. Pintado; André M. Pereira; Clara R. Pereira
- 15:05-15:20 Graphene-Enabled Percolation Networks in Crystalline Sulfur Cathodes for High-Energy Lithium–Sulfur Batteries
Solmaz Valizadeh; Viney Ghai; Koundinya Nellutla; Pranav Pradeep Nair
- 15:20-15:35 Low-cost preparation of graphene materials for scalable supercapacitor application
Hanieh Akbari; Neal T Skipper; Christopher A Howard; Srinivas Gadipelli
- 15:35-16:05 Exhibition & Break , Exhibition**
- 15:35-16:05 Meet your Future , Exhibition**
- 16:05-18:20 Scalable graphene technologies for smart textiles, wearable electronics, and next-generation supercapacitors (GRAPHERGIA & ARMS) , Auditorium**
- 16:05-16:45 Unconventional Carbon Processing
Sheng Dai, USA, University of Tennessee;
- 16:45-17:10 Laser-enabled graphene integration for flexible electronics and energy storage
Spyros Yannopoulos, Greece, FORTH;
- 17:10-17:35 Atomic Layer Deposition of Transition Metal Oxides on Activated Carbon for Enhanced Supercapacitor Performance
Hamed Pourkheirollah, Finland, University of Tampere;
- 17:35-17:55 Powering the future with graphene: high-performance, flexible laser-induced graphene and ionic liquid gel electrolyte micro-supercapacitors for wearable electronics
Apurba Ray, Germany, German Aerospace Center;
- 17:55-18:15 Surface Growth of Porous Graphene-MXene on Carbon Fibers for Structural Supercapacitors
Komal Gola, Sweden, Chalmers University of Technology; Hamed Pourkheirollah, Finland, University of Tampere; Matti Mäntysalo; Jinhua Sun, Sweden, Chalmers University of Technology
- 18:15-18:20 Discussion
- 16:05-17:40 16. Photonics, Optoelectronics & Photoactive Devices , Room 1**
- 16:05-16:10 Introduction
- 16:10-16:25 Ultrasensitive integrated photonic readout of 2D material nanomechanical membranes
Gerard J. VERBIEST, the Netherlands, TU Delft; Javad Ebrahimipour; R. Tufan Erdogan; Wouter J. Westerveld; Peter G. Steeneken
- 16:25-16:40 Unveiling broadband optical response of muscovite for next-generation all van der Waals nanophotonics
Maksim Sargsyan, Armenia, Yerevan State University; Meri Hayrapetyan; David Karakhanyan; Ani Khachatryan; Maria Levonyan; Dmitrii Litvinov; Maciej Koperski; Artsruni Margaryan; Makars Šiškins; Kostya S. Novoselov; Davit A. Ghazaryan
- 16:40-16:55 High Gain Photodetection in Monolayer MoS2 Avalanche Photodetector
Babita Negi, Germany, RWTH Aachen University; Rijil Thomas; Stephan Suckow; Satender Kataria; Simonas Krotkus; Sergej Pasko; Michael Heuken; Steven J. Koester; Max C. Lemme
- 16:55-17:10 Towards VUV Photodetection Using Two-Dimensional Materials
Wenqian Yao; Roxanne Guenette; Elena Gramellini; Darren Price
- 17:10-17:25 Influence of Directly Deposited Hexagonal Boron Nitride Interlayers on the Interface Properties and Photoresponse of Graphene/Si Heterostructures
Šarūnas Meškinis, Lithuania, Institute of Materials Science of Kaunas University of Technology; Andrius Vasiliauskas; Asta Guobienė; Šarūnas Jankauskas; Rimantas Gudaitis
- 17:25-17:40 Hybrid Quantum Dot-Enabled All-in-One Textile Photo-Supercapacitors for Self-Powered Smart Wearables: Towards Integration with 2D Materials
Joana S. Teixeira, Portugal, REQUIMTE/LAQV - Department of Chemistry and Biochemistry, Faculty of Sciences - University of Porto; João M. O. Silva; André M. Pereira; Clara R. Pereira
- 16:05-16:50 Innovation Forum: Start-up insights , Room 2**
Kari Hjelt, Sweden, Chalmers Industriteknik; Burcu Saner Okan, Turkey, Euronova; Irek Rosłoń, the Netherlands, Soundcell; Abhay Shivayogimath, Denmark, 2D;
- 16:05-16:20 From Waste to Market: Scaling Circular Graphene for Sustainable Thermoplastics
Burcu Saner Okan, Turkey, Euronova;

- 16:20-16:35 From graphene drums to one-hour antibiotic testin
Irek Roslón, the Netherlands, Soundcell;
- 16:35-16:50 Perspectives on Building an EU Graphene Manufacturing Company
Abhay Shivayogimath, Denmark, 2D;
- 16:50-17:45 Panel Discussion: Market Opportunities and Future for 2D Materials, Room 2**
Chair: Cedric Huyghebaert, Germany, Black Semiconductor
- 16:50-17:40 Panel Discussion: Market Opportunities and Future for 2D Materials
Kari Hjelt, Sweden, Chalmers Industriteknik; Thomas Bithell, UK, IDTechEX; Tony Pearce, UK, Paragraf; Amaia Zurutuza, Spain, Graphenea Semiconductors;
- 17:40-17:45 Closing of Innovation Forum
- 19:00-23:00 Conference Dinner, Awards & Graphene Week Pub Quiz @ WOW , Auditorium**

Friday 25 September 2026

- 09:00-10:50 Keynote & Plenary , Auditorium**
- 09:00-09:35 Keynote: Claudia Backes
Claudia Backes, Germany, University of Kassel;
- 09:35-10:00 Bringing 2D transition metal dichalcogenides into 300 mm for nanoelectronics applications
Pierre Morin, Belgium, imec; Benjamin Groven; Daire Cott; Henry Medina Silva; Pawan Kumar; Gaohang He; Nicholas Trainor; Zi-Liang Yang; Iryna Kandybka; Nader Hosaien; APOSTOLIA MANASI; Krishna Kumar Baskar; Syeda Unaiza Hasan; Annelies Delabie; Souvik Ghosh; Rajat Gujrati; Steven Brems; Tom Schram; Quentin Smets; Dennis Lin; Bogdan Govoreanu; Cesar Javier Lockhart de la Rosa
- 10:00-10:25 Artificial Intelligence enabling disruptive 2D materials design & engineering
Stephan Roche, Spain, ICN2/ICREA;
- 10:25-10:50 Flat Band Realization and Novel State Detection in 2D Systems
Lin He, China, Beijing Normal University;
- 10:50-11:20 Closing , Auditorium**
- 12:00-15:45 Travel to INL for lab tour , Auditorium**
- 15:00-16:00 LAB TOUR: Discover Portugal world-class facilities, labs & inspiring spaces, Auditorium**