

TENTATIVE PROGRAM (as of 22/11/2021)

P: Plenary / K: Keynote lecture / I: Invited Lecture / O: Oral contribution



Tuesday (23/11/2021)

08:00 – 09:00: Registration

09:00 – 09:15: Opening Ceremony

09:15 – 09:30: **Adolfo Morais Ezquerro** (Basque Government, Spain)

The Basque Country IKUR Strategy 2030 in Quantum Technologies

09:30 – 10:15: **Ignacio Cirac** (Max Planck Institute of Quantum Optics, Germany) P

Quantum computers and many-body systems

10:15– 11:15: *Coffee Break / Poster Session / Exhibition*

11:15 – 12:00: **Tommaso Calarco** (Forschungszentrum Jülich, Germany) P

The European Quantum initiative: from a flagship to a fleet

12:00 – 12:45: **Andrea Ferrari** (Cambridge Graphene Centre, University of Cambridge, UK) P

The Graphene Flagship: The First 10 years

12:45 – 13:00: **Yolanda de Miguel** (Tecnalia, Spain)

Nanotechnology at the Basque Research and Technology Alliance (BRTA)

13:00 – 14:00: *Cocktail lunch (offered by Imagenano2021)*

14:00 – 14:30: *Poster session*

Chairperson: **Manuel Vázquez Sulleiro** (IMDEA, Spain)

14:30 – 15:00: **Felix Casanova** (CIC nanoGUNE, Spain) K

Spin-orbit proximity in van der Waals heterostructures

15:00 – 15:15: **Raúl Guerrero** (DIPC, Spain) O

Spin-momentum Locking in Defect Line Array Bilayer Graphene under Gate Voltage and n-doping

15:15 – 15:30: **Daniel Sanchez Portal** (CFM-CSIC / EHU, Spain) O

Boron Substitution in Graphene Nanoribbons: One-dimensional Spin Chains with Tuneable Interactions

15:30 – 15:50: **Jose Hugo Garcia Aguilar** (ICN2, Spain) I

Low-symmetry materials for Spintronics

15:50 – 16:20: **Francesco Bonaccorso** (Bedimensional, Italy) K

Industrial exploitation of 2D crystals

16:20 – 16:40: **Daniel Carriazo** (CIC EnergiGUNE, Spain) I

Graphene-based materials in next generation electrochemical capacitors

16:40 – 17:00: **Adelina Braun** (Merck, Germany) I

Innovative 2D Nanomaterials for Electronics and Energy Storage

17:00 – 17:30: *Coffee Break / ePoster Session / Exhibition*

Chairperson: **Jose Hugo Garcia Aguilar** (ICN2, Spain)

17:30 – 17:50: **Thomas Alava** (CEA, France) I

Sensing and modifying biological objects with graphene surfaces through versatile non-covalent biological functionalization

17:50 – 18:05: **Artur Moreira Pinto** (LEPABE, University of Porto, Portugal) O

New method for nanographene oxide high yield production and its biomedical applications

18:05 – 18:20: **Gabriele Boschetto** (CNRS-LIRMM, University of Montpellier, France) O

MoS₂ as the Sensing Platform for the Non-Enzymatic Detection of Cortisol: A First-Principles Study



Wednesday (24/11/2021)

Chairperson: **Enrique Díez Fernández** (University of Salamanca, Spain)

09:00 – 09:20: **Manuel Vázquez Sulleiro** (IMDEA, Spain) I

A Chemical Approach to Graphene-MoS₂ Heterostructures Beyond Van Der Waals

09:20 – 09:50: **Eugenio Coronado** (ICMOL - Universidad de Valencia, Spain) K

2D magnetic molecular materials

09:50– 10:50: *Coffee Break / Poster Session / Exhibition*

Chairperson: **Eugenio Coronado** (ICMOL - Universidad de Valencia, Spain)

10:50 – 11:20: **Vladimir Falko** (National Graphene Institute, University of Manchester, UK) K

Ferroelectric and piezoelectric networks in twistrionic bilayers of transition metal dichalcogenides

11:20 – 11:40: **Enrique Díez Fernández** (University of Salamanca, Spain) I

Broken symmetries in heterostructures based on 2D materials

11:40 – 12:00: **Moshe Ben Shalom** (Tel Aviv University, Israel) I

Slide-Tronics

12:00 – 12:15: **Andrés Ayuela** (DIPC, CFM-MPC, Spain) O

Relative Stability of Bernal and Rhombohedral Stacking in Trilayer Graphene under Distortions

12:15 – 12:30: **Rodrigo Aguilera** (DIPC: Donostia International Physics Center, Spain) O

Distorsion and electronic structures in two-dimensional magnetic ilmenenes systems

12:30 – 12:45: **Aleandro Antidormi** (ICN2, Catalan Institute of NanoScience and Nanotechnology, Spain) O

Fundamentals of thermal properties of amorphous sp² carbon monolayers

12:45 – 13:00: **Jesus Gonzalez** (Universidad de Cantabria, Spain) O

Non- Hydrostatic Pressure dependence of Raman modes in Monolayer Graphene

13:00 – 14:30: *Lunch Break*

Chairperson: **Moshe Ben Shalom** (Tel Aviv University, Israel)

14:30 – 14:50: **Julio Gomez Cordon** (Avanzare, Spain) I

Actual and future industrial applications of graphene and other 2D materials

14:50 – 15:05: **Ulrich Ncombe Nguetchuissi** (IPCMS (University of Strasbourg), France) O

Ionic Glass Gated 2D Material Based Field Effect Transistor and Photo-transistor

15:05 – 15:20: **Miguel Sinusia Lozano** (Universitat Politècnica de València, Spain) O

PECVD of Graphene on sapphire substrates: A Design of Experiments (DoE) approach

15:20 – 15:35: **Kavya Sreeja Sadanandan** (University of Exeter, UK) O

Graphene coated textile fabrics for wearable electronics

15:35 – 15:55: **Amaia Zurutuza** (Graphenea, Spain) I

Latest developments in graphene applications

15:55 – 17:00: *Coffee Break / ePoster Session / Exhibition*

Chairperson: **Amaia Zurutuza** (Graphenea, Spain)

17:00 – 17:20: **Wolfgang Maser** (ICB-CSIC, Spain) I

Graphene GO-ing Green

17:20 – 17:35: **Haseeb Khan** (King Saud University, Saudi Arabia) O

Hybrid graphene quantum dot-manganese oxide nanoparticles for photodynamic therapy

17:35 – 17:50: **Maayan Vizner Stern** (Tel Aviv University, Israel) O

Interfacial Ferroelectricity by van der Waals Sliding

17:50 Closing