

Tentative Program

(as of 26/09/2019)

Monday September 30, 2019		
09:30-10:30	Registration	
10:30-11:00	Opening Ceremony - Antonio Correia - TNT2019 chairman - Director CFM (CSIC-UPV/EHU)	
11:00-11:30	Pablo Ordejón (ICN2, Spain) Understanding the origin of Charge Density Waves from First-Principles: clearing misconceptions and explaining real materials	K
11:30-11:45	Rodrigo Menchón (Donostia International Physics Center, Spain) Ab initio vibrational properties and isotope effect in H-bonded ferroelectric materials	O
11:45-12:00	Ilya Nechaev (Donostia International Physics Center (DIPC), Spain) Ab initio relativistic k.p models for non-centrosymmetric systems with competing spin-orbit and magnetic exchange interaction	O
12:00-12:15	Daniel Jose Arismendi Arrieta (Donostia International Physics Center, Spain) Large-scale simulations of soft polymeric particles at liquid-liquid interfaces: Effects of network topology on the miscibility of immiscible solvents	O
12:15-12:30	Eva Rauls (Institutt for matematikk og fysikk, Norway) On-Surface Site-Selective Chemical Conversions -- Corroles on Ag(111)	O
12:30-12:45	Thomas Frederiksen (Donostia International Physics Center, Spain) Electron beam splitting and interferometry with graphene nanoribbons	O
12:45-13:15	Aran Garcia-Lekue (UPV/EHU & DIPC, Spain) Graphene nanoarchitectures: insights from theory and experiments	I
13:15-15:00	Lunch	
15:00-15:30	Elvira Fortunato (CENIMAT - Universidade NOVA de Lisboa, Portugal) Metal oxide materials as a sustainable alternative to low cost and flexible electronics	K
15:30-16:00	Eugene Chulkov (CFM, UPV/EHU & DIPC, Spain) Recent Advances in Physics and Materials Science of Magnetic Topological Insulators	K
16:00-16:30	Javier Junquera (Universidad de Cantabria, Spain) Novel topological phases in ferroelectric materials	K
16:30-17:00	Maia Vergniory (DIPC, Spain) Introducing Topological Quantum Chemistry and Topological Materials Data Base	I
17:00-17:15	Mikhail Otrokov (Materials Physics Center (MPC), Spain) New Universal Type of Interface in the Magnetic Insulator/Topological Insulator Heterostructures	O
17:15-18:00	Coffee Break / Poster Session	
18:00-18:30	Celia Rogero (CFM, UPV/EHU & DIPC, Spain) Polymerization on unconventional substrates	I
18:30-18:45	Fabienne Barroso-Bujans (Donostia International Physics Center, Spain) Subnanometer 2D-confinement of poly(ethylene oxide) in graphene-based materials: effect of polymer topology	O
18:45-19:00	Daniel E. Martínez-Tong (University of the Basque Country (UPV/EHU), Spain) Shaping polymer surfaces by laser interactions: formation and nanomechanical properties of LIPSS in controlled environments	O

Tuesday October 01, 2019

09:00-09:15	Adam Rycerz (Jagiellonian University, Institute of Physics, Poland) Mesoscopic valley filter in graphene Corbino disk containing p-n junction	O
09:15-09:45	Jean-Christophe Charlier (UCLouvain, Belgium) Optical Hall effect and Veselago lensing in Graphene	K
09:45-10:00	Michele Pisarra (Imdea Nanociencia, Spain) Nanostructured graphene catalyzes the reaction between two organic molecules	O
10:00-10:15	Aleandro Antidormi (Catalan Institute of Nanoscience and Nanotechnology (ICN2), Spain) Effect of structural disorder and chemical doping on thermal transport in Nanoporous Graphene	O
10:15-10:45	Diego Peña (Universidad de Santiago de Compostela, Spain) Building graphene materials by combining organic synthesis and surface science	K
10:45-11:30	Coffee Break / Poster Session	
11:30-12:00	Daniel Neumaier (AMO GmbH, Germany) Towards wafer-scale fabrication of graphene based electronic, photonic and sensor devices	K
12:00-12:30	Amaia Zurutuza (Graphenea, Spain) Graphene Integration Challenges	I
12:30-13:00	Stephan Hofmann (University of Cambridge, UK) Crystal Growth in the Flatland: Growth Mechanisms in 2D Materials and Pathways to Scalable, Controlled Device Integration	K
13:00-13:15	Celia Vaquero (TECNALIA, Spain) Applications of hybrid graphene pastes for functional printing	O
13:15-14:15	Cocktail Lunch (offered by TNT2019 organisers)	
14:15-15:00	Poster Session	
15:00-15:30	Jose Ignacio Pascual (CIC nanoGUNE, Spain) Magnetism in graphene nanoribbons	K
15:30-16:00	Dimas G. de Oteyza (CFM, UPV/EHU & DIPC, Spain) Probing the magnetism of topological end-states in armchair graphene nanoribbons	I
16:00-16:30	Joaquín Fernández-Rossier (INL, Portugal) Novel magnetic proximity effect in vertical structures of 2D ferromagnets and Graphene	K
16:30-16:45	Frederik Schiller (Centro de Física de Materiales (CSIC), Spain) Structure and electronic properties of h-BN on curved crystals	O
16:45-17:15	Coffee Break / Poster session	
17:15-17:45	Alain Pénicaud (CNRS / Université Bordeaux-I, France) Graphene and other carbon nanoforms for a sustainable world	I
17:45-18:00	Alicia de Andrés (ICMM/CSIC, Spain) Orientation dependent Cu oxidation and anomalous Raman shift for the graphene-copper system	O
18:00-18:15	Enrique Diez (Universidad de Salamanca, Spain) Cryo-etching method for quantum constrictions in encapsulated Graphene	O
18:15-18:30	Mario Amado (Universidad de Salamanca, Spain) Long range topological valley currents in single layer graphene superlattice near the main Dirac point	O
18:30-18:45	Jorge Quereda Bernabeu (Universidad de Salamanca, Spain) Symmetry regimes for circular photocurrents in monolayer MoSe ₂	O
18:45-19:00	Manh-Ha Doan (Sungkyunkwan University, Korea) Quantum transport in van der Waals heterostructures at room temperature	O

Wednesday October 02, 2019		
09:00-09:30	Peining Li (CIC nanoGUNE, Spain) Infrared hyperbolic metasurface based on nanostructured van der Waals materials	I
09:30-10:00	Ullrich Steiner (Adolphe Merkle Institute, Switzerland) The Interplay of Metasurfaces and Metamaterials	K
10:00-10:15	Nerea Zabala (University of the Basque Country UPV-EHU, FCT-ZTF, Spain) Broad band infrared modulation with spintronic- plasmonic metasurfaces	O
10:15-11:00	Coffee Break / Poster session	
Parallel Session 1 - PhD Students		
11:00-11:15	Michal Bodik (Institute of Physics, Slovak Academy of Sciences, Slovakia) What will stop the exfoliation of MoS ₂	O
11:15-11:30	Kristina Jajcevic (University of Geneva, Switzerland) Carbon nanomaterials fabricated with lipid nanotube templates	O
11:30-11:45	Jakub T. Domagalski (Unversitat Rovira i Virgili, Spain) Engineering of Magnetic Nanotubes Based on Nanoporous Anodic Alumina	O
11:45-12:00	Amina Kimouche (ICN2, Spain) Electronic and magnetic properties of an on-surface synthesized 2D metal organic framework	O
12:00-12:15	Sonja Krohn (Fraunhofer Institute, Germany) Synthesis of Elongated CdSe/CdS Core/Shell Nanoparticles Realized on Top of Cubic Crystal Structured Cores	O
12:15-12:30	Bruno Hermenegildo (BCMaterials, Basque Center for Materials, Applications and Nanostructures, Spain) Magnetically active hydrogel microenvironments for tissue stimulation	O
12:30-12:45	Maria Kovacova (Polymer Institute, Slovak Academy of Sciences, Slovakia) New hydrophobic carbon quantum dots mediated antibacterial activity in various polymer matrix	O
12:45-13:00	Aaron Lee (Adolphe Merkle Institute, University of Fribourg, Switzerland) Understanding the role of particle rigidity in nanoparticle-cellular interactions	O
13:00-13:15	Lukas Steinmetz (Adolphe Merkle Institute, University of Fribourg, Switzerland) Lock-in thermography to investigate nanomaterial-cell association trends	O
13:15-13:30	Jasim Zia (University of Genoa and Italian Institute of Technology, Italy) Biocomposite foams as rapid indicators for pH changes	O
Parallel Session 2 - Seniors		
11:00-11:15	Emre Gür (Atatürk University, Turkey) High Performance of Electrochromic Devices based on WO ₃ Nanowalls	O
11:15-11:30	Yu Kyoung Ryu Cho (ICMM-CSIC, Spain) p-type-doped WSe ₂ nanoelectronic devices fabricated by oxidation scanning probe lithography	O
11:30-11:45	Özge Saglam (Izmir University of Economics, Turkey) Oxide Nanosheets Structured Upconverting Nanofilms	O
11:45-12:00	Xiaolu Zhuo (CIC biomaGUNE, Spain) Synthesis of Ultrathin Silver Nanorods and Enhancing Their Stability in Biofluids	O
12:00-12:15	Andrey Kovalskii (National university of science and technology "MISIS"/ Laboratory of inorganic nanomaterials, Russia) Hybrid BN/Au and BN/Pt nanoparticles development as promising catalysts	O
12:15-12:30	Guillermo Pozo (VITO, Belgium) Tailoring magnetic properties of nanoparticles by gas-diffusion electrocrystallization (GDEX)	O
12:30-12:45	Eugene Krasovskii (University of the Basque Country, Donostia International Physics Center, and IKERBASQUE, Spain) Microscopic View on Relativistic Splitting and Spin-Dependent Scattering of Surface States	O
12:45-13:00	Ladislau Vekas (Romanian Academy-Timisoara Branch, Romania) Ferrofluids and ferrofluid based magnetorheological fluids: tuning the flow behavior by micron-size Fe particles and magnetite nanoclusters	O
13:00-13:15	Alexei Nazarov (Lashkaryov Institute of Semiconductor Physics NASU, Ukraine) Plasma Modification of Nanoporous Graphite Films	O

13:15-13:30	Carmen Del Hoyo Martinez (Universidad de Salamanca, Spain) Nanoclays for industrial decontamination applications	O
13:30-15:00	Lunch	
15:00-15:30	Josep Samitier (IBEC, Spain) Surface nanopatterning and 3d architecture of cell aggregation	K
15:30-16:00	Aitziber Lopez Cortajarena (CIC Biomagune, Spain) Bio-inspired nanotechnology: from protein engineering to functional nanomaterials	K
16:00-16:30	María del Puerto Morales (ICMM/CSIC, Spain) Strategies for Shape-Controlled Magnetic Iron Oxide Nanoparticles for biomedical applications	K
16:30-17:00	Danny Porath (The Hebrew University of Jerusalem, Israel) Novel DNA-Based Molecules and Their Charge Transport Properties	K
17:00-17:30	Luis Liz-Marzán (CIC biomaGUNE, Spain) Reversible Surface Charge Control through Supramolecular Chemistry	K
17:30-18:00	Coffee Break / Poster Session	
18:00-18:30	Bergoi Ibarlucea (Technische Universität Dresden, Germany) Single-step Modified Electrodes for Ascorbic Acid Detection in Sweat at Ultralow Potential	I
18:30-18:45	Eduardo Gil Santos (IMM-CNM-CSIC, Spain) Optomechanical biosensors	O
18:45-19:00	Oscar Malvar (IMM-CNM-CSIC, Spain) Mass and stiffness nanomechanical spectrometry	O
21:00	Social Dinner - Sidrería Beharri, Narrica 22, 20003 San Sebastián - Donostia	

Thursday October 03, 2019		
09:00-09:30	Philippe Lalanne (LP2N-CNRS, France) Light interaction with nanoresonators: mode volume and quasinormal mode expansion	K
09:30-10:00	Javier García de Abajo (ICREA - ICFO, Spain) Control of Light at the Atomic Scale	K
10:00-10:30	Luis Froufe (University of Fribourg, Switzerland) Light in correlated disordered media	I
10:30-11:00	Coffee Break / Poster Session	
11:00-11:30	Javier Aizpurua (CSIC-UPV/EHU and DIPC, Spain) Atomic-scale interactions in plasmon-enhanced molecular spectroscopy	K
11:30-12:00	Antonio Garcia-Martin (IMN-CNM-CSIC, Spain) Sensing Performance of Hybrid Magnetoplasmonic Systems	K
12:00-12:30	Marek Grzelczak (DIPC, Spain) Plasmon-assisted photoregeneration of biomolecules.	K
12:30-12:45	Rafael Ramírez-Jiménez (Universidad Carlos III de Madrid, Spain) SERS in the ultra-small limit: size and interparticle distance effects	O
12:45-13:15	Manuel Marques (UAM, Spain) Magneto-optical Stren-Gerlach forces and non-reciprocal torques on small particles	I
13:15-13:30	Rodica Turcu (National Institute for Research and Development of Isotopic and Molecular Technologies, Romania) Magneto-responsive nanosystems with controlled morphology and surface functionalization	O
13:30-15:00	Lunch	
15:00-15:30	Pedro David García (ICN2, Spain) Optomechanical interaction driven by complexity	I
15:30-16:00	Guillermo Acuna (Université de Fribourg, Switzerland) DNA origami nanotools for nanophotonics	I
16:00-16:30	Lluís F. Marsal (Universitat Rovira i Virgili, Spain) Tunable Multispectral Photonic Stopbands Based on Structurally Engineered Nanoporous Anodic Alumina	K
16:30-17:00	Coffee Break / Poster Session	
17:00-17:30	Marek A. Kolmer (Oak Ridge National Laboratory, USA) Two-probe scanning tunneling spectroscopy as a tool for studying quantum transport at the atomic-level	K
17:30-17:45	Pedro Brandimarte (Donostia International Physics Center, Spain) Multi-probe scanning tunneling spectroscopy for in-plane electronic transport: theory and experiment	O
17:45-18:15	Carole Fauquet (CINAM, France) Coupling X-ray spectroscopy and Scanning Probe Microscopy	I
18:15-18:30	Didier Tonneau (CINAM, France) High lateral resolution fibered sensor for dosimetry at high energies	O
18:30-19:00	Nicolas Lorente (CFM/CSIC - UPV/EHU, Spain) Electronic correlations in excitations revealed by the scanning tunneling microscope	K
19:00-19:15	Arvidas Galdikas (Kaunas University of Technology, Lithuania) Kinetic modeling of nanocomposites formation during co-deposition of binary films	O

Friday October 04, 2019		
09:00-09:30	Miguel M. Ugeda (CSIC-UPV/EHU and DIPC, Spain) Visualization of multifractal superconductivity in a two-dimensional transition metal dichalcogenide in the weak-disorder regime	K
09:30-09:45	Yia-Chung Chang (Academia Sinica, Taiwan) Exciton Coupled to Fermi-Sea Polarizations in Semiconductor Quantum Wells and Transition-Metal Dichalcogenides	O
09:45-10:15	Peter Bøggild (DTU Nanotech, Denmark) Quantum transport in nanopatterned graphene - without killing the patient	K
10:15-10:45	Julio Gomez-Herrero (UAM, Spain) Manipulating gold nanowires to probe electrical properties at the nanoscale: few-layer antimonene as a case study	K
10:45-11:30	Coffee Break / Poster Session	
11:30-12:00	Gabriel Molina-Terriza (DIPC, Spain) Quantum nanophotonics: using nanostructures to manipulate photons	K
12:00-12:30	Géza Giedke (DIPC, Spain) Wigner crystals in transition-metal dichalcogenides: optical detection and quantum simulation	K
12:30-13:00	Shiue-Yuan Shiau (DIPC, Spain) Composite-boson signature of atomic dimers in the interference pattern of colliding condensates	I
13:00-13:30	Jorge Lobo Checa (ICMA-CSIC-UZ, Spain) Tailoring quantum confinement using extended organic nanoporous networks	I
13:30	Closing & TNT2020 announcement	