

Programme CEN2025 Tuesday 10/06/2025



IX CONFERENCIA ESPAÑOLA DE NANOFÓNICA (CEN 2025)

Title	Speaker	Contribution	Time
Opening CEN 2025			09:10-09:30
Session 1			
Sensing electromagnetic landscapes in 3D with single molecules and nanometric resolution	Valentina Krachmalnicoff	Keynote	09:30-10:15
Localisation and directional emission in driven-dissipative photonic lattices	Alberto Amo	Invited	10:15-10:45
Optical forces on magneto-optical electric dipoles	Manuel Marqués	Oral	10:45-11:05
Coffee Break			11:05-11:35
Session 2			
Collective resonances in periodic arrays of nanostructures	Alejandro Manjavacas	Invited	11:35-12:05
In-operando control of sum-frequency generation in tip-enhanced nanocavities	Philippe Roelli	Oral	12:05-12:25
Probing light-matter interaction at the atomic scale	Alberto Martín	Oral	12:25-12:45
Electronic and vibrational fingerprints in the fluorescence emission of a molecule in an atomic-scale STM picocavity	Xabier Arrieta	Oral	12:45-13:05
Three-dimensional visualization of the near-field in plasmonic nanostructures	Irving Brian Becerril Castro	Oral	13:05-13:25
Lunch Break			13:25-15:00
Session 3			
Nanophotonics of time varying media	Paloma Arroyo Huidobro	Invited	15:00-15:30
Polariton condensates flow in codirectional couplers	Dolores Martín	Oral	15:30-15:50
Casimir-Lifshitz forces and ice behavior: implications for earth, technology, and planetary systems	Sol Carretero Palacios	Oral	15:50-16:10
Solving Maxwell's equations using polarimetry alone	Jorge Olmos Trigo	Oral	16:10-16:30
Coffee Break			16:30-17:00
Session 4			
Flow cytometer based on microbubble resonators: detection and characterization of nanoparticles by photoacoustic effects	Lucía Cavigli	Invited	17:00-17:30
Nanohole plasmonic biosensors: an application to glioblastoma surgery	Fernando Moreno	Oral	17:30-17:50
Engineered nanoporous anodic alumina photonic structures for enhanced light-matter interaction and sensing	Lluís F. Marsal	Oral	17:50-18:10
Cost-effective SERS substrates for gas sensing	Hugo Romero	Oral	18:10-18:30

Programme CEN2025 Wednesday 11/06/2025



IX CONFERENCIA ESPAÑOLA DE NANOFOTÓNICA (CEN 2025)

Title	Speaker	Contribution	Time
Session 5			
Low-latency computing with photonic systems	Wolfram Pernice	Keynote	09:30-10:15
3D topological photonics: 3D Chern photonic insulators and electromagnetic axions	Aitzol García Etxarri	Invited	10:15-10:45
Machine learning: tools for everyday nanophotonics	Sergio Gutiérrez Rodrigo	Oral	10:45-11:05
Coffee Break			11:05-11:35
Session 6			
Photon statistics and entanglement of the light emitted by two interacting emitters	Rubén Esteban	Invited	11:35-12:05
Single-photon source over the THz regime	Diego Martín Cano	Oral	12:05-12:25
Ambient-stable high single photon purity doped CsPbBr ₃ quantum dots	Jehyeok Ryu	Oral	12:25-12:45
Generation and control of quantum entanglement using free electrons	Adamantios P. Synanidis	Oral	12:45-13:05
Multiqubit quantum state preparation enabled by topology optimization	Alberto Miguel	Oral	13:05-13:25
Lunch Break			13:25-15:00
Session 7			
Photonics to tailor persistent luminescence	Gabriel Lozano	Invited	15:00-15:30
Nanostructure modification in MaPbBr ₃ thin films via bathocuproine addition for light-emitting devices	Alicia de Andrés	Oral	15:30-15:50
Optical probing of doping reversal in MoS ₂ p-n junctions induced by pyroelectricity	Javier Fernández-Martínez	Oral	15:50-16:10
Assesing dielectric function in emerging materials for new electro-optic devices	Victoria Estesó	Oral	16:10-16:30
All-optical ferroelectric domain engineering of photovoltaic lithium niobate crystals	Carlos Sebastián	Oral	16:30-16:50
Poster session I + Coffee Break			16:50-19:00

Programme CEN2025 Thursday 12/06/2025



IX CONFERENCIA ESPAÑOLA DE NANOFOTÓNICA (CEN 2025)

Title	Speaker	Contribution	Time
Session 8			
Organic materials, optical resonances and strong light-matter coupling	Malte Gather	Keynote	09:30-10:15
Strong light-matter interaction in anisotropic 2D materials	Pablo Alonso González	Invited	10:15-10:45
Organic chromophores are not ideal two-level systems in light-matter interactions	Ruth H. Tichauer	Oral	10:45-11:05
Coffee Break			11:05-11:35
Session 9			
Optomechanics as a source of complexity	Pedro David Garcia	Invited	11:35-12:05
Towards SQL in a Si optomechanical crystal at room temperature	Irene Castro	Oral	12:05-12:25
Enhancing photothermal effects in VO ₂ through Au nanodiscs coupling	Lionel Aigouy	Oral	12:25-12:45
Reconstructing 3D temperature maps with luminescent nanothermometers and AI	Erving Ximendes	Oral	12:45-13:05
Interfacial thermal conductance in Janus nanoparticles: implications for photothermal therapy	Pablo Albella	Oral	13:05-13:25
Lunch Break			13:25-15:00
Session 10			
Enhanced optical response in arrays of multifunctional plasmonic nanostructures	Arantxa Fraile Rodríguez	Invited	15:00-15:30
Wavelength-dependent differential amplification of RAMAN scattering by chiral gold nanorods for multiplexed encoding	Andrés Serrano	Oral	15:30-15:50
Multifunctional inverted pyramid metasurfaces: Scalable fabrication for enhanced infrared absorption, hot electron generation, and chiral plasmonics	Luis Alberto Pérez	Oral	15:50-16:10
Effective index measurement for guided chiral mode generation	Iago Díez	Oral	16:10-16:30
Bound states in the continuum and superchiral near-fields in Si metasurfaces	José Luis Pura	Oral	16:30-16:50
Poster session II + Coffee Break			16:50-18:30
Conference dinner			19:00-00:00

Programme CEN2025 Friday 13/06/2025



IX CONFERENCIA ESPAÑOLA DE NANOFOTÓNICA (CEN 2025)

Title	Speaker	Contribution	Time
Session 11			
Manipulating matter by strong coupling to vacuum fields	F. J. Garcia Vidal	Keynote	09:30-10:15
Enhancing light-matter interaction via anapole and quasi-bound states in the continuum	Ángela Barreda	Invited	10:15-10:45
Advanced light-matter interactions in J-aggregate plasmonic nanostructures	Isabel Pastoriza	Oral	10:45-11:05
Coffee Break			11:05-11:35
Session 12			
Plasmonic photocatalysis and its application in light-to-matter chirality transfer	Lucas V. Besteiro	Invited	11:35-12:05
Nanoparticles as building blocks for multifunctional optical materials	Hernán Míguez	Oral	12:05-12:25
Scattering defects induced by pulsed laser ablation for superluminescent diode fabrication	Andrea Martínez	Oral	12:25-12:45
Bio-derived active photonic structures: functionalization and control	Pedro Braga Fernandes	Oral	12:45-13:05
Organic distributed feedback lasers for refractive index sensing	Álex Farrando Pérez	Oral	13:05-13:25
Closing CEN 2025 & Lunch			13:25-15:00