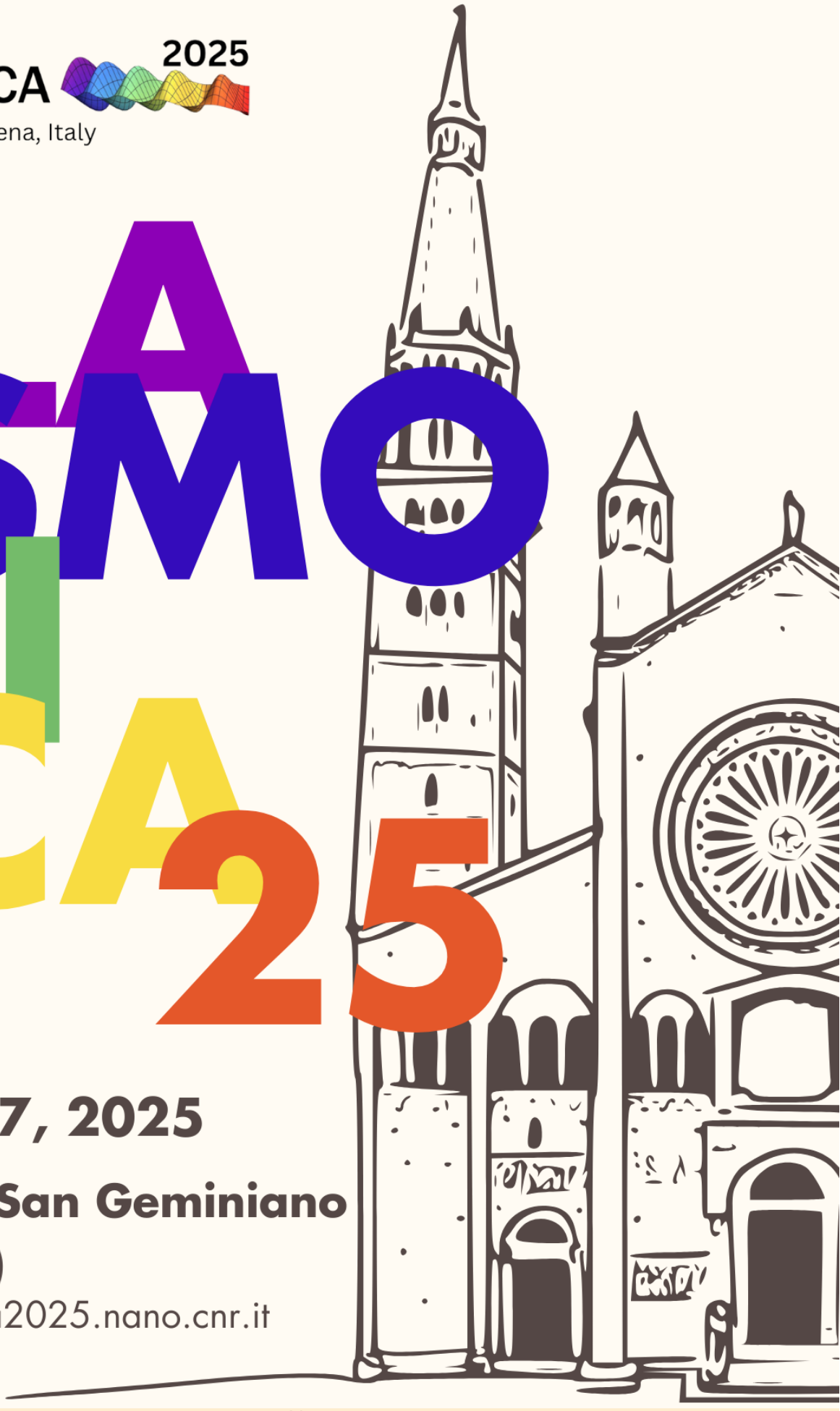
PLASMONICA 2025

June 25-27, 2025 | Modena, Italy

PLASMONICA25



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Complesso San Geminiano
Modena (IT)

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This booklet is based on the AMCOS conference booklet by Maxime Lucas and Pau Clusella. The LaTeX template is freely available at https://github.com/maximelucas/AMCOS_booklet along with examples, additional codes, and information about its use and distribution policy.

The document was compiled on May 30, 2025. You can download the latest version of the booklet from the conference website at https://plasmonica2025.nano.cnr.it/. Please address any comments (e.g., reporting errors) and suggestions on this booklet to luca.bursi@unimore.it.

Credits

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Instructions for presenters

Contributed **talks** are allocated a 18 minutes time slot (15' talk + 3' questions). Please bring your slides in a USB stick and upload them to the lecture hall's computer well in advance of your talk.

The recommended format for **posters** is A0 or A1 with portrait orientation (poster dimensions should not exceed 90×120 cm – width × height). Please hang your poster at the opening of the Conference. You may leave it displayed on the designated boards until the end of the event.

Timetable

Wednesday, June 25th

12:30–14:00	**Registration and light lunch**	
14:00–14:15	**Opening remarks**	
14:15–14:45 **[Invited]**	**Alejandro Manjavacas** Instituto de Química Física Blas Cabrera IQF-CSIC, ES	Collective lattice resonances in complex arrays of nanostructures
14:45–16:00	**Session I: Ultafast and active plasmonics.**	
	Sveva Sodomaco Scuola Normale Superiore, Pisa, IT	Towards an integrated QM/classical framework for molecular nanoplasmonics
	Pablo Grobas Illobre Scuola Normale Superiore, Pisa, IT	Plasmon-mediated fluorescence enhancement of chromophores: An atomistically-detailed theoretical perspective
	Tersilla Virgili Cnr Ifn, Milano, IT	Ultrafast spectroscopy on a hybrid plasmonic-photonic platform
	Valeria Giliberti Center for Life Nano- and Neuro-Science, IIT, Roma, IT	Customized infrared nanospectroscopy technique for the study of electric-field-induced molecular dynamics
16:00–16:30	**Coffee break, Poster session, and Sponsors' exhibition**	
16:30–17:45	**Session II: Light-matter interaction and quantum plasmonics.**	
	Hira Asif Akdeniz University, Antalya, TR	Stark control of plexcitonic states in incoherent quantum system
	Gabriele Calusi Università di Firenze, IT	Optical mode level repulsion in hyperuniform disordered systems
	Maria Villanueva-Blanco ISOM, Univ. Politécnica de Madrid, ES	Polaritonic hybrid modes in Cd(Zn)O thin films on SiC
	Alessandro Rogai Università di Pisa, IT	Yb^{3+}-doped $CsPbCl_3$ perovskite nanocrystals: Quantum cutting for optoelectronic applications
18:00–19:00	**Round table of *Plasmonica* (in Italian)**	

Thursday, June 26th – Morning

9:00–9:30 **[Invited]**	**Valentina Krachmalnicoff** Institut Langevin, ESPCI Paris, Univ. PSL, CNRS, FR	Sensing 3D electromagnetic landscapes at the nanometer scale with single emitters
9:30–10:30	**Session III: Thermoplasmonics and plasmon-excitonics.**	
	Giorgio Zambito Università di Genova, IT	Hybrid 2D-plasmonic nanoemitters via grayscale thermal-scanning probe lithography
	Alessio Gabbani Università di Firenze, IT	Infrared thermoplasmonics with indium tin oxide nanocrystals
	Francesco Bisio Cnr Spin, Genova, IT	Plasmonic/excitonic hybrid systems for nanoscale thermometry
10:30–11:30	**Coffee break, Poster session, and Sponsors' exhibition**	
11:30–13:00	**Session IV: Hybrid and tunable metasurfaces.**	
	Henning Galinski ETH Zurich, CH	Hybrid resonant metasurfaces combining dielectric nanocup metasurfaces and plasmonic networks
	Yigong Luan Politecnico di Milano, IT	All-optical polarization encoding and modulation by nonlinear interferometry at the nanoscale
	Alberto Santonocito Università di Pisa, IT	Magnetically tunable metasurfaces
	Yaping Hou Politecnico di Milano, IT	Electrically tunable polarization state of light using lithium niobate-based nanograting
	Ali Douaki Università di Modena e Reggio Emilia, IT	Plasmonic gating of single nanopores
13:00–14:00	**Lunch break**	

Thursday, June 26th – Afternoon

14:00–16:15	**Session V: Metasurfaces for smart vision and imaging.**	
	Bert Hecht University of Würzburg, DE	Individually addressable nanoscale OLEDs
	Jonathan Barolak Università di Pavia, IT	Automated design of one-dimensional photonic crystals for all-optical image processing
	Pietro Baldin Politecnico di Milano, Smart Eyewaer Lab, IT	Metasurfaces supporting guided mode resonances for holography and eye tracking in future smart eyewear devices
	Jacopo Stefano Pelli Cresi EssilorLuxottica, Milano, IT	In-plane scattering sustaining metasurface for eye-tracking applications
	Costantino De Angelis Università di Brescia, IT	Nonlinear-nonlocal flat optics for space-time image processing
	Andrea Vogliardi Università di Padova, IT	All-dielectric silicon metasurfaces for the generation and manipulation of structured light
	Giuseppe Emanuele Lio Cnr Nano, Pisa, IT	Reconfigurable beamforming metasurfaces for infrared beam steering
16:15–17:00	**Coffee break, Poster session, and Sponsors' exhibition**	
17:00–19:00	**Session VI: Devices and applications.**	
	Camilla Gonzini LENS, Università di Firenze, IT	Near-field spectroscopy of photonic crystal cavities with small footprint and high optimized Q-factor
	German Lanzavecchia Istituto Italiano di Tecnologia, Genova, IT	Tailored fabrication of 3D nanopores for advanced nanoscale techniques
	Simone Zanotto Cnr Nano, Pisa, IT	Tailoring thin film absorption and nonlinear transduction in thermomechanical bolometers
	Fritz Berkmann Experimental Physics and Functional Materials, BTU Cottbus, DE	Plasmonic-induced hot carrier generation for MIR detectors
	Ergun Simsek University of Maryland Baltimore County, USA	Excito-plasmonic phototransistors with improved thermal management
	Margherita Angelini ESSS & Ansys	ESSS & Ansys for the academic world: Empowering education, research and innovation
20:30–23:00	**Social dinner**	

Friday, June 27th

9:00–9:30 **[Invited]**	**Emiliano Cortés** Nanoinstitute Munich, Faculty of Physics, Univ. of Munich (LMU), DE	Plasmonics for energy and sustainability
9:30–10:30	**Session VII: Plasmonic biosensing.**	
	Agostino Occhicone Università La Sapienza, Roma, IT	Detection of anti-SARS CoV-2 antibodies in human serum by localized surface states on 1D photonic crystal biochips
	Valeria Nocerino Università di Napoli Federico II, IT	Engineering gold nanocluster in PEGDA hydrogel for SERS-based on-site dimethoate sensing on olives
	Veronica Zani Università di Padova, IT	Ultra-low frequency surface enhanced Raman scattering of CTAB: Unveiling its detection and exchange mechanism on gold nanorods
10:30–11:30	**Coffee break, Poster session, and Sponsors' exhibition**	
11:30–12:45	**Session VIII: Alternative plasmonic (meta)materials.**	
	Cristina Mancarella Politecnico di Milano, IT	Plasmonic multilayers metamaterials merging nitrides, oxynitrides and transparent conductors with broad and tunable properties
	Naveen Kumar Cnr Nano, Modena, IT	Role of amorphization in tuning the electronic and plasmonic structure of Al-doped zinc oxide
	Antonio Ferraro Istituto di Nanotecnologia Cnr Nanotec, Rende, IT	ENZ metamaterials as platform for different applications
	Gonzalo Älvarez-Pérez Istituto Italiano di Tecnologia, Arnesano, IT	Free-electron optical nonlinearities in heavily doped semiconductors: From fundamentals to integrated photonics
12:45–13:15	**Closing remarks**	