

4th International Conference

NanoPlasm²⁰²²

Frontiers in Plasmonics and Nano-Photonics
13-17 June, 2022- Grand Hotel San Michele (Italy)

Detailed Program

For this 4th edition, NanoPlasm2022 has chosen to be green and eco-sustainable. Please consider in this same spirit to download it only via the QR code without printing it



NanoPlasm2022 Abstract Book

MONDAY, June 13th 2022

08:30			OPENING CEREMONY
			Chair: G. Strangi
8:45-9:25	F. Capasso		Plenary: Structured Light and Dark by Metaoptics
9:25-9:50	M. Wegener		Invited: The rise of two-step absorption 3D laser nanoprinting
9:50-10:10	F. Pineider		Oral: Detection of local magnetic fields with plasmonic nanoantennas
10:10-10:40			Coffee Break
			Chair: J. Khurgin
10:40-11:15	V. Shalaev		Keynote: Hybrid Quantum Photonics
11:15-11:40	F. de Angelis		Invited: Plasmonic Solid-state Nanopores: Toward Single-molecule Protein Identification
11:40-12:00	C. Ciraci		Oral: Quantum Hydrodynamic Theory for Plasmonics: from Molecule-Coupling to Nonlinear Optics
12:00-12:20	R. Hasan		Oral: Trapping of biological nanoparticles by quasi-bound state in the continuum
12:30-14:30			Lunch
			Chair: A. De Luca
16:00-16:40	A. Boltasseva		Plenary: Advancing Photonics with Machine Learning
16:40-17:05	A. Foti		Oral: Controlled Aggregation of Gold Nanorods on Graphene by Radiation Pressure for SERS Detection of Biomolecules
17:05-17:30			Coffee Break
17:30-17:55	J. Khurgin		Invited: Epsilon (and mu) Near Zero Materials – Photonics on Steroids?
17:55-18:15	M. G. Donato		Oral: Light-induced forces in front of epsilon-near-zero metamaterials.
18:15-18:40	R. Bachelot		Invited: hybrid plasmonic nano-sources of light: on the importance to control the spatial distribution of the active medium
20:15-21:30			Dinner

TUESDAY, June 14th 2022

Chair: G. Cerullo

8:45-9:25	E. Hu	Plenary: Nano-Photonic Emitters for the “Quantum Age”: where imperfections lead to opportunities
9:25-9:50	R. Advincula	Invited: Plasmonics and Molecular Imprinted Polymer (MIP) Sensing
9:50-10:10	J. Huang	Oral: Plasmonic Nanogap-enhanced Single-molecule Raman Spectroscopy: Towards Single-protein Raman Sequencing
10:10-10:40	Coffee Break	
Chair: A. Boltasseva		
10:40-11:15	R. Grange	Keynote: Bottom-Up Assembly of Random Polycrystals for Nonlinear, Electro-Optic, and Quantum Devices
11:15-11:40	M. Celebrano	Invited: Controlling and steering the nonlinear emission in nanoantennas and metasurfaces
11:40-12:00	B. Zappone	Oral: Understanding and controlling mode hybridization in multi-cavity optical resonators using quantum theory and the surface forces apparatus
12:00-12:20	A. Magazzu	Oral: Investigation of individual dust particle grains by optical tweezers for space applications
12:30-14:30	Lunch	
Chair: M. Wegener		
16:00-16:40	M. Soljagic	Plenary: Nanophotonics for tailoring of electron-light interactions
16:40-17:05	R. Quidant	Invited: Dielectric meta-optics for reconfigurable planar optics and biosensing
Elevator Pitch SESSION		
17:05-19:30	Coffee Break + Posters	
20:15-21:30	Dinner	

WEDNESDAY, June 15th 2022

Chair: R. Quidant

8:45-9:25	N. Engheta	Plenary: <i>Extreme Metamaterials in Four Dimensions</i>
9:25-9:50	G. Cerullo	Invited: <i>Nonlinear optical response of two-dimensional materials</i>
9:50-10:10	G. Della Valle	Oral: <i>Ultrafast All-optical Light Management with Plasmonic Metasurfaces</i>
10:10-10:40	Coffee Break	
Chair: R. Grange		
10:40-11:15	B. Palpant	Invited: <i>Ultrafast plasmonics in complex nano-objects</i>
11:15-11:40	F. Capolino	Invited: <i>What's exceptional at exceptional degeneracy points?</i>
11:40-12:00	S. De Liberato	Oral: <i>Mid-infrared nonlocality and electrical generation</i>
12:30-14:30	Lunch	

16.00 - Night

Social Event:

Excursion to the Tyrrhenian Coast: Colavolpe Company (Belmonte) and Fiumefreddo Bruzio: one of the most beautiful Hamlet in Calabria



THURSDAY, June 16th 2022

Chair: F. De Angelis

8:45-9:25	H. Altug	Plenary: Frontiers in Nanophotonics: Enabling Technology for Next-Generation Optical Biosensors
9:25-9:50	G. Baffou	Invited: Quantitative phase microscopy for nanophotonics
9:50-10:10	O. Maragò	Invited: Optical tweezers: from space to the nanoscale... and back
10:10-10:40	Coffee Break	

Chair: O. Marago'

10:40-11:15	J. Garcia De Abajo	Keynote: Atomically thin polaritonics: Challenges and opportunities
11:15-11:40	V. Giannini	Invited: Exploring "Unconventional" Topological Nanoparticle Photonics Situations
11:40-12:00	S. Bernatova	Oral: Optical force aggregation of gold nanorods as a tool to fabrication a multifunctional sensor
12:30-14:30	Lunch	

Chair: F. Capolino

16:00-16:35	N. Zheludev	Keynote: Optical Parametric Processes, Nonlinearity and Bistability in Nano-Opto-Mechanical Metamaterials
16:35-17:00	H. Caglayan	Invited: Linear all-optical switching via plasmonic analogue of Enhancement of Index of Refraction
17:00-17:30	Coffee Break	

17:30-17:55	C. De Angelis	Invited: Reconfigurable nonlinear photonic metasurfaces
17:55-18:20	G. Tagliabue	Invited: Nanoengineering of Light Absorption: from Hot Carriers to Photothermal Effects

18:30-19:30 Closing Remarks and Awards

20:15-21:30 Gala Dinner