



## Programma scientifico

### 18 marzo

14.30-15.30, Aula 27: **25 anni di IPCF nell'Area della Ricerca di Pisa**

- 14.30-14.35: *Welcome* (S. Bronco & O.M. Maragò)
- 14.35-14.50: *IPCF: multidisciplinarietà e interdisciplinarietà* (O.M. Maragò)
- 14.50-15.05: *IPCF nell'ambito dell'Area della Ricerca di Pisa: ieri e oggi* (S. Bronco)
- 15.05-15.20: *IPCF nel contesto dell'Area della Ricerca di Bari* (R. Comparelli)
- 15.20-15.30: Interventi aperti sulla storia di IPCF

15.30-16.30, Aula 29: Coffee break & poster session

16.30-17.30, Aula 27: *Tavola rotonda sul trasferimento tecnologico a IPCF* (Chairman: E. Tombari)

Presentazione dell'Ufficio Valorizzazione e Trasferimento Tecnologico (G. Lombardo)

17.30-17.50, Aula 27 → *Comunicazione e dissemination @IPCF*

Ore 20.00: cena presso ristorante/pizzeria La Tana (via S. Frediano 6)

### 19 marzo

09.15-10.30, Aula 27 → **Life Sciences** (Chairman: C. Cristallini)

- 09.15-09.30- *C. Trouki* (PI): Preparation and characterization of antioxidant and electroconductive PLGA/gelatin-based films for biomaterial applications
- 09.30-09.45- *F. Rizzi* (BA): Synthetic and Physiological Nanovectors: Designing the Future of Diagnosis and Therapy
- 09.45-10.00- *M. Infusino* (ME): Investigating Cosmic Dust Analogues with Acoustic Raman Tweezers
- 10.00-10.15- *D. Sonaglioni* (PI): Application of Fast Differential Scanning Calorimetry in the study of Soft Condensed Matter
- 10.15-10.30- *I. De Pasquale* (BA): Antimicrobial Screening of the Engineered Nanocomposites and Nanosystems

10.30-11.30, Aula 29 → coffee break & poster session

11.30-12.15, Aula 27 → **Advanced Materials** (Chairman: M. Labardi)

- 11.30-11.45- *G. Molinari* (PI): Tailoring Crystallinity and Mechanical Properties of Poly (Lactic Acid) (PLA): Insights into D-Unit Inclusion and Plasticizer Addition
- 11.45-12.00- *R. D'Ambrosio* (PI): Pushing the limits of the Microwave-assisted Chemical Vapor Infiltration technology for the production of large SiC<sub>v</sub>/SiC samples with different geometries
- 12.00-12.15- *C.N. Dibenedetto* (BA): Highly-ordered nanoparticles assembly in superstructures through slow destabilization



12.15-12.45, Aula 27 → **Energy** (Chairman: G. Barcaro)

- 12.15-12.30- *M. Latino* (ME): Advanced Electrodes for Next-Generation Renewable Energy Applications
- 12.30-12.45- *L. Sementa* (PI): Real-Time Ab Initio Simulations: Probing Electron Dynamics in Solar Cells and Sensor Materials

12.45-14.45, Aula 29 → pranzo e foto di gruppo

14.45-16.00, Aula 27 → **Environment** (Chairman: C. De Monte)

- 14.45-15.00- *L. Arrighetti* (PI): Cutin as potential innovative biobased additive on biodegradable/biobased polymers (remote)
- 15.00-15.15- *R. Labarile* (BA): Biohydrogen production from photosynthetic microorganisms
- 15.15-15.30- *L. Ricci* (PI): Stone wastes valorization by melt blending with biodegradable polymers
- 15.30-15.45- *S. Pezzini* (PI): BIOSMARTFERT: Advancing Sustainable Biofertilizers through Smart Release Technology
- 15.45-16.00- *A. Magazzù* (ME): Towards compact and portable Raman Optical Tweezers setups for the detection and chemical analysis of micro and nanoplastics

16.00-17.00, Aula 29 → coffee break & poster session

17.00-17.45, Aula 27 → **Environment** (Chairman: M.C. Righetti)

- 17.00-17.15- *S. Bernatova* (ME): Implementation of microfluidic platform to portable Raman tweezers: application to microplastics detection
- 17.15-17.30- *E. Ascari* (PI): Road traffic noise new challenges for data gathering
- 17.30-17.45- *L. Fredianelli* (PI): Environmental acoustic research and Sound Event Classification using Transfer Learning

17.45-18.00, Aula 27: Final remarks (O.M. Maragò & S. Bronco)

Ore 20.00: cena presso ristorante L'Europeo (via Santa Maria 177)

## **20 marzo**

09.00-10.30 → visita laboratori

10.30-11.30, Aula 29 → coffee break & poster session

11.30-13.00 → visita laboratori

13.00-14.30, Aula 29 → pranzo



## Poster list

### Advanced Materials

- 1- *G. Annino* (PI): Microwave-assisted processing of materials at IPCF Pisa
- 2- *A. Cintio* (PI): Microwave dielectric characterization at high temperature
- 3- *R. Journiac* (PI): Development of a resonant microwave cavity for the evaluation of dielectric properties of apatite ceramics
- 4- *M.C. Righetti* (PI): Contribution of the Amorphous/Filler Interphase to Properties of Poly(lactic acid)-based Nanocomposites
- 5- *M.C. Righetti* (PI): Amorphous/Crystal and Amorphous/Filler Interphase in Poly(butylene furandicarboxylate)-based Nanocomposites
- 6- *M. Montorsi* (PI): Local dielectric spectroscopy as a scanning probe method for nanoscale crystallinity mapping in semicrystalline polymers and polymeric nanocomposites
- 7- *S. Bronco* (PI): CircularEconomyCable PROJECT - Sviluppo e prototipazione di innovativi cavi elettrici e per telecomunicazioni ad elevata circolarità, tracciabilità e visibilità, per consentire la piena attuazione dei principi del circular economy e della transizione digitale nei settori del trasporto energia e della connettività dati
- 8- *S. Bronco* (PI): ATTITUDE PROJECT - vAlorization of wasTe products for the fabrication of sustainable paTient-personalIzed paTches targeting different phases of the woUnD hEaling cascade
- 9- *S. Trusso* (ME): Process controlled nanostructure and superhydrophobicity of thin film prepared ablating titanium in mixed Ar/N<sub>2</sub> atmosphere
- 10- *M.G. Donato* (ME): Optical forces in front of Epsilon-near-zero (ENZ) metasurfaces
- 11- *A. Foti* (ME): Boosting Raman and Photoluminescence by plasmon-enhanced spectroscopies: ultrasensitive detection and characterization of biomolecules and 2D materials
- 12- *C. Ingrosso* (BA): Ag Nanoparticles decorated Reduced Graphene Oxide based hybrid nanocomposites for antimicrobial textile coatings

### Energy

- 13- *I. Citro* (ME): Enhancing Solar Cell Efficiency through Nanotechnology: Integrating Quantum Dots and Gold Nanoparticles
- 14- *C. Mongiovì* (BA): B-ME: Biobased Materials for energy

### Life Sciences

- 15- *F. Aiello* (PI): Characterization of derivatized biopolymers via solution NMR spectroscopy
- 16- *C. Cristallini* (PI): Interdisciplinary Advances in Biomaterials for Nanomedicine and Tissue Engineering



### **Theory and computational modelling**

17- *G. Barcaro* (PI): GOrGONA: new Strategies in the Global Optimization of NanoAlloys

18- *F. Saija, G. Cassone* (ME): Formation of Sulfur Dioxide in Exoplanets' Atmospheres Investigated by Quantum Chemistry

### **Environment**

19- *P.G. Gucciardi* (ME): Advancements in instrumental development, modeling and environmental applications within the SAMOTHRACE project

20- *P. Fini* (BA): Agri-food wastes as new resource: Kiwi Peels as adsorbent material for water remediation

21- *M. Trotta* (BA): Green applications of photosynthetic microorganisms for space communication

22- *C. De Monte* (PI): ECOSEA PROJECT Integrative solutions for aquaculture and ecosystem health

### **Cultural Heritage**

23- *D. Giuffrida* (ME): Sustainable and flexible SERS Sensors for non-invasive Cultural Heritage analysis: achievements and perspectives