

08:45 Riccardo Donnini (ICMATE)

Assessment of mechanical and microstructural properties of structural alloys in fusion energy design for the EUROfusion framework

09:00 Chiara Aliotta (ISMN)

Doping strategies on perovskite oxides-based materials for clean energy and energy vectors

Chairperson: LOREDANA DE BARTOLO (ITM)

09:15 Monica Montesi (ISSMC)

3d scaffold-based cellular model mimicking the heterogeneity of osteosarcoma microenvironment, a new platform for preclinical study

09:30 Alessia Famengo (ICMATE)

Hybrids cellulose/TiO₂ substrates for biomedical applications

09:45 Francesca Della Sala (IPCB)

Natural polymers based substrates for pulmonary tissue regeneration

10:00 Lorenzo Degli Esposti (ISSMC)

Calcium phosphate nanoparticles loaded with therapeutic biomolecules for treatment of cardiovascular diseases and bacterial infections

10:15 Fausta Ulgheri (ICB)

PNRR PE13 INFACIT: Development of Immunomodulatory and Antiviral Lead Compounds

10:30 Coffee Break

Chairperson: MICHELE DONDI (ISSMC)

11:00 Mario Marchionna (INVITED, SAIPEM)

Solutions for the decarbonization of hard to abate industries: a zero-carbon puzzle?

11:40 Frederic Monteverde (ISSMC)

Entropy as thermodynamic boost to stabilize compositionally complex ceramics: a diamond in a rough

11:55 Francesca Villa (ICMATE)

Thermomechanical and elastocaloric properties of NiMn-based shape memory alloys for solid-state cooling applications

12:10 Marinella Striccoli (IPCF)

Carbon Dots: new fluorescent nanoparticles for advanced optical applications

12:25 Francesco Galiano (ITM)

A new coating technology for the preparation of anti-fouling membranes

Chairperson: NORBERTO LIBORIO MICALI (IPCF)

12:40 Massimo Trotta (IPCF)

From sustainability to circularity. The mighty power of photosynthesis

12:55 Pietro Russo (IPCB)

Green composites for automotive applications: opportunities, challenges and perspectives

13:10 Gianluca Di Profio (ITM)

Advanced membrane operations for the downstream processing of therapeutic biomolecules

13:25 Conclusioni Direttore DSCTM

13:40 Lunch

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Comitato Scientifico

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Paola Stagnaro (SCITEC)	Vincenzo Palermo (ISOF)
Angelo Fontana (ICB)	Claudio Sangregorio (ICCOM)
Alberto Figoli (ITM)	Alessandra Sanson (ISSMC)
Cinzia Giannini (IC)	Onofrio Maragò (IPCF)
Salvatore Iannace (SCITEC)	Eugenio Amendola (IPCB)

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GIORNATE DI DIPARTIMENTO CNR | DSCTM 2023

Molecular sciences, chemical technologies and materials for the global challenges



**18-20 OTTOBRE
2023**
Sesri Levante

Il Centenario del CNR è realizzato con il contributo della Presidenza del Consiglio dei Ministri e con il Patrocinio di RAI



Rai

18 Ottobre

14:00 Saluti di apertura

Maria Chiara Carrozza, Presidente CNR
Lidia Armelao, Direttore DSCTM

Chairperson: **LUIGIA CRISTINO (ICB)**

14:30 Giuseppina Rea (IC)

Space research and technologies addressing quality of life on Earth

14:45 Marianna Carbone (ICB)

The Importance of Natural Products Chemistry to Recognize and Capture Biodiversity Value: the Contribution of ICB to the National Biodiversity Future Center (NBFC)

15:00 Andrea Sorrentino (IPCB)

Printing the Future of Orthopedics: Exploring the Boundless Horizons of Functional Materials and 3D Technologies

15:15 Francesco Damin (SCITEC)

Analytical microsystems for infectious diseases: diagnosis and monitoring

Chairperson: **FRANCESCA RAVERA (ICMATE)**

15:30 Francesco Galeotti (SCITEC)

Functional Surfaces by Nano- and Microscale Fabrication of Soft Materials

15:45 Ilaria Bergenti (ISMN)

Spin-tunable interfaces for high speed and low consumption electronic devices

16:00 Lorenzo Poggini (ICCOM)

Titanium(III) Mixed-Sandwich Qubits on surface

16:15 Leonarda Liotta (ISMN) e Alessandro Mordini (ICCOM)

Incontro con i componenti eletti del Consiglio Scientifico DSCTM

16:30 Coffee Break & Poster Session

Chairperson: **SERGIO RIVA (SCITEC)**

17:15 Alessandro Benedetti (ICMATE)

MARECO, the polythematic marine laboratory of Bonassola: reconstruction and perspectives

17:30 Roberto Dragone (ISMN)

AI based satellite and ground sensor ANALYSIS for surface waters protection: The ECONET Project

17:45 Catia Algieri (ISMN)

Photocatalytic membrane reactors: a possible route for environmental remediation

18:00 Daniela Caschera (ISMN)

Waste-derived cellulose and nanomaterials: a smart combination for nanotechnology application

18:15 Manuela Melucci (ISOF)

Role and interplay of copper(II) and related ligands as effectors of α -synuclein

Chairperson: **GIUSEPPINA REA (IC)**

18:30 Giuseppe Di Natale (IC)

Study of peptides containing the KLVFF sequence: a potential route for understanding β amyloid aggregation

18:45 Andrea Caporale (IC)

SAR Study of the Human Host-Defence Peptide LL-37

19:00 Luigia Cristino (ICB)

Integrative Approaches by Multiscale Imaging, Biochemical and Functional Screening to Study Neuroactive Molecules

19:15 Elena Michelucci (ICCOM)

Proteomics analyses and integrative omics approach to highlight the common molecular signatures for different NCL forms

19:30 Greta Varchi (ISOF)

Porphyrin-based supramolecular nanocomposites: properties and opportunities

20:30 Dinner

19 Ottobre

Chairperson: **ALESSANDRO MORDINI (ICCOM)**

08:20 Vladimiro Dal Santo (SCITEC)

Materials and processes for the sustainable hydrogen production

08:35 Donatella Spadaro (IPCF)

Next-Generation Photovoltaics: Unveiling the Synergy between Solar Energy, Nanomaterials, Green Chemistry and Technology

08:50 Barbara Ventura (ISOF)

Photoactive Arrays Based on Porphyrins and Acridinium Units

09:05 Simone Casadio (ISSMC)

Piezophototronic materials for solar conversion

09:20 Federica Aiello (IPCF)

Functional Surfaces by Nano- and Microscale Fabrication of Soft Materials

Chairperson: **VINCENZO BUSCAGLIA (ICMATE)**

09:35 Angela Altomare (IC)

Developing advanced methodology and computing to challenge the structure characterization of microcrystalline materials

09:50 Giacomo Prampolini (ICCOM)

Integrated Computational Protocols for Materials Science

10:05 Edoardo Mosconi (SCITEC)

Computational Modeling of Perovskites for Photovoltaics and photocatalysis

10:20 Coffee Break & Poster Session

Chairperson: **LEONARDA LIOTTA (ISMN)**

11:05 Andrea Candini (ISOF)

Exploiting fluorescent nanodiamonds for imaging and multimodal sensing in biological systems

11:20 Marzio Rancan (ICMATE)

Multifunctional luminescent lanthanoids systems for sensing and energy conversion

11:35 Andrea Cintio (IPCF)

High-temperature dielectric characterization for microwave-assisted processes

11:50 Mario Prosa (ISMN)

Smart Integration of Organic Optoelectronic and Photonic Components for a New Class of Miniaturized Biosensors

Chairperson: **GABRIELLA DI CARLO (ISMN)**

12:05 Sabrina Gualtieri (ISSMC)

Interdisciplinary methods for the study and enhancement of cultural heritage materials

12:20 Brenda Doherty (SCITEC)

Prediction and prevention of irreversible colour changes of dyes and pigments in artworks

12:35 Natalia Rovella (ITM)

Engineered Membranes for Sustainable Preservation and Restoration of Cultural Heritage

12:50 Armida Torreggiani (ISOF)

Le iniziative di divulgazione scientifica nel DSCTM

13:05 Foto di gruppo

13:15 Lunch

Chairperson: **MASSIMO TROTTA (IPCF)**

14:30 Fabrizio Cavani (INVITED, Università di Bologna)

Perspectives in the valorisation of biomass to chemicals and fuels

15:10 Elisabetta Alberico (ICB)

Methyl Formate as a Liquid Organic Hydrogen Carrier

15:25 Fabio Bazzarelli (ITM)

Formulation of bioderived lipid particles by membrane processes

15:40 Nicola D'Antona (ICB)

Cascade Biocatalysis Strategies... and Green Approaches in Samothrace Project

15:55 Lucia Conzatti (SCITEC)

Macrocyclic oligomers of condensation polymers: from eco-composites to chemical recycling

Chairperson: **PAOLA STAGNARO (SCITEC)**

16:10 Aldobenedetto Zotti (IPCB)

From Chemistry to Engineering: Development and Characterization of Hierarchical Composites for Structural Applications

16:25 Maria Rosaria Plutino (ISMN)

Functional hybrid nanomaterials as crucial tools for sustainable highly efficient products and smart technologies

16:40 Filippo Valorosi (ISOF)

Graphene-based heaters for aeronautical applications

16:55 Giuseppe Recca (IPCB)

New approaches for the manufacturing of hollow composite parts using wax-based blends loaded with ferromagnetic metal particles

17:10 Coffee Break & Poster Session

Chairperson: **DOMENICO GAROZZO (IPCB)**

17:55 Loredana De Bartolo (ITM)

Multifunctional membranes: New Insights into Regenerative Medicine

18:10 Mariangela Di Donato (ICCOM)

Design of a new class of light activated photoswitches for applications in photopharmacology

18:25 Giancarlo Tria (IC)

Potentiating the Italian Capacity for Structural Biology Services in Instruct-ERIC

18:40 Giunta DSCTM

20:30 Social Dinner

20 Ottobre

Chairperson: **BARBARA VENTURA (ISOF)**

08:30 Manuela Bevilacqua (ICCOM)

The Role of Electrochemistry and Electrocatalysis in a Sustainable Future Perspective: Representative Case Studies