

08:35 Marco Scoponi (ISOF)

Methods for the identification of microplastics from flexible packaging of conventional plastics and bioplastics

08:50 Chiara Zanelli (ISTEC)

The Ceramic Industry in the challenge of sustainability through resource efficiency

09:05 Stefano Toffanin (ISMN)

A fully integrated miniaturized optical biosensor for multiplexing plasmonic detection of high- and low-molecular weight analytes

Chairman: TBA

Chimica per le scienze della vita

09:20 Invited lecture Fabio Fava (UniBo)

The Biobased industry and circular Bioeconomy in Europe: state-of-the-art and new priorities

09:45 Antonella Piscioneri (ITM)

Topographical cues of PLGA membranes modulate the behavior of hMSCs, myoblasts and neuronal cells

10:00 Maria Cristina De Rosa (SCITEC)

Accelerating drug discovery through computer simulation methods and artificial intelligence

10:15 Monica Favaro (UDVR-DSCTM)

Unità di Supporto alla Ricerca di Dipartimento: risultati di un anno di attività

10:30-11:10 Coffee Break - Poster Session/Software Corner

Chairman: TBA

Chimica per le scienze della vita

11:10 Daniele Sanna (ICB)

Biospeciation of vanadium compounds with potential medicinal application

11:25 Marianna Pannico (IPCB)

Raman Spectroscopy and Raman Imaging for bioanalytical applications

11:40 Roberto Consonni (SCITEC)

La spettroscopia NMR: potenzialità presenti e future nella metabolomica agroalimentare

11:55 Francesco Bellia (IC)

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

Chairman: TBA

Energia

Materiali

12:10 Enrica Fontananova (ITM)

Sustainable Energy Recovery from Salinity Gradients by Reverse Electrodialysis

12:25 Hamish Miller (ICCOM)

Electrocatalysis for future sustainable energy generation and storage

12:40 Jessica Groppi (ISOF)

The Evolution of Light Effectuated Autonomous Molecular Pumps

12:55 Elisa Mercadelli (ISTEC)

Ceramic materials for the Hydrogen Economy

13:10 Valentina Villari (IPCF)

Porphyrin-based supramolecular nanocomposites: properties and opportunities

13:25 Conclusioni Direttore DSCTM

13:45 Lunch

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Comitato Scientifico

Lidia Armelao	Direttore DSCTM
Luigi Ambrosio	(IPCB)
Angelo Fontana	(ICB)
Cinzia Giannini	(IC)
Francesco Attanasio	(IC)
Nicola D'Antona	(ICB)
Domenico Garozzo	(IPCB)

Comitato Organizzatore

Francesco Attanasio	(IC)
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Antonio Greco	(ICB)
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Floriana Bernabucci	(DSCTM)
Caterina Adinolfi	(DSCTM)
Cinzia Fraschetti	(DSCTM)
Maria Luisa Pompili	(DSCTM)
Federica Criscuoli	(DSCTM)



DSCTM



Giornate di dipartimento

DSCTM 2022

26-28 Ottobre 2022
Aci Castello - Catania

Dipartimento Scienze Chimiche e
Tecnologie dei Materiali
DSCTM

26 Ottobre

14:00 Saluti e apertura meeting
Presidente CNR e Direttore DSCTM

Chairman: TBA Chimica per le scienze della vita

14:30 Alessia Ligresti (ICB)
Natural small molecules targeting cancer: a long journey from bench to bedside

14:45 Marcella Chiari (SCITEC)
Extracellular Vesicles in Liquid Biopsies

15:00 Angela Messina (IPCB)
Non invasive colorectal cancer liquid biopsy by exosomes N-glycome

15:15 Cristina Bolzati (ICMATE)
 $[^{99m}\text{Tc}][\text{Tc}(\text{N})\text{PNP}]$ -tagging of small peptide: impact of different PNP structures on the labeling and pharmacokinetics of the radioconjugates

Chairman: TBA Materiali

15:30 Monica Sandri (ISTEC)
Medicated 3d hybrid patches designed for disinfection and healing of deep, infected skin wound

15:45 Maria Chiara Trapani (ISMN)
Functional hybrid nanomaterials for sensing and biological applications

16:00 Francesca Petronella (IC)
Label-free and reusable plasmonic biosensor for the rapid detection of Escherichia coli cells in water

16:15-17:15 Coffee Break - Poster Session/Software Corner

Chairman: TBA Chimica verde

17:15 Giuseppe Vitola (ITM)
Insights into Biocatalytic Membrane Reactors for pesticides degradation

17:30 Sergio Riva (SCITEC)
Biocatalysis and steroids at SCITEC: A forty-year history

17:45 Simone Quaranta (ISMN)
An example of circular economy: from mining tailings to value-added materials

18:00 Roberto Avolio (IPCB)
Design and processing of multicomponent polymeric materials towards improved recyclability and sustainability

18:15 Antonino Foti (IPCF)
Controlled aggregation of gold nanorods by radiation pressure for ultrasensitive sensing: from biomolecules to nano-plastics.

Chairman: TBA Chimica per scienze della vita

18:30 Vincenzo Di Marzo (ICB)
Caratterizzazione chimica e biomolecolare dei microbiomi: nuove scoperte a cavallo tra il CNR e l'Université Laval

18:45 Danilo Belviso (IC)
From multiscale X-ray based techniques to integrative structural biology and drug design

19:00 Ines Fasolino (IPCB)
Extracellular matrix analogues to treat acute and chronic neuroinflammation

19:15 Carla Ferreri (ISOF)

Cell membrane and lipidomics: a chemical-biological approach for precision medicine and nutraceuticals

19:30 Stefano Tartaglia (ICB)

Design and investigation of biologically relevant peptides

20:30 Dinner

27 Ottobre

Chairman: TBA

Teorica

08:20 Invited lecture Gianluca Maria Farinola (UniBa)

From organic synthesis to synthetic biology: a route to sustainable materials for solar energy conversion

09:00 Enrico Ronca (IPCF)

Controlling molecular properties with quantum fields

09:15 Gabriele Manca (ICCOM)

CO_2 conversion into N-alkyl/aryl Oxazolidin-2-ones Promoted by Metal-Free catalyst

Chairman: TBA

Materiali

09:30 Francesca Ravera (ICMATE)

Nanoparticles and nanostructures at liquid interfaces: from basic concepts to applications

09:45 Giuseppe Annino (IPCF)

Processing of SiC-based composites by means of microwave-assisted techniques

10:00 Alessandro Kovtun (ISOF)

X-Ray Photoelectron Spectroscopy: a unique tool to understand the chemical structure of nanomaterials

10:15 Luca Zoli (ISTEC)

Processing and properties of Ultra high Temperature Ceramic Matrix Composites

10:30-11:30 Coffee Break - Poster Session/Software Corner

Chairman: TBA

Energia

11:30 Adele Brunetti (ITM)

Advanced Membrane operations for the hydrogen separation, purification and conversion into liquid carriers

11:45 Davide Barreca (ICMATE)

Towards clean energy production: eco-friendly material mastering to tailor the oxygen evolution reaction

Chairman: TBA

Materiali

12:00 Luisa Barba (IC)

The XRD1 Synchrotron hard X-ray light source beamline as a tool for chemistry, material science and technical engineering of materials

12:15 Elisa Carignani (ICCOM)

Solid State NMR Spectroscopy unravels Structural Complexity and Dynamics in Lead Halide Perovskite

12:30 Carlo Alberto Biffi (ICMATE)

Additive manufacturing of metallic implantable and customized components: design, manufacturing and characterization

12:45 Eletra Papa (ISTEC)

Geopolymer based materials for pollutant removal (from water and gas)

13:00 Matteo Ceppatelli (ICCOM)

Materials synthesis under extreme pressure conditions

13:15 Lunch

Chairman: TBA

Chimica verde

14:35 Invited lecture Stefano Bessegini (Presidente ARERA)

Il Sistema energetico tra decarbonizzazione e sicurezza degli approvvigionamenti

15:15 Mario Foti (ICB)

Antioxidant properties of catechols against the hydroperoxy radical, HOO^*

15:30 Alessandra Criscuoli (ITM)

Membrane Distillation in Water Treatment and Desalination

15:45 Matteo Guidotti (SCITEC)

La Chimica per società più sicure e resilienti

Chairman: TBA

Materiali

16:00 Alfonso Martone (IPCB)

High performance epoxy vitrimers for recyclable carbon fiber reinforced composites

16:15 Ilaria Bergenti (ISMN)

New paradigms for spintronics based on functional interfaces

16:30 Serena Coiai (ICCOM)

Functional polymeric substrates with intercalated layered double hydroxides

16:45-17:30 Coffee Break - Poster Session/Software Corner

Chairman: TBA

Chimica per le scienze della vita

17:30 Giuseppe Pappalardo (IC)

Exploring conjugated peptides for neuroprotection and Abeta detection

17:45 Laura Siracusa (ICB)

Natural products: past, present and future

18:00 Emanuela Saracino (ISOF)

Probing structural and functional properties of primary astrocytes *in vitro* by fluorescent gold-nanoclusters (fAuNCs) as potential quantum nano-tools for the modulation of brain's functions

Chairman: TBA

Chimica verde

18:15 Paola Fini (IPCF)

Eco-friendly strategies to remove emerging pollutants from wastewater

18:30 Rosaria Ciriminna (ISMN)

A circular economy approach to biowaste valorization

18:45-20:00 Giunta di Dipartimento

20:30 Social Dinner

28 Ottobre

Chairman: TBA

Materiali

08:20 Simona Barison (ICMATE)

Colloidal systems based on phase change materials and their applications in cooling, solar and construction technologies