PROGRAM (as of 30/08/2021)


Tuesday (31/08/2021)

08:30 – 08:50: Online Registration
08:50 – 09:00: Opening - Welcome and Introduction

Chairperson: Vincenzo Palermo (Italian National Research Council (CNR), Italy)
09:00 – 09:45: Klaus Mullen (Max Planck Institute for Polymer Research, Germany)  P
Small, Medium, Large - from Nanographenes to Graphene Nanoribbons and Graphene
09:45 – 10:25: Elisa Molinari (Modena University, Italy)  K
The excitons that you might not expect
10:25 – 10:30: Alberto Moscatelli (Nature Publishing Group, UK)
Introduction to Nature Portfolio

10:30 – 10:45: Break & Posters Session

Chairperson: Paolo Samori (Université de Strasbourg / CNRS, France)
10:45 – 11:15: Eugenio Coronado (ICMOL - Universidad de Valencia, Spain)  I
2D magnetic materials based on molecular/2D heterostructures
11:15 – 11:45: Andreas Hirsch (University of Erlangen, Germany)  I
Patterned Functionalization of Graphene and Inorganic 2D-Materials
11:45 – 12:00: Jean-Francois Dayen (Université de Strasbourg, France)  O
Switchable Optoelectronic Devices based on Spin Crossover/Graphene Heterostructure
12:00 – 12:15: Niklas Herrmann (KULeuven, Belgium)  O
On-surface synthesis of an imine based 2D-COF using the 2-in-1 strategy: Characterisation at multiple length scales
12:15 – 12:30: Sara Amar (Centre de Recherche Paul Pascal, France)  O
Zeolite-Templated Carbon: a Promising Material for Supercapacitors
12:30 – 12:45: Marta Alcaraz Megias (Universidad de Valencia, Instituto de Ciencia Molecular (ICMol), Spain)  O
Continuous-flow synthesis of high-quality few-layer antimonene hexagons

12:45 – 13:45: Lunch Break

Chairperson: Claudia Backes (University of Heidelberg, Germany)
13:45 – 14:25: Valeria Nicolosi (Trinity College Dublin, Ireland)  K
Processing and applications of two-dimensional nanosheet inks
14:25 – 14:40: Miriam Rodriguez Gonzalez (KULeuven, Belgium)  O
Multicomponent Covalent Chemical Patterning of Graphene
14:40 – 14:55: Tim Nowack (University of Heidelberg, Germany)  O
Covalent functionalization of photoluminescent liquid-exfoliated WS2 nanosheets
14:55 – 15:10: Ji Liu (Trinity College Dublin, Ireland)  O
Electromagnetic interference shielding materials based on assembly of Ti3C2Tx MXene
15:10 – 15:25: Manuela Melucci (CNR-ISOF, Italy)  O
Graphene composites for enhanced drinking water purification
15:25 – 15:55: Posters Session 1
**15:55–16:15: Break & Posters Session**

Chairperson: Xinliang Feng (TU Dresden / cfaed, Germany)

16:15 – 16:45: **Claudia Backes** (University of Heidelberg, Germany) I
The role of defects in liquid-exfoliated nanosheets: from degradation to functionalisation

16:45 – 17:15: **Ute Kaiser** (Ulm University, Germany) I
Chemistry of low-dimensional materials on the atomic level

17:15 – 17:30: **Alessandro Kovtun** (CNR-ISOF, Italy) O
Graphene Oxide as promoter for chemical reactions monitored by X-Ray Photoelectron spectroscopy

17:30 – 17:45: **Michael Kinyanjui** (Ulm University, Germany) O
Imaging the atomic-scale effects of controlled disorder on an ordered electronic state in 2D quantum materials

17:45 – 18:00: **Vishnu Sreepal** (University of Manchester, UK) O
Two-Dimensional Covalent Crystals by Chemical Conversion of Thin van der Waals Materials

18:00 – 18:15: **Haoyuan Qi** (Ulm University, Germany) O
Towards atomic resolution imaging of beam-sensitive 2D polymers and metal-organic frameworks

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**Wednesday (01/09/2021)**

**// Workshop 1**

Chairperson: Artur Ciesielski (University of Strasbourg, France)

09:00 – 09:30: **Steven De Feyter** (KU Leuven, Belgium) I
Formation and functionalization of 2D materials: a molecular approach

09:30 – 09:45: **Alex Boschi** (CNR-ISOF, Italy) O
Charge transport mechanisms in GRM thin films: interplay between different length scales

09:45 – 10:00: **Andrea Mescola** (Istituto Nanosciente, CNR Nano S3, Italy) O
Frictional Response of Texture Induced Strained Graphene

10:00 – 10:15: **Michal Otyepka** (CATRIN, Palacký University Olomouc, Czech Republic) O
Graphene derivatives for energy storage

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**10:15–11:00: Break & Posters Session**

Chairperson: Steven De Feyter (KU Leuven, Belgium)

11:00 – 11:30: **Thomas Heine** (TU Dresden, Germany) I
Topological Two-Dimensional Polymers: a chemistry way towards quasiparticle physics

11:30 – 11:45: **Vito Di Noto** (University of Padova, Italy) O
Hierarchical Electrocatalysts for the oxygen reduction reaction with a Graphene “Core” and a Carbon Nitride “Shell” exhibiting a Low Pt loading

11:45 – 12:00: **Jinhua Sun** (Chalmers University of Technology, Sweden) O
Critical role of functional groups containing N and S on graphene surface for stable and fast charging Li-S batteries

12:00 – 12:15: **Alvaro Seijas-Da Silva** (ICMOL (Universidad de Valencia), Spain) O
Molecular Engineering of Hybrid Layered Double Hydroxides for Energy Applications

12:15 – 12:30: **David Bodesheim** (TU Dresden, Germany) O
In silico polymerization of 2D Polymers at water-surfactant monolayer interfaces

12:30 – 12:45: **Sebastian Grieger** (University of Heidelberg, Germany) O
Site selective oxidation of monolayered liquid-exfoliated WS2 by shielding the basal plane through adsorption of a facial amphiphile

12:45 – 13:00: **Christopher Leist** (Ulm University, Germany) O
Neural-network-based investigation of defect-rich carbon monolayers

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**13:00 – 14:00: Lunch Break**

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**// Workshop 2**

Chairperson: Thomas Heine (TU Dresden, Germany)

14:00 – 14:30: **Giovanni Cuniberti** (TU Dresden, Germany) I
Hofstader’s butterfly made labs accessible via 2D-COFs?

14:30 – 14:45: **Ganna Gryn’ova** (Heidelberg Institute for Theoretical Studies (HITS gGmbH), Germany) O
Nanographene Catalysts for the Oxygen Reduction Reaction
14:45 – 15:00: **Yingying Zhang** (TU Dresden, Germany)
A statistical model for representing stacking disorder of 2D covalent organic frameworks
15:00 – 15:15: **Miki Bonacci** (Università di Modena e Reggio Emilia, Italy)
Excitonic effects in graphene-like C3N
15:15 – 15:30: **Srdjan Stavrić** (University of Trieste, Italy)
Carbide Formation at Graphene/Nickel Interface: The Decisive Role of Graphene Orientation
15:30 – 15:45: **Antonios Raptakis** (TU Dresden, Germany)
Predicting the bulk modulus of single-layer 2D COFs from their molecular building-blocks properties

**15:45 – 16:45: Break & Posters Session**

Chairperson: Andrea Candini (CNR-ISOF, Italy)
16:45 – 17:00: **Florian Arnold** (TU Dresden, Germany)
The Importance of Relaxation Effects on the Properties of Twisted van der Waals Materials
17:00 – 17:15: **Donato Civita** (University of Graz, Austria)
Single-molecule study of the intermediate steps in a coupling reaction
17:15 – 17:30: **Iosif Tantis** (RCPTM/ Czech Advanced Technology and Research Institute, Czech Republic)
Covalently Interlinked Graphene Sheets with Sulfur-Chains Enable Superior Lithium Sulfur Battery Cathodes at Full-Mass Level
17:30 – 17:45: **Claudio Gasparini** (CNR-ISOF, Italy)
Enhancing triboelectric performances of electrospun poly(vinylidene fluoride) with graphene oxide sheets
17:45 – 18:00: **Minghao Yu** (TU Dresden, Germany)
High-power energy storage enabled by 2D layered materials
18:00 – 18:15: **Edoardo Raciti** (University of Trieste, Italy)
Defect-modulated photocatalytic response in 2D carbon nitride: a joint computational and experimental study

// **Workshop3**

Chairperson: Valentina Benfenati (CNR, Italy)
09:00 – 09:30: **Lucia Gemma Delogu** (University of Padua, Italy)
2Dmat Immune profiling by High-Dimensional Approaches
09:30 – 09:45: **Jinhua Li** (University of Chemistry and Technology Prague, Czech Republic)
Electron Transfer Mediated Antibacterial Property of 2D Materials: From Graphene to MXene
09:45 – 10:00: **Giada Cellot** (International School for Advanced Studies (SISSA), Italy)
Graphene oxide as nanotool to target dysfunctional neuronal plasticity: a synaptic approach to anxiety disorders
10:00 – 10:15: **Vasiliki Benekou** (CNR-ISOF, Italy)
Tuning the electrode work function by deposition of chemically functionalized MXenes-An SPM study

**10:15 – 11:00: Break & Posters Session**

Chairperson: Alberto Bianco (CNRS, France)
11:00 – 11:30: **Maurizio Prato** (Università di Trieste (biomaGUNE), Italy)
Recent Developments in the Chemistry of Graphene and Other 2D Materials
11:30 – 11:45: **Barbara Zanfrognini** (CNR-ISOF, Italy)
All-graphene flexible electrodes: novel platforms for wearable biosensing
11:45 – 12:00: **Kannan Balasubramanian** (Humboldt-Universitaet zu Berlin, Germany)
Electrochemistry at the edge of a single graphene sheet
12:00 – 12:15: **Sara Khaliha** (CNR ISOF, Italy)
The role of graphene oxide ‘defects’ on the adsorption of emerging water contaminants from water
12:15 – 12:30: **Lucas Jacquemin** (CNRS, France)
Investigation of radical formation on chemically modified graphene oxide under near infrared irradiation
12:30 – 12:45: **Ylea Vlamidis** (Istituto Italiano di Tecnologia, Italy)
CVD graphene coating of Cu cables for low voltage domestic and industrial wiring

**12:45 – 14:00: Lunch Break**
Industrial Forum
Chairperson: Vincenzo Palermo (Italian National Research Council (CNR), Italy)
14:00 – 14:20: Francesco Gazza (Centro Richerche FIAT, Italy) Graphene: opportunities for multifunctional lightweight structures in automotive sector
14:20 – 14:40: Maurizia Brunetti (Gruppo Hera, Italy) Graphene oxide in the multi-barrier system provided by the Water Safety Plans
14:40 – 15:00: Francesco Bonaccorso (BeDimensional, Italy) Solution processed 2D crystals for energy applications
15:00 – 15:20: Simone Ligi (Graphene-XT, Italy) 2D material for lubrication, a commercial application
15:20 – 15:35: Antonio Bianchi (ISOF-CNR, Italy) Graphene oxide coating of hollow fibers for simultaneous adsorption filtration in water purification
15:35 – 15:55: Cristina Bertoni (Electrolux, Italy) / Alessandro Migliavacca (Rold R-Lab, Italy) Advanced water and air quality sensing through 2D nanomaterials for smart appliances and smart homes

15:55 – 16:45: Break & Posters Session
Chairperson: Fouzia Hannour (Qatar Free Zones Authority, Qatar)
16:45 – 17:05: Sabrina Conoci (STMicroelectronics - U. Messina, Italy) Carbon dots as radiosensitizers in tumor treatment
17:05 – 17:25: Aldo Di Carlo (University of Rome "Tor Vergata", Italy) The fundamental role of two-dimensional materials for perovskite solar modules and panels
17:25 – 17:45: Rune Wendelbo (Abalonyx, Norway) Abalonyx’ expansion plan for GO production and applications
17:45 – 18:05: Meganne Christian (CNR/Graphene Factory, Italy) Opportunities for 2D materials to facilitate research in extreme environments

Thursday (02/09/2021)
Chairperson: Manuela Melucci (CNR-ISOF, Italy)
09:00 – 09:30: Camilla Coletti (IIT Pisa, Italy) Synthesis and Stabilization of Large-Scale Monolayer 1T’-MoTe2
09:30 – 09:45: Natalya Vassilyeva (Instituto de Ciencia Molecular, Spain) Solution-processed Janus 2D-layers
09:45 – 10:00: Luca Basta (Scuola Normale Superiore, Italy) Selective Covalent Organic Functionalization of Patterned Graphene Via 1,3-Dipolar Cycloaddition
10:00 – 10:15: Marco Gobbi (CIC nanoGUNE, Spain) Tuning superconductivity in large-area NbSe2 monolayers via molecular functionalization
10:15 – 10:30: Ayush Tyagi (Scuola Normale Superiore, Italy) Ultraclean high-mobility graphene on technologically relevant substrate
10:30 – 10:45: Zhenyuan Xia (IMS-Chalmers, Sweden) Electrophoretic deposition of graphene-related materials for positive electrodes in structural batteries

10:45 – 11:00: Break & Posters Session
Chairperson: Camilla Coletti (IIT, Italy)
11:00 – 11:40: Kian Ping Loh (National University Singapore, Singapore) Covalent organic framework for energy applications
11:40 – 12:10: Costas Galoitis (FORTH/ ICE-HT and University of Patras, Greece) Real-Time monitoring and kinetic studies of graphene growth on solid and liquid copper
12:10 – 12:40: Cecilia Mattevi (Imperial College London, UK) Precise synthesis of 2D crystals for energy applications
12:40 – 13:10: Gregory F. Schneider (Leiden University, The Netherlands) From polycyclic aromatic hydrocarbons to nanopore-nanogap devices

13:10 – 14:00: Lunch Break
Advances in Organic 2D Crystals
14:00 – 14:40: Xinliang Feng (TU Dresden, Germany)
The use of graphene electrodes for nanodevices with low-dimensional materials: the case of 1D graphene nanoribbons
14:40 – 14:55: Andrea Candini (CNR-ISOF, Italy)
15:00 – 15:15: Leonardo Martini ( Fondazione Istituto Italiano Tecnologia, Italy)
15:15 – 15:30: Letizia Ferbel (Scuola Normale Superiore, Italy)
15:30 – 15:45: Artur Ciesielski (University of Strasbourg, France)
15:45 – 16:00: Posters Session 2
16:00 – 17:00: Break & Posters Session

Friday (03/09/2021)

Chemistry of 2D graphene analogues – silicene and germanene
09:00 – 09:30: Zdenek Sofer (UCT Prague, Czech Republic)
Curved Nanographenes and Graphene Nanoribbons: Bottom-up Synthesis and Characterizations
09:30 – 09:45: Ji Ma (TU Dresden, Germany)
09:45 – 10:00: Sebastiano Mantovani (CNR-Isof Bologna, Italy)
10:00 – 10:15: Isaac Brotons Alcázar (Universitat de València, Spain)
MnPS3: Exfoliation and Stabilization with different Capping Agents
10:15 – 10:45: Break & Posters Session

Exploring the Flatland of 2D materials by electrochemical STM: visualization of the active sites for the hydrogen evolution reaction with atomic scale precision
12:45 – 13:45: Lunch Break
Chairperson: Vincenzo Palermo (Italian National Research Council (CNR), Italy)

13:45 – 14:15: Valentina Benfenati (CNR, Italy)
Graphene interfaces and devices for selective modulation of glial cells

14:15 – 14:45: Alberto Bianco (CNRS Strasbourg, France)
Carbon dots for photodynamic therapy and imaging

14:45 – 15:15: Andrey Turchanin (Friedrich Schiller University Jena, Germany)
van der Waals and Lateral Heterostructures of Organic and Inorganic 2D Materials:
Synthesis and Device Applications

15:15 – 15:45: Maurizio Peruzzini (ICCOM CNR, Italy)
Chemistry and Catalysis Mediated by 2D Black Phosphorus Decorated with Transition Metals Species

15:45 – 16:00: Closing remarks