

# From surfaces to devices: novel perspectives from nanostructured oxides and carbon materials

## International workshop

### PROGRAM

#### Monday 12 December 2022

##### Ore 8:50 Welcome

Ore 9:00 **Antonio TRICOLI**, University of Sydney, Australia

*MOF-Semiconductor Nanocomposite Architectures for Selective Gas Sensing*

Ore 9:40 **Manuela SCARSELLI**, Università degli Studi di Roma – Tor Vergata, Italy

*Synthesis and applications of 3D multifunctional carbon nanotube networks*

Ore 10:20 **Elena SPAGNOLI**, Università degli studi di Ferrara, Italy

*Influence of Morphology in WO<sub>3</sub>-Based Gas Sensors for Selective Detection of Alcohols*

##### Ore 10:40 Coffee break

Ore 11:10 **Vincenzo GUIDI**, Università degli studi di Ferrara, Italy

*Gas-sensor characterization assisted by operando DRIFT-FTIR spectroscopy*

Ore 11:50 **Andrea CASOTTO**, Università Cattolica del Sacro Cuore, Italy; University of Notre Dame, USA

*Interrogating the acetone adsorption on complex ZnO nanowire-based surfaces: a NAP-XPS study addressing selective-gas sensing mechanism*

Ore 12:10 **Barbara FABBRI**, Università di Ferrara, Italy

*Chemical gas sensors for precision agriculture*

Ore 12:30 **HakimeH PAKDEL**, Università degli studi di Brescia, Italy

*Synthesis of WO<sub>3</sub> nanomaterials and their gas sensing properties*

##### Ore 12:50 Lunch break

Ore 14:00 **Gilbert NESSIM**, Bar Ilan University, Israel

*Insights on the synthesis of carbon nanotubes*

Ore 14:40 **Steven DE FEYTER**, KU Leuven, Belgium

*2D carbon surfaces and molecules: a good marriage?*

Ore 15:20 **Mario TRIONI**, Consiglio Nazionale delle ricerche CNR, Italy

*WO<sub>3</sub> chemiresistors for acetone gas sensing: a theoretical study.*

##### Ore 16:00 Coffee break

Ore 16:30 **Daniele PERILLI**, Università degli studi di Milano – Bicocca, Italy

*Combining theoretical modeling and experiments to characterize graphene-based nanosystems*

Ore 16:50 **Aldo UGOLOTTI**, Università degli studi di Milano – Bicocca, Italy

*Structural, electronic and spectroscopic properties of graphitic carbon nitride: interplay between theory and experiments*

Ore 17:10 **Sonia FREDDI**, Università Cattolica del Sacro Cuore, Italy

*E-nose based on functionalized graphene for NO<sub>2</sub> discrimination*

##### Ore 17:30 Conclusions