

## International Workshop & NIS colloquium

# (Photo)catalysts for sustainable fuel production

21 September 2023

Aula Vallauri (C.so Massimo D'Azeglio 42, Torino)

### Morning session

Chair: Lorenzo Mino

9.15-9.30

**Gabriele Ricchiardi**

*Director of NIS Centre of Università di Torino*

**Welcome address**

9.30-10

**Francesco Parrino**

*Università di Trento, Trento (Italy)*

**Photocatalytic generation of nitrate radicals for the synthesis of industrial relevant compounds**

10-10.30

**Angel Morales-Garcia**

*Universitat de Barcelona, Barcelona (Spain)*

**Realistic photoactive TiO<sub>2</sub> nanoparticles: a trip from anhydrous to hydrated environments**

10.30-11 **Coffee Break**

Chair: **Fabrizio Sordello**

11-11.30

**Elizaveta Kozyr**

*Università di Torino, Torino (Italy)*

**Tracking active sites in metal-TiO<sub>2</sub> systems for photocatalytic H<sub>2</sub> production by *in situ* and *operando* spectroscopies**

11.30-12

**Sergio Tosoni**

*Università di Milano Bicocca, Milano (Italy)*

**Single-atom active species grafted on C<sub>3</sub>N<sub>4</sub> for catalytic and photocatalytic reactions: hints from DFT simulations**

12-12.30

**Jesus Gonzalez Cobos**

*Institut de Recherches sur la Catalyse et l'Environnement (IRCELYON) – CNRS, Lyon (France)*

**Electrochemical valorization of organic wastes at IRCELYON**

## Afternoon session

Chair: **Elisa Gaggero**

14.30-15

**Silvia Nappini**

*CNR-IOM – Elettra Synchrotron, Trieste (Italy)*

**In situ and quasi operando soft X-ray spectroscopy of catalytic materials at the BACH beamline: a deep dive into solid/liquid interfaces**

15-15.30

**Alberto Naldoni**

*Università di Torino, Torino (Italy)*

**Harnessing visible and infrared light with nanometal photocatalysts for solar to chemical energy transduction**

15.30-16 **Coffee Break**

Chair: **Francesco Pellegrino**

16-16.30

**Simelys Hernández**

*Politecnico di Torino, Torino (Italy)*

**Renewable-energy-driven CO<sub>2</sub> conversion: engineering of the electrocatalytic process from the lab to the demonstration scale**

16.30-17

**Andrea Martini**

*Fritz Haber Institute, Berlin (Germany)*

**Tracking the evolution of Ni-based single atom catalysts for the CO<sub>2</sub> electroreduction reaction: an operando XAS and XES study**

17 **Closing remarks**

**Organizers:**

Lorenzo Mino

Francesco Pellegrino

Fabrizio Sordello

**Attendance is free but you are required to register at:**

[NIS Colloquium UniTO](https://www.nis.unito.it) (by 19/09/2023)

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