



International Workshop and NIS Colloquium

Sponsored by doMino and DAM4CO₂ projects

Towards Carbon Neutrality

New frontiers in carbon dioxide capture and valorization

Wednesday 19th June 2024

Aula Darwin - Molecular Biotechnology Center
Via Nizza, 52 - Torino (Italy)

Local organizers (Department of Chemistry, University of Torino):

Valentina Crocellà, Matteo Signorile, Silvia Bordiga, Virginia Guiotto,
Alberto Ricchebuono, Melodj Dosa, Gabriele Deplano



MORNING SESSION

- 9.00 – 9.10** **Gabriele Ricchiardi** - Director of NIS, University of Torino, Italy
Introduction to the Colloquium
- 9.10 – 9.30** **Alessio Fuoco** - Institute on Membrane Technology, CNR-ITM, Italy
doMino and DAM4CO₂ projects
- 9.30 – 9.50** **Alexis Dunand** - Carbon Gap LTD, Belgium
A snapshot of the state of carbon management policy in the EU
- 9.50 – 10.40** **Susana García** - Heriot-Watt University, United Kingdom
On the race to Net Zero Energy Systems: Shedding light on Stakeholders' perspectives for Sorbent-based Carbon Capture
- 10.40 – 11.00** **Virginia Guiotto** - University of Torino, Italy
Exploring Flexible MOFs as Potential Fillers of Mixed Matrix Membranes for CO₂ separation
- 11.00 – 11.20** **Coffee Break offered by Assing s.p.a.**
- 11.20 – 12.00** **Alexander Forse** - Cambridge University, United Kingdom
Using Electrochemistry to Capture Carbon Dioxide
- 12.00 – 12.20** **Matteo Romano** - Polytechnic of Milano, Italy
The calcium looping process for CO₂ capture in cement plants: the outcomes from the Cleanker project's TRL7 pilot plant
- 12.20 – 12.40** **Angiolina Comotti** - University of Milano Bicocca, Italy
CO₂ in porous frameworks: an insight on adsorption and dynamics
- 12.40 – 13.00** **Sergio Bocchini** - Polytechnic of Torino, Italy
Bridging Research and Industry: Ionic Liquids in CO₂ Capture Applications
- 13.00 - 14.00** **Light Lunch**

AFTERNOON SESSION

- 14.00 – 14.40** **Rocio Semino** - Sorbonne Université, France
What can simulations teach us about MOF-based membranes?
- 14.40 – 15.00** **Carmen Rizzuto** - Institute on Membrane Technology, CNR-ITM, Italy
Fluorinated Mixed Matrix membranes for CO₂ capture: preparation and transport properties
- 15.00 – 15.20** **Grazia Bezzu** - Swansea University, United Kingdom
Polymers of intrinsic microporosity for CO₂ capture and catalysis
- 15.20 – 16.00** **Adele Brunetti** - Institute on Membrane Technology, CNR-ITM, Italy
Sustainable valorization of waste CO₂ into e-fuel through catalytic and photocatalytic membrane processes
- 16.00 – 16.20** **Coffee Break offered by CEM s.r.l.**
- 16.20 – 16.40** **Roberto Gobetto** - University of Torino, Italy
Recent Advances in CO₂ Electroreduction by Molecular Catalysts Functionalized on Electrode Surface
- 16.40 – 17.00** **Nataly Carolina Rosero** - Instituto de Cerámica y Vidrio, CSIC, Spain
Rational design of sustainable and environmentally friendly electrocatalysts for CO₂ reduction reaction
- 17.00 – 17.20** **Francesca Valetti** - University of Torino, Italy
Microbial enzymes for CO₂ capture, conversion and upcycling
- 17.20 – 17.40** **Haresh Manyar** - Queen's University Belfast, United Kingdom
Catalysis and Process Engineering for CO₂ Conversion to Fuels and Chemicals
- 17.40 – 18.20** **Berend Smit** - EPFL, Switzerland
Big-data in chemical engineering; science beyond understanding
- 18.20 – 18.30** Conclusions and greetings

Attendance is free but **registration is required**, [fill this form](https://forms.gle/TMG9GFfhCdnxQ91v6) (<https://forms.gle/TMG9GFfhCdnxQ91v6>) before 11/06/2024

(the organization will close the registration before this date if the maximum number of participants is reached)

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We Simplify Science

The organizers acknowledge the Department of Biotechnology for providing the location for the conference.