



Mattia Boscherini

📍 **Work** : Via Granarolo 64, 48010, Faenza, Italy

✉ **Email**: mattia.boscherini@cnr.it

🌐 **Website**: <https://orcid.org/0000-0001-6314-1458>

Gender: Male **Date of birth**: 13/07/1995 **Nationality**: Italian

WORK EXPERIENCE

[02/01/2025 – Current] **Researcher-Level III**

CNR-ISSMC

City: Faenza (RA) | **Country**: Italy

Research activity in the field of hydrogen production from biomass in fixed and fluidized bed reactors.

[15/03/2021 – 31/12/2021]

Research scholarship on "Sviluppo di attività modellistica in ambiente marino-costiero"

Università Ca' Foscari Venezia-Dipartimento di Scienze Ambientali, Informatica e Statistica (DAIS)

City: Venezia (VE) | **Country**: Italy

Activity integrated in the research program "VENEZIA 2021", (CORILA - Consorzio per il coordinamento delle ricerche inerenti al sistema lagunare di Venezia and l'Università Ca' Foscari Venezia - Dipartimento di Scienze Ambientali, Informatica e Statistica) on the modeling of dispersion of organic and inorganic contaminants in the environment of Venice's lagoon.

[15/03/2021 – 15/06/2021]

University tutor for the course of FLUID MECHANICS AND TRANSPORT PHENOMENA

Università di Bologna-Dipartimento di Ingegneria Civile, Chimica, Ambientale e dei Materiali

City: Bologna (BO) | **Country**: Italy

[07/2013 – 08/2013]

Quality control analyst

Cabot Italiana s.p.a.

City: Ravenna (RA) | **Country**: Italy

Internship as quality control analyst for carbon black production company

EDUCATION AND TRAINING

[01/01/2022 – Current]

PhD in Process Engineering

Alma Mater Studiorum- Università degli Studi di Bologna

City: Bologna (BO) | **Country**: Italy | **Field(s) of study**: Engineering, manufacturing and construction: • *Chemical engineering and processes* | **Level in EQF**: EQF level 8

Thesis subject: "Analysis of the chemical looping methane dry reforming process for syngas production"

[16/07/2020]

Italian qualification as Industrial Engineer, Section A

Alma Mater Studiorum-Università degli Studi di Bologna

City: Bologna (BO) | **Country**: Italy | **Field(s) of study**: Engineering, manufacturing and construction: • *Chemical engineering and processes*

[09/2017 – 13/03/2020]

Master Degree in Chemical and Process Engineering

Alma Mater Studiorum, Università degli Studi di Bologna

City: Bologna (BO) | **Country:** Italy | **Field(s) of study:** Engineering, manufacturing and construction: • *Chemical engineering and processes* | **Final grade:** 101/110 | **Level in EQF:** EQF level 7 | **Thesis:** "Adsorbimento dinamico di CO2 in compositi innovativi a base geopolimerica" Supervisor: Prof. Matteo Minelli, Co-supervisor: Prof. Francesco Miccio

[02/2020] **IELTS Certification-English Language Level C1**

British Council Italia

City: Bologna (BO) | **Country:** Italy | **Field(s) of study:** Arts and humanities : • *Lingua ge acquisition*

[01/10/2019 – 10/01/2020] **Internship at ISTECCNR di Faenza**

ISTEC/CNR

City: Faenza (RA) | **Country:** Italy |

Research on geopolymer-based composite materials for carbon capture applications by adsorption processes.

[09/2014 – 06/10/2017] **Bachelor's Degree in Chemical and Biochemical Engineering**

Alma Mater Studiorum- Università degli Studi di Bologna

City: Bologna (BO) | **Country:** Italy | **Field(s) of study:** Engineering, manufacturing and construction: • *Chemical engineering and processes* | **Final grade:** 95/110 | **Level in EQF:** EQF level 6 | **Thesis:** "Analisi di un processo di trattamento fumi" Supervisor: Prof. Cozzani Valeri

[09/2009 – 04/07/2014] **Diploma di Maturità Tecnica ad Indirizzo Chimico.**

I.T.I.S. "Nullo Baldini"

City: Ravenna (RA) | **Country:** Italy | **Field(s) of study:** Natural sciences, mathematics and statistics: • *Chemistry* | **Final grade:** 100/100 | **Level in EQF:** EQF level 4 | **Thesis:** "La spettroscopia e lo studio della composizione delle stelle"

[06/2014] **First Certificate in English Language, Level B2**

Cambridge English Language Assessment

City: Ravenna (RA) | **Country:** Italy | **Field(s) of study:** Arts and humanities : • *Lingua ge acquisition*

PUBLICATIONS IN INTERNATIONAL PEER REVIEWED JOURNALS

[2024] **5) The Trade-Off between Combustion and Partial Oxidation during Chemical Looping Conversion of Methane**

Energies, MDPI

<https://doi.org/10.3390/en17112764>

Authors: Francesco Miccio, Mauro Mazzocchi, Mattia Boscherini, Alba Storione, Matteo Minelli, Ferruccio Doghieri

Role: execution of experimental activity, data elaboration, writing

- [2024] **4) Improvement of Process Conditions for H₂ Production by Chemical Looping Reforming**
Energies, MDPI
<https://doi.org/10.3390/en17071544>
Authors: Alba Storione, Mattia Boscherini, Francesco Miccio, Elena Landi, Matteo Minelli and Ferruccio Doghieri
Role: execution of experimental activity, data elaboration, writing
- [2023] **3) New Perspectives on Catalytic Hydrogen Production by the Reforming, Partial Oxidation and Decomposition of Methane and Biogas**
Energies, MDPI
<https://doi.org/10.3390/en16176375>
Authors: Mattia Boscherini, Alba Storione, Matteo Minelli, Francesco Miccio and Ferruccio Doghieri
Role: literature research, writing
- [2021] **2) CO₂ Adsorption in a Geopolymer-Zeolite Composite: Experimental Dynamic Tests and Modelling Insights on Related Thermal Effects**
Chemical Engineering Transactions, AIDIC
<https://doi.org/10.3303/CET2186179>
Authors: Mattia Boscherini, Francesco miccio, Elettra Papa, Valentina Medri, Elena Landi, Matteo Minelli
Role: execution of experimental activity, data elaboration, writing
- [2020] **1) The relevance of thermal effects during CO₂ adsorption and regeneration in a geopolymer-zeolite composite: Experimental and modelling insights**
Chemical Engineering Journal, Elsevier
<https://doi.org/10.1016/j.cej.2020.127315>
Authors: Mattia Boscherini, Francesco Miccio, Elettra Papa, Valentina Medri, Elena Landi, Ferruccio Doghieri, Matteo Minelli
Role: execution of experimental activity, data elaboration, writing.

CONFERENCES AND SEMINARS

- [18/09/2024 – 22/09/2024] **ACS Fall 2024- American Chemical Society Meetings & Expositions** Denver, Colorado (USA)
Poster presentation: "Cerium dioxide based oxygen carriers for methane chemical looping reforming"

Authors: Alba Storione, [Mattia Boscherini](#), Ferruccio Doghieri, Matteo Minelli, Francesco Miccio

Poster presentation: "Numerical investigation of Vapor Recovery Unit for VOCs capture applied to oil storage tanks using Aspen Adsorption™"

Authors: [Mattia Boscherini](#), Ferruccio Doghieri, Francesca Nappini
Link: <https://www.acs.org/meetings/acs-meetings/fall.html>
- [14/01/2024 – 18/01/2024] **GRICU PhD School 2024** Bardonecchia (TO), Italia
Poster presentation: "Chemical looping reforming over CeO₂ for syngas production from methane"

Authors: [Mattia Boscherini](#), Alba Storione, Ferruccio Doghieri, Francesco Miccio, Matteo Minelli
Link: <https://www.gricu.it/scuola-di-dottorato-gricu-2024/>
- [05/11/2023 – 10/11/2023] **2023 AIChE Annual Meeting** Orlando, Florida (USA)
Oral presentation by Alba Storione: "Methane Looping Reforming to Syngas: Optimal Process Conditions and Carrier Lifetime Assessment"

Authors: Alba Storione, Matteo Minelli, [Mattia Boscherini](#), Elena Landi, Francesco Miccio, Ferruccio Doghieri

Link abstract: <https://aiche.confex.com/aiche/2023/prelim.cgi/Paper/665623>
Link: <https://www.aiche.org/conferences/aiche-annual-meeting/2023>
- [03/07/2022 – 09/07/2022] **GRICU 2022 Conference: "Centralità dell' Ingegneria Chimica in un Mondo che cambia". GRICU PHD School 2022**
Ischia (NA), Italia
Poster presentation: "Geopolymer-zeolite composite materials for carbon capture applications: adsorption tests and modelling of thermal effects"

Authors: [Mattia Boscherini](#), Francesco Miccio, Elettra Papa, Valentina Medri, Elena Landi, Ferruccio Doghieri, Matteo Minelli
Link: <https://www.aidic.it/gricu2022/>

Società Chimica Italiana (SCI)-XIX Congresso Nazionale della Divisione di Chimica dell'Ambiente e dei Beni Culturali: SFIDE ED OPPORTUNITA' EMERGENTI PER L'AMBIENTE E PER I BENI CULTURALI

[20/06/2022 – 23/06/2022]

Torino (TO, Italia)

Poster presentation by Loris Calgaro: "A novel integrated approach for assessing the impact of shipping emissions control technologies on the marine environment in the Northern Adriatic Sea"

Authors: Loris Calgaro, Elisa Giubilato, Mattia Boscherini, Adriano C. Lima, Roberto Pastres, Marco Picone, Annamaria Volpi Ghirardini, Elena Semenzin, Antonio Marcomini

Link: <https://www.soc.chim.it/it/node/2804#:~:text=Contatti%3A-,XIX Congresso Nazionale della Divisione di Chimica dell'Ambiente e,20 al 23 giugno 2022.>

[23/05/2021 – 25/05/2021]

ICHEAP15, 15th International Conference on Chemical and Process Engineering

Napoli, Italia

Oral presentation by Matteo Minelli

Authors: Mattia Boscherini, Francesco Miccio, Elettra Papa, Valentina Medri, Elena Landi, Ferruccio Doghieri, Matteo Minelli

Link: <https://www.aidic.it/icheap15/>

ALTRI CORSI E TITOLI

[18/10/2022 – 26/10/2022]

Online course on "Fluidized beds for conversion of solid fuels"

Online training course by Cenertec-Center of Energy and Technology, Rio Tinto, Portugal

[09/03/2021]

Online course for Internal Auditor UNI EN ISO 9001:2015

Online training course by Area ISO S.r.L., Brescia (BS), Italia

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING C1 READING C1 WRITING C1

SPOKEN PRODUCTION B2 SPOKEN INTERACTION C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

My Digital Skills

Aspen Adsorption | Aspen Hysis | Auto CAD 2D | MATLAB | MFIX-TFM | Microsoft Office | QGIS

ADDITIONAL INFORMATION

[09/2023 – Current]

REVIEWER FOR INTERNATIONAL PEER REVIEWED JOURNALS

Journal: Applied Thermal Engineering

Publisher: Elsevier

Journal web page: <https://www.sciencedirect.com/journal/applied-thermal-engineering>

Link: <https://www.sciencedirect.com/journal/applied-thermal-engineering>

BIBLIOMETRIC DATA

ORCID ID: 0000-0001-6314-1458

SCOPUS ID: 57219702392

WEB OF SCIENCE ID: MCI-6882-2025

I authorize the treatment of my personal data presented in this CV according to art. 13 d. lgs. 30 giugno 2003 n. 196 - "Codice in materia di protezione dei dati personali" and art. 13 GDPR 679/16 - "Regolamento europeo sulla protezione dei dati personali".

Faenza, 21/01/2025