

## PERSONAL INFORMATION

## Barbara Bosio



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🌐 <https://dicca.unige.it/rubrica/BarbaraBosio>

### EDUCATION

- 2000 **PhD in Chemical Engineering**  
Polytechnic of Turin (*consortium* with Genoa and Milan), IT
- 1996 **Master degree *summa cum laude* in Chemical Engineering**  
University of Genoa, IT

### JOB POSITION

- 2023 - ongoing **Full Professor**  
University of Genoa, IT
  - Research and teaching activities in Applied Physical Chemistry
- 2011 - 2023 **Associate Professor**  
University of Genoa, IT
  - Research and teaching activities in Applied Physical Chemistry (*firstly in Principles of Chemical Engineering*)
- 2006 - 2011 **Contract Professor**  
University of Trent, IT
  - Teaching activities in Principles of Chemical Engineering
- 2000 - 2011 **Contract Researcher**  
University of Genoa, IT
  - Research activities in Principles of Chemical Engineering

### INSTITUTIONAL ROLES

- 2017 - ongoing **International Maritime Organization (IMO, specialized agency of the United Nations)**
  - Scientific delegate as Italian flag administration for participation in the "Sub-Committee on Carriage of Cargoes and Containers" as fuel cell expert
- 2023 - ongoing **European Energy Research Alliance (EERA, European platform)**
  - Official representative of the University of Genoa
- 2023 - ongoing **CapLab - Electrochemical cells for Carbon Capture and Energy Transition (jointed laboratory with the company Ecospray)**
  - Co-founder and scientific coordinator
- 2023 - ongoing **ATENA, High Technology in Energy and Environment (high tech district)**
  - Delegated in the members' assembly by the Rector of the University of Genoa
- 2023 - ongoing **Joint Commission of the University of Genoa**
  - President of the Polytechnic School team
- 2024 - ongoing **Fondazione CARIGE (non-profit organization of social utility)**
  - Member of the Steering Committee
- 2013 - ongoing **Doctoral Course in Civil, Chemical and Environmental Engineering at the University of Genoa**
  - Member of the Teaching Committee

## WORK EXPERIENCE

- Scientific research **Topics and skills:**
- Traditional and innovative fields of the Process Engineering with particular interest in the interaction of technology and environment for the promotion of a sustainable development
  - Electrochemical cells for "Gas to Power" as well as "Power to Gas" applications focusing on hydrogen as clean energy carrier
  - Molten Carbonate Fuel Cells development for carbon capture applications
  - Multiscale modelling, from microscopic phenomena investigation up to system process analysis
  - Design of experiments, test execution and data analysis related to prototypes on a laboratory or pilot plant scale
- Supervisor of 7 contract researchers**
- Teaching **Actual courses:**
- Applied Physical Chemistry
  - Diffusion phenomena in complex systems
  - Multiscale models of electrochemical cells applied to energy transition
- Supervisor or co-supervisor of 10 PhD theses**  
**Supervisor on average of 10 degree-theses / year**
- Project Management **Scientific coordinator, principal investigator or reference person of national and international projects, for example:**
- 2024 - ongoing: CO2-STOP, Molten Carbonate Fuel Cells for maritime applications, project financed by FINCANTIERI, scientific coordinator
  - 2024 - ongoing: Molten Carbonate Fuel Cells industrial technology development. project financed by Ecospray Technologies, scientific coordinator
  - 2022 - ongoing: NEST - Network 4 Energy Sustainable Transition, Spoke 4 "Clean Hydrogen and Final Uses", national project, internal reference person for the University of Genoa
  - 2019 – 2022: Ad Astra - Harnessing degradation mechanisms to prescribe accelerated stress tests for the realization of lifetime prediction algorithms, European project HORIZON 2020, task manager
  - 2017 – 2020: Investigation of the phenomena occurring in Molten Carbonate Fuel Cells (MCFCs), project financed by Exxon Mobil Research and Engineering, USA, scientific coordinator
  - 2010 – 2014: Contex - MCFC catalyst and stack component degradation and lifetime fuel gas contaminant effects and extraction strategies, European project FCH JU, steering committee member
  - 2006 - 2011: Study of molten carbonate fuel cell systems, project financed by Ansaldo Fuel Cells, principal investigator
  - 2007 - 2009: Biceps - Biogas integrated concept: a European program for sustainability, European project FP6, partner
  - 2006 – 2009: Use of hydrogen produced by crude residues gasification for the production of electricity through fuel cells, project financed by Isab Energy Services (ERG), partner
  - 2003 – 2005: Imatech - Integrated researches on materials technologies and processes to enhance MCFC in a sustainable development, European project FP5, reference person for the University of Genoa
- Main research collaborations KTH, Royal Institute of Technology – Sweden; KIST, Korea Institute of Science and Technology – Korea; ParisTech, École Nationale Supérieure de Chimie – France; University of Edinburgh - UK; Warsaw University of Technology – Poland; Université de Liège – Belgio DTU, Technical University of Denmark – Denmark; Universidad Católica Santo Toribio de Mogrovejo – Peru; ENEA and CNR – Italy.

## PUBLICATIONS

- Main collaborations **Author of more than 100 scientific papers, published in refereed journals or presented at international conferences (source: SCOPUS).**

In witness whereof,



Prof. Barbara Bosio