



Maëlle NISOLLE

Ph.D. in Chemical Science

Building on my engineering background, I pursued a Ph.D. driven by my interest for research, gaining expertise in multidisciplinary research project management, advanced experimentation, and modeling applied to climate-related challenges.

PERSONAL DETAILS

- Lyon - France
- [linkedin.com/in/maëllenisolle](https://www.linkedin.com/in/maëllenisolle)
- maelle.nisolle@gmail.com
- Driving license

TECHNICAL SKILLS

- Project management:** Planning, coordination, progress tracking, and communication of results
- Data processing and reporting:** Data management, technical reporting, and documentation using Microsoft Office Suit
- Scientific computing:** Task automation, data analysis, visualization using Python
- Modeling of chemical systems:** Mass balances, kinetics, parameter estimation using MATLAB
- Laboratory experimentation:** Protocol development, laboratory measurements, and data interpretation

LANGUAGE SKILLS

- French (mother tongue)
- English (C1)
- Italian (A2)

HOBBIES

- Artistic swimming: Practice and coaching
- Creative Arts & Handcrafts: Sewing, embroidery

EDUCATION

Ph.D. in Chemical Science

Lyon 1 Université / IFP Énergies Nouvelles (France) | Nov 2023 - Ongoing

Master in Chemical Engineering and Materials Science

Processes, energy and environment section: Highest distinction

UMons - Faculté Polytechnique (Belgium) | Sep 2021 - June 2023

WORK EXPERIENCES

Ph.D. - Precipitating solvents for carbon capture: Reactional mechanism investigation and kinetic study

Investigation of absorption and precipitation phenomena in phase-changing carbon capture solvents through advanced experiments and modeling

Lyon 1 Université / IFP Énergies Nouvelles (France) | Nov 2023 - Ongoing

Director: M. TAYAKOUT; Supervisors: G. PÉTAUD, É. LÉCOLIER, É. GANIÈRE, N. LEBAZ

- Research project management: 3-year project planning, coordination with academic and research partners, publication strategy definition, and project knowledge management within the permanent research team
- Scientific communication: Literature review and publications (1 published and 2 submitted), technical reporting, and international conference presentations (Best Poster and Best Presentation awards)
- Teamwork and management: Coordination with academic and research partners, supervision of two interns
- Innovation and experimental development: Design and construction of two new experimental setups, implementation and commissioning of a €150k instrumented device

Internship - Carbon capture degradation: Nitrosamine synthesis

Development and optimization of synthetic routes for nitrosamine standards required for carbon capture degradation studies

IFP Énergies Nouvelles (France) | July 2022 - Oct 2022

Supervisor: É. GIREL

- Literature review and synthesis protocol development
- Analytical characterization using chromatographic techniques and NMR

ACADEMIC PROJECTS

Photobioreactor development for microalgae | Oct 2022 - June 2023

Simulation of volatile compounds adsorption | Oct 2021 - June 2022

Monitoring of fatty acids in anaerobic digester | Nov 2020 - May 2021