

Justine Do Rosario

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PhD Student in Heterogeneous Catalysis



PROFESSIONAL EXPERIENCE



IFP Energies Nouvelles, Solaize (69)

2025

PhD Student in Heterogeneous Catalysis – Directed by Dr Céline Chizallet

Topic: Elucidation on the role of phosphorus doping on the acidity of zeolites and its impact on catalytic performance in ethanol dehydration.

- **MFI catalyst for dehydration of ethanol** (the first step of ethanol conversion to valuable chemical intermediates in the production of sustainable aviation fuels).
- Molecular modelling, and materials characterization.

Sept 2024 – Sept 2025

Apprenticeship Chemical Engineer

- Developed a lithium extraction method from cathode active materials for Li-ion battery recycling.



IC2MP CNRS, Poitiers (86)

Apr – Jun 2024

Applied Research Intern

- Evaluated innovative catalysts (2D materials, MXenes) for biomass valorization.
- Performed selective hydrogenation of citral under pressure.

Sept 2023 – Mar 2024

Analytical Techniques Intern

- Developed analytical skills in GC-MS: Q-MS, TQ-MS and TOF-MS.



Marine maTeriAls (MANTA), Pau (64) – Intern in the PhD project of Dr. Falgayrac

Jun – Jul 2023

- Developed eutectic solvents for biomass valorization.



IPREM CNRS, Pau (64) – Intern

Sept 2021 – May 2022

- Science outreach project on biomimicry (video and report): “Structural Color”.



SICOVAL, Belberaud (31) – Intern

Jun 2020

- Water quality analysis at wastewater treatment plant outlets.

EDUCATION



Engineering master's degree in chemical sciences, University of Poitiers and Pau

2020 - 2025

Scientific Project, Technical GC-MS Analysis Project, Accounting, HSE Training, Environmental Impact Assessment, Entrepreneurship, Management

2023 - 2025



Research Master's in Green Chemistry, Catalysis and Environmental Science, University of Poitiers

Heterogeneous and homogeneous catalysis, Theoretical chemistry and modelling, Materials analysis, Electrocatalysis, Inorganic chemistry.

2023



ERASMUS, Complutense University of Madrid (UCM)

Applied organic chemistry for industry, Chemical engineering, Biochemistry and advanced analytical chemistry.

2020 - 2023



Bachelor's degree in Physics-Chemistry, Engineering Master's Track in Geo-energy, Environment and Materials, University of Pau

Theoretical chemistry, Materials chemistry, Inorganic chemistry, Thermodynamics, Molecular biology, Organic chemistry, Physics and Analytical chemistry.

SKILLS

Laboratory Analysis : GC-MS, HPLC, FTIR, ICP-OES, ATG, XRD

Software : Microsoft Office, Origin, VASP, PIX Certification (456 points)

Languages : French (native; Voltaire Certification: 682 points), English (TOEIC: 785 points), Spanish (B1)

INTERESTS & HOBBIES

Sports: Skiing, Mountain biking; **Travel:** Europe, USA, Vietnam; **Theatre and reading**