




# Maryem RAHMANI


1st year PhD student

## MY PROFILE

With a solid background in chemistry-physics and materials and materials science, I'm currently working as first year PhD student at the Institute of Chemistry and Processes for Energy, Environment and Health (ICPEES) on the photocatalytic and photoelectrochemical performance of asymmetric heterostructures for green hydrogen production

## Contact

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## COMPÉTENCES

- Materials synthesis
- **Characterization of materials by spectroscopy:** UV-Vis, Fluorescence, IR, XRD, ellipsometry
- AFM, STM, SEM microscopy.
- **Electrochemical analysis :** potentiometry, cyclic voltammetry
- **Photoelectrochemical analysis:** PEC, impedance spectroscopy, LSV
- Teamwork, Autonomous, curious, rigorous, dynamic.

## INTERESTS



## PROFESSIONAL EXPERIENCE

**Institute of Chemistry and Processes for Energy, Environment and Health (ICPEES) | 11/2024 - at present**

**1st year PhD**

- Determination and optimization of deposition parameters on substrate surfaces
- Investigation of the photocatalytic and photoelectrochemical performance of dissymmetrical heterostructures.
- Optimizing materials for more efficient conversion of solar energy into hydrogen.
- Use of various characterization techniques, including UV-Vis spectroscopy,

**Institut Charles Sadron, PECMAT team. | 02/2024 – 07/2024**

**M2 internship**

- Chiral plasmonic nanostructures as enantioselective catalysts.
- Layer by Layer assembly of cyclodextrins/Nanoparticles
- Film growth monitoring by Ellipsometry, QCM,

**Strasbourg Chemistry Institute, LECPS team. | 03/2023 - 06/2023**

**M1 internship**

- Optimization of a sensor based on Polyoxometallates for nitrite detection.
- Sensor preparation/ Electrochemical electrochemical methods

**Office chérifien du phosphate (OCP) | 06/2018**

**L2 internship**

- Preparation of samples for analysis from Bul phosphates
- Characterization by UV-Vis, ATG, IR.

## ACADEMIC EDUCATION

**Master 2, chemistry-physics and materials | 2023 - 2024**

Strasbourg University

**Master 1 chemistry physics analytical informatics and materials | 2022 - 2023**

Strasbourg University

**Bachelor's degree in chemistry | 2021 - 2022**

Claude Bernard Lyon 1 university

**DEUG, Chemistry-Biology | 2019 – 2021**

Clermont Auvergne University

**DEUST, Chemistry-Biology-Geology | 2017 – 2019**

Abdelmalik Essaidi university

**Baccalaureat in general science | 2016 – 2017**

## LANGUAGES

- **French:** Advanced level
- **English:** Advanced level
- **Arabic:** Native language