



MARIE CRESP

PHD STUDENT AT THE INSTITUTE OF RESEARCH IN
CHEMISTRY PARIS (IRCP) IN THE LABORATORY OF
MATERIALS FOR PHOTONICS AND
OPTOELECTRONICS (MPOE)



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Formations

National Graduate School of Chemistry of Montpellier (ENCSM)

2019 - 2022

Degree of Engineer in Chemistry
Engineering
Major in Materials Chemistry

University of Montpellier (UM)

2021 - 2022

Master degree in Chemistry and
Materials Sciences for Sustainable
Development

Two-year intensive undergraduate studies to integrate the Gay- Lussac Federation Schools in the National Graduate School of Lille (ENSCL)

2017 - 2019

Hard skills

Thin film formations

- Spin Coating
- Spray Pyrolysis

Characterisations

- **Crystallography:** XRD, SEM
- **Thermic characterizations:** DSC, thermogravimetric analysis
- **Optoelectronic characterization:** J-V curves, EQE spectroscopy, photoluminescence (PL), UV-vis absorbance spectroscopy
- **Chemical analysis:** NMR spectroscopy, glow-discharge optical emission spectroscopy

Soft skills

- Autonomy
- Presentation of scientific research
- Team work
- Time management

Work Experiences

Thesis about Chemical Engineering for the Synthesis of Highly Stable Perovskite Layers for Efficient Solar Cells Applications

Institute of Research in Chemistry Paris (IRCP)
Scientific Research National Center (CNRS)

Oct. 2022 - Oct. 2025

- Working under the supervision of Dr Thierry PAUPORTE
- Design of **new efficient & stable perovskites for solar cell applications**
- **Layer characterization** by UV-vis absorbance, photoluminescence, XRD, SEM, NMR & GD-OES
- **Solar cell characterization** by EQE measurements & J-V curves
- **Stability measurement** on layers and devices
- Publication of research article in high-impact journal: **Adv. Funct. Mater. 2024, 2413671**

Research & Development Internship

Saint-Gobain Research Compiègne

Feb. 2022 - Aug. 2022

- Working under the direction of Dr Elise GARDIN
- Study of the physico-chemical phenomena involved in the **corrosion of new mirrors** in order to identify new ways of improvement

Research & Development Internship

CellMark Montpellier

Apr. 2021 - Aug. 2021

- Working under the direction of Dr Frederic ROQUEFEUIL
- **Formulations and applications of coatings based on organometallics** for the improvement of glass properties

Languages

- **French**..... Mother tongue
- **English**.....(TOEIC score: 975/990) **C1**
- **Spanish**..... **B2**