



Contact

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Email

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Address

69003, Lyon, France

Technical skills

- Chemical Kinetics
- Thermodynamics
- Electrochemistry
- Transport Phenomena
- Chemical Reactors
- Physical Analysis Methods and Spectroscopy Techniques
- Project and Risk Management – MOOC Certificate

Softwares

- Simulation: Aspen HYSYS, Aspen Plus, COMSOL
- Optimization & Data Analysis: Statgraphics, Minitab
- Programming: C/C++, Python, MATLAB
- Typesetting: LaTeX

Language

- French: Fluent (C2)
- English: Advanced (C1)
- Arabic: Native

Interests

- Graphic design
- Traveling
- Scientific communication

Hanane AMEUR

PhD student- Li-ion battery safety

Work Experience

11/2025 - 11/2028

IFPEN / LRCS / CdF - France

PhD candidate : Understanding and Modeling Internal Mechanisms Leading to Thermal Runaway under Overcharge Conditions in Lithium-Ion Batteries

- Literature review on lithium-ion batteries and thermal runaway
- Development of multiphysics electrochemical-thermal model
- Formulation of electrodes and fabrication of lithium-ion cells (coin, pouch, cylindrical) with integrated optical fibers
- Conducting thermal runaway experiments using Accelerating Rate Calorimetry (ARC)
- Conducting electrochemical tests under normal and abusive conditions

03/2025 - 07/2025

IFP Energies nouvelles (IFPEN) | Solaize, France

Final-Year Internship: Operando Spectroscopy Characterization of Lithium Batteries during Cycling

- Preparation of IR-compatible electrochemical cells in a glovebox
- Conducting FTIR measurements (ex situ, in situ, operando) and data interpretation

09/2024 - 02/2025

École Centrale de Lille | Lille, France

Research Project: Machine Learning Methods to Explore Catalytic Activity from Experimental Data

- Literature review on supervised and unsupervised machine learning models and their applications in catalysis
- Application of random forest methods to the furfural oxidation reaction: data collection and processing, model training and validation

03/2023 - 06/2023

Laboratory of Fossil Energy Valorization | Algiers, Algeria

Research Project: Study of Steady-State and Dynamic Behavior of a Non-Isothermal CSTR reactor for Thermal Runaway Prevention

- Mathematical modeling of CSTR behavior and identification of multiplicity profiles
- Analysis of steady-state and dynamic thermal stability
- Definition of safe operating zones to prevent thermal runaway

Education

2025-2028

Université de Picardie Jules Verne (UPJV) - Amiens, France

PhD in Electrochemical Engineering

2024-2025

Ecole Centrale de Lille | Villeneuve d'Ascq, France

Master's Degree in Catalysis and Processes

- Ranked 1st in class

2018-2023

Ecole Nationale Polytechnique - Algiers, Algeria

Engineering degree in Chemical Engineering