

Call for Applications – Postdoctoral Position (CYCLOLIVE-PRIMA Project)

Project title: From waste to resource: ReCYCLing OLIVE oil extraction byproducts for sustainable agricultural practices in the Mediterranean region (CYCLOLIVE).

Contract Duration & Salary:

The selected candidate will receive a monthly gross stipend of 8,000.00 MAD for a period of six (6) months, renewable once.

Position Description :

The primary objective of this post-doctoral position is to develop an accurate numerical model capable of simulating the thermal and dynamic performance of a solar furnace system. The model will integrate multiple environmental and technical parameters to ensure realistic and reliable simulations.

In addition, advanced simulations will be conducted to analyze the turbulent behavior of heat and gas flows within the furnace during the carbonization process. These investigations will help optimize the system's design and operational efficiency, ensuring high-quality biochar production while minimizing energy losses.

Keywords: Solar furnace, Solar thermal systems, Numerical modeling, Computational modeling, Thermal analysis, Heat transfer, Fluid dynamics, Computational Fluid Dynamics (CFD), Carbonization process, Biochar production.

Implementation Procedures

The post-doctoral researcher will be responsible for the following tasks:

- Numerical modeling, using **ANSYS Fluent** or **COMSOL Multiphysics**, of the carbonization process of olive pomace in a solar furnace.
- Design and sizing of a solar furnace combined with a **Schiffler parabolic concentrator**.
- Optimization of activated carbon production parameters in the solar furnace.

- Physico-chemical characterization of the activated carbon produced in the solar furnace.
- Preparation of scientific reports and research articles.

Candidate Profile

- PhD in Energy Engineering, Renewable Energy and Environment, or a related field.
- Strong background in heat transfer, mass transfer, and renewable energy (solar thermal systems).
- Proficiency in numerical modeling (ANSYS Fluent or COMSOL Multiphysics).
- Knowledge of the design and sizing of concentrating solar thermal systems.
- Ability to conduct experimental research independently.
- Strong scientific writing and research dissemination skills.
- Ability to work in a multidisciplinary team.

Application Documents

The application file must include:

- Motivation letter
- Curriculum Vitae
- Copy of the PhD diploma (or certificate of completion)
- Copies of internship certificates

The complete application must be sent as a single PDF file to the following email address:
f.aziz@uca.ac.ma

Contact

Prof. Faissal Aziz

Faculty of Sciences Semlalia, Cadi Ayyad University, Marrakech

Email: f.aziz@uca.ac.ma

Tel: +212 641 639 142

Timeline

- **24th February – 12th March 2026:** Application submission period,
- **14th March 2026:** Interview and notification of results,
- **16th March 2026:** Starting date.