

POSTDOCTORAL RESEARCHER SPECIALISED IN CHEMICAL LOOPING PROCESSES

Reference: 26-07-00045

The Centre for Forest Science and Technology of Catalonia (CTFC) is seeking to recruit a postdoctoral researcher in chemical looping processes to carry out research activities within the Forest Chemistry, Bioproducts and Biorefineries Group, integrated into the Bioeconomy, Health and Governance Programme.

Located in Solsona (Pre-Pyrenees, Catalonia), CTFC employs approximately 200 staff members, produces more than 140 scientific publications annually, and manages an annual budget of around €12 million. Its research and knowledge transfer activities are structured around four programs: Multifunctional Forest Management, Landscape Dynamics and Planning, Biodiversity Management and Conservation, and Bioeconomy, Health and Governance.

More institutional information is available at: www.ctfc.cat.

TERMS OF THE APPOINTMENT

1. Expected starting date: 1ST November 2026.
2. Contract type: Open-ended contract for scientific and technical research activities.
3. Working time: Full-time, 37.5 hours per week, with a schedule to be agreed.
4. Workplace: Solsona (Solsonès, Catalonia, Spain).
5. Professional category: Postdoctoral researcher.
6. Salary: According to qualifications and experience.
7. Probation period: 6 months.

KEY RESPONSABILITIES

1. Lead the development and optimisation of thermochemical conversion processes, including pyrolysis and gasification, using diverse lignocellulosic biomass feedstocks within the Green Chemistry Laboratory of the Forest Hub, with a particular focus on the valorisation of process streams into high-value bio-based products and materials.
2. Support the scale-up and demonstration of biorefinery technologies from pilot to pre-commercial stages, contributing to the advancement of processes across medium- to high-Technology Readiness Levels (TRLs).
3. Evaluate the technical, environmental, and economic performance of developed technologies, identifying opportunities for industrial implementation and market uptake.
4. Contribute to the supervision and mentoring of research and technical staff, including technicians, research assistants, and internship students involved in laboratory and pilot-scale activities.

5. Prepare and contribute to competitive national and international research proposals, particularly in the areas of chemical engineering, thermochemical process, environmental technologies, and circular bioeconomy.
6. Disseminate research results through scientific publications, conferences, stakeholder engagement activities, and collaboration with industrial partners.
7. Undertake any other research, innovation, or knowledge-transfer activities related to the candidate's area of expertise, as required by the project portfolio and CTFC strategic objectives.

BASIC REQUIREMENTS

1. PhD in Chemical Engineering and Environmental Engineering, or a closely related field, with expertise in chemical looping technologies, and thermochemical conversion processes.
2. Proven research experience in chemical looping processes, including the design, operation, optimisation, and scale-up of conversion processes from laboratory to industrial scale.
3. Strong track record of scientific publications in peer-reviewed international journals, commensurate with career stage.
4. Demonstrated experience in competitive research projects, including participation in nationally and internationally funded projects (e.g., Horizon Europe, or equivalent programmes).
5. Bachelor's and/or master's degree in chemical engineering, Petrochemical Engineering, Environmental Engineering, or a related scientific discipline.
6. Excellent command of English, both written and spoken, with proven ability to prepare scientific publications, technical reports, project proposals, and deliver presentations to international audiences.
7. Proficiency in Microsoft Office applications (Excel, Word, and PowerPoint) and experience with data analysis, reporting, and scientific communication.

DESIRABLE REQUIREMENTS

1. Advanced proficiency in process simulation and engineering software, including Aspen HYSYS, Thermoflow and ROSA.
2. Knowledge and research experience in oxygen carrier development and Chemical looping combustion (CLC)
3. Special consideration will be given to:
 - Ability to integrate rapidly into the CTFC research team.
 - Experience in international research collaborations and interaction with industrial partners.
4. Personal profile:
 - Flexible, responsible, proactive and well-organised professional with the ability to work independently and manage multiple tasks simultaneously.
 - Strong teamwork skills and interpersonal skills, with the ability to collaborate effectively in multidisciplinary and international environments.
 - Results-oriented mindset, with excellent problem-solving and communication skills.

- Commitment to scientific excellence, innovation, and the advancement of sustainable bioeconomy solutions.

SOFT COMPETENCES

1. Ability to plan, organise and efficiently manage time and resources.
2. Strong teamwork, both in multidisciplinary environments and with external collaborators.
3. Good communication and interpersonal skills with internal staff, scientific partners and industrial stakeholders.
4. Responsible and rigorous person with a high level of commitment to assigned projects.
5. Initiative, autonomy and proactivity in problem-solving and in proposing new research lines.
6. Flexibility and adaptability to new challenges, projects and applied research environments.
7. Willingness to travel for project meetings, conferences and technology transfer activities.

CONTACT

Centre de Ciència i Tecnologia Forestal de Catalunya
Crt. de St. Llorenç de Morunys, km 2 (direc. Port del Comte) 25280 Solsona
Tel. (+34) 973 48 17 52
E-mail: borsa.treball@ctfc.cat
<https://ctfc.cat/>
<https://ctfc.cat/transparencia.php>

SELECTION PROCESS AND CRITERIA

The selection process will be carried out through a two-stage procedure. The first stage will primarily target candidates from the consortium entities, given the nature of the position. The second stage will include the remaining candidates who have correctly submitted their application within the established deadline.

- **Applications:**

Candidates must submit a CV and a motivation letter via www.ctfc.cat/registre.php by **31 August 2026 at 14:00**, indicating the reference code of the job offer. Applications submitted through portals other than the CTFC's own job board will not be accepted, nor will those received through the SOC that do not follow the instructions specified in the call itself.

The position subject to this call may be declared vacant if the selection committee considers that, despite the existence of candidates who meet the minimum requirements, none is deemed suitable for the position.

The CTFC guarantees an open, transparent, and merit-based selection process (OTM-R) for all registered applications, thus avoiding any bias based on gender, origin, age, ideology, or any other potentially discriminatory circumstances. Inclusion policy: Priority will be given to candidates with a recognized and accredited disability of 33% or higher, provided that the disability is compatible with the proper performance of the position.

Estimated timeline	
24 working days	Publication and dissemination of the job offer: CTFC website, SOC Office, and other communication channels.
Following 2 working days	Pre-selection: verification of compliance with the minimum requirements and assessment of desirable conditions. Informative email sent to non-eligible CVs.
Following 2 working days	Selection committee meeting: interviews with shortlisted eligible candidates. Minutes of the Selection Committee stating the name of the selected candidate and the reasons for the selection. Publication of the resolution on the CTFC job portal identifying the selected candidate. Informative email sent to interviewed eligible candidates who were not selected.
Following 1 working day	Submission to Human Resources of the official documentation required to process the employment contract and coordination of the contract start date.
November 2026 (approximately)	Start of the contract.