



Universidad Católica del Norte

Thematic Research Anillos Project 2024 on Lithium and Salt Flats ATE240011

Postdoctoral Position in Environmental Assessment Available

The ANILLOS PROJECT titled "Technological Innovation for Sustainable Recycling of Lithium-Ion Batteries: Recovery of Critical Materials for the Safety of Energy Transition (RECLIBS)" code ATE240011, developed in collaboration by the Universidad Católica del Norte and the Universidad de Antofagasta, announces the opening of a postdoctoral research position.

The general objective of this research project is to develop cutting-edge recycling technologies aimed at the environmentally sustainable and economically viable recovery of critical materials from discarded Lithium-Ion Batteries. The focus is on promoting a multidisciplinary approach that integrates the principles of circular economy, sustainability, and innovation.

The selected candidate will participate in a research project related to the environmental aspects of lithium battery recycling in Chile. The overall concept of the "lithium battery cycle" is to develop emerging technologies for recycling lithium batteries. At each step of this cycle, Life-Cycle Assessment (LCA) tools will be used to evaluate energy and environmental impacts. The selected candidate will have a strong background in LCA methodologies and experience applying LCA tools to similar multi-step industrial processes.

Requirements:

- Ph.D. in Environmental Engineering, Chemical Engineering, Process Engineering, Metallurgy, Industrial Ecology, or a related field.
- Familiarity with common LCA software (e.g., SimaPro, GaBi, OpenLCA) and databases.
- Familiarity with modern programming languages and data analysis (e.g., Python, R, or Matlab).
- Familiarity with chemical process simulation software (e.g., Aspen).
- Demonstrated experience in conducting sustainability research.
- Excellent written and verbal communication skills in English.
- Ability to effectively analyze and report research results to sponsors, at conferences, and during professional meetings.
- Proven ability to work independently and collaboratively in diverse research teams.
- Ability to collaboratively develop research proposals and participate in grant writing to secure research funding.
- Commitment to academic integrity and ethics.

Required Competencies:

- Teamwork skills.
- Excellent interpersonal relationships and achievement orientation.
- Decision-making capacity.
- Effective communication skills.
- Proactivity.
- Cognitive flexibility.
- Adaptability.

Duties:

- Conduct applied research on the subject of this call in collaboration with the project's research team, disseminated through scientific publications and other formats agreed upon with the research team.
- Publish and submit a scientific article on lithium-ion battery recycling topics affiliated with the ANILLOS project. At least 1 article is expected to be published or accepted in Web of Science (WoS) journals each year.
- Conduct experimental work to collect relevant information for the project.
- Support outreach and dissemination activities of the project.
- Apply for postdoctoral scholarships from ANID or equivalent funding.
- Participate as a guide, co-guide, or member of the thesis committee for undergraduate and/or



postgraduate students within the project's framework.

Offer:

- Gross Monthly Salary according to the provisions established by ANID in the 2024 Thematic Research Rings in Lithium and Salt Flats.
- Maximum contract duration of 36 months, subject to annual evaluations.
- Economic incentive for scientific publications.

Required Documents:

Applicants must submit:

- A letter of interest expressing their connection to the project's themes (1 page).
- A summary of a research project on topics for submission to the ANID Postdoctoral competition (1 page).
- A work plan that includes a Gantt chart and a publication plan.
- An academic recommendation letter.
- Curriculum vitae that demonstrates research capacity or project development related to the project's themes.
- A copy of the Ph.D. degree certificate.
- The candidate must be able to join the team immediately at the Catholic University of the North, Coquimbo campus.
- Applicants for the postdoctoral position must be Chilean or foreign nationals (preferably those who already have residency in Chile) who can commit to staying in Chile from the scheduled start date for the entire project duration.

Application Submission:

- **The submission of applications will be open until November 3rd, 2024.**
- **Send applications and required documents to jaimе.chacana@ucn.cl with a copy to begopc@ucn.cl, indicating in the subject line: "Application for Postdoc in Environmental Assessment".**
- Questions should be sent to jaimе.chacana@ucn.cl

Selection Process:

- The selection process consists of two stages. Applications will be reviewed and pre-selected by the project's scientific committee for an interview.
Applicants participating in the process agree to undergo all evaluation systems, qualifications, and instruments deemed appropriate to assess their competencies and experience for the position.
- Universidad Católica del Norte will notify the selected candidate via an Offer Letter, and the candidate must formally accept the offer in writing within the specified time frame. If the offer is not accepted, another candidate will be appointed.
- In line with strategies to support closing the gender gap in research, women will be given preference in hiring, all else being equal.
- In accordance with Chilean Law No. 20.422, the Universidad Católica del Norte seeks to ensure that selection processes are conducted on an equal basis for all individuals. Therefore, in compliance with Chilean Law 21.015, which encourages the inclusion of people with disabilities in the workforce, applicants may inform if they require support devices, adjustments to the instruments used during the selection process, or other adaptations, in order to ensure their participation on an equal opportunity basis.
- **The Universidad Católica del Norte reserves the right to declare the competition void without stating a reason.**
- **ANID disqualifies candidates from receiving remuneration from the Anillo project if they are already receiving funding from ANID's postdoctoral, initiation, or regular research projects or if they hold public scholarships for the same academic level. Additionally, postdoctoral candidates who have secured their own project in the Anillo framework may participate directly but will only be eligible for funding for travel, accommodation, and operational expenses related to the project's objectives.**
- **The results of the call for applications will be announced on November 8th, 2024.**
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