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## Post-doctoral position in viability assessment of emerging decarbonizing technologies

ICFO is offering a postdoctoral position to a well-qualified, highly motivated and dynamic young scientist who wishes to enhance his/her scientific career in a friendly and stimulating environment.

The successful candidate will be joining the **CO2 Mitigation Accelerated by Photons group led by Prof. Dr. Pelayo García de Arquer.**

The focus of this project is to assess the environmental and economic viability of emerging decarbonizing technologies such as:

- CO2 capture, including atmospheric and single point emitters
- CO2 electroreduction
- Water splitting
- Ammonia electrosynthesis
- And complementary cathodic/anodic reactions

We model and analyze the prospects of scalability of these technologies to address the global challenge of achieving net-zero emissions by 2050.

The main tasks will include:

- Assessing the performance state of the art systems, including those published in the scientific literature and ongoing industrial developments.
- Developing detailed techno-economic (TEA) and life cycle analysis (LCA) models based on this information
- Coupling these models to offer a combined prospect of viability.
- Projecting the combined models into different future global scenarios to assess the best paths to scalability and net zero.

### Eligibility and Conditions

The candidate should hold a PhD and degree(s) in areas such as chemical engineering, process engineering, sustainability or economics.

The prospective candidate should have proven experience (e.g. excellent track record of publications) in some of the next:

- Techno-economic analysis, including the development of accurate quantitative models
- Life cycle analysis and software suites typically employed to carry out these analysis (e.g. ASPEN, SimaPro, etc)
- CO2 electroreduction, water splitting, and other electrochemical technologies
- Economies of scale
- Artificial intelligence, with focus on forecasting and Bayesian estimation

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ICFO is an equal opportunity employer. Candidates are selected exclusively on merit and potential on the basis of submitted application material. No restrictions related to disabilities, citizenship or gender apply to ICFO positions. ICFO abides by the principles of openness, efficiency, transparency, supportiveness, and international comparability as stated in the European Charter for Researchers and the European Code of Conduct for the Recruitment of Researchers.

Salary is offered according to the institutional salary scales.

The contract is offered for a period of 1 year.

Additionally, a family allowance is also available on request and after corresponding approval for people with family charges in the terms described in the corresponding policy.

### **Application procedure**

The formal application should be submitted online via <https://jobs.icfo.eu/?detail=707>

Suitable candidates are requested to submit:

- Presentation letter with a declaration of interest,
- Curriculum Vitae, including contact details,
- The contact e-mail of two potential referees.

Candidates will be assessed as they apply and the call will remain open until the suitable candidate is identified.

Candidates may contact [jobs@icfo.eu](mailto:jobs@icfo.eu) for formal enquiries regarding the application, as well as address scientific enquiries to [pelayo.garciadearquer@icfo.eu](mailto:pelayo.garciadearquer@icfo.eu).

For update information about the hosting group, please visit <https://www.icfo.eu/research-group/30/co2map/home/> .

For updated information about ICFO, please visit <https://www.icfo.eu>.

### **Deadlines**

The call will remain open until **09/10/2022**