

Job Information

Organisation/Company

Innovative Catalysis for Carbon Recycling-IC2R
Interuniversity Consortium on Chemical Reactivity and Catalysis-CIRCC

Location

IC2R and University of Bari

Researcher Profile

First Stage Researcher (R1)

Country

Italy

Application Deadline

18/07/2024 – 23.59 (CET)

Type of Contract

Three years

Job Status

Full-time

Hours Per Week

40

Offer Starting Date

After October/1/2024, as will be published on the dedicated website (see below).

Is the job funded through the EU Research Framework Programme?

H2020 Horizon

Is the Job related to staff position within a Research Infrastructure?

No

Offer Description

Two Positions available, one of which within the research project entitled Horizon DESIRED # **101083355** (IC2R-CIRCC), the other funded by UNIBA.

DESIRED

IC2R and CIRCC are seeking two highly motivated candidates holding a Master's Degree in Chemistry-Industrial Chemistry-Chemical Engineering and other close fields of Sciences, fluent in English interested in applying for a PhD position within a National Doctorate Programme having its administrative seat in Perugia. The two Grants are funded one by IC2R-CIRCC and the other by the University of Bari.

The two positions open for application are relevant to:

- A) A PhD Grant funded by IC2R-CIRCC with a focus on “Catalysis and photocatalysis for circular carbon economy -Water-CO₂ coprocessing under solar irradiation to afford C₂₊ molecules”
- B) A PhD Grant funded by the University of Bari on “Development of sustainable catalytic processes for chemical and energy industry”

The PhD title will be released by the University of Perugia and the University of Bari.

The PhD Candidates will work both at the IC2R seat in Valenzano-Bari and/or at the Department of Chemistry, University of Bari. They will act under the EU-DESIRED Project and will participate to the relevant activities and Meetings.

The PhD Candidate will work under the supervision of Prof. Michele Aresta at IC²R and Prof. Angela Dibenedetto at the University of Bari. They will be tutored by IC²R Senior Scientists.

Scope of the work is:

- To design, synthesize, characterize and use new photocatalysts and photo-electrocatalysts able to work under solar-light irradiation, in clean conditions avoiding any false positives.
- To up-scale the production of selected photo(electro)catalysts
- To follow the production-implementation of the new DESIRED photocatalysts and photoreactor.
- To develop reliable analytical methods for product validation.
- Have skill in small-equipment/solutions development/building
- To participate in Project activities, even attending periodical Project meetings.

As part of their application, candidates will be asked to submit a personal interpretation of the research project in the form of a specific project proposal of 2-3 pages, including a research question, a theoretical framework, a methodological strategy, and a justification for the suggested empirical choices.

The PhD candidate will have to reside in Bari or neighbours.

The PhD Candidate has to obey Italian laws and match the requisites of the Call.

Requirements

Research Field

Photo(electro)catalysis

Education Level

The applicants must have a Master degree (120 ECTS), preferably in Chemical Sciences, Industrial Chemistry or Chemical Engineering

Research Field

Synthetic Chemistry, Catalysis, Catalyst development, Photocatalysis

Skills/Qualifications

Knowledge of: laboratory operations, synthetic chemistry, controlled atmosphere operations, use of air-sensitive compounds, product isolation, product characterization, high pressure operations.

Language

ENGLISH

Level

Excellent

Additional Information

Benefits

This 3-Year-long doctoral fellowship is offered as part of a specific collective project within a multiannual international research effort on ‘Direct co-processing of CO₂ and water to sustainable multicarbon energy products in novel photocatalytic reactor’, (www.DESIREDProject.com). This project (2022-2026) is coordinated by CIRCC and partnered by IC²R. The ESR will be tutored by IC²R and seconded by CIRCC and the Department of Chemistry, University of Bari.

Candidates will get the salary according to the Italian Law on PhD candidates (see the conditions in the call) plus an allowance package for the participation in Project Meetings and International Conferences, according to the rules of the DESIRED Project.

Eligibility criteria

Candidates must have a 2-year master's degree (120 ECTS). Ideally, candidates should have a Master's degree in Chemical Sciences, Industrial Chemistry, Chemical Engineering and

- must respond to the requisites of the call and must have published at least two papers in known Journals (Chemistry, Chemical Engineering, Material Sciences) relevant to the topic that may document their operational and scientific ability;
- must have a good knowledge of laboratory practices and operations, including vacuum-inert gas and high-pressure operations;
- must be able to run in person GC, GC-MS, FTIR, UV-VIS equipment;
- must have strong written and oral communication skills in English;
- should be in the first four years of their research careers at the time of recruitment and have not been awarded a doctoral degree so far.

The ideal candidate should have:

Knowledge, Skills, Qualifications and Experience Required

Essential:

- Understanding the essential concepts in the field of photo- and photoelectro-catalysis
- Ability to clearly communicate complex information

Desirable

- Thorough understanding and relevant direct experience of research methods
- Advanced understanding of the functioning of equipment.
- Advanced understanding of issues related to CO₂-chemistry.

Selection process

The candidate can reach the website below for informations about the application process

<https://www.unipg.it/didattica/percorsi-post-laurea/dottorati-di-ricerca/dottorati-di-ricerca-old/bandi-avvisi-e-modulistica?view=elenco&layout=concorso&idConcorso=46693>

The calendars of the tests or any other communication concerning this selection will be available after July 9, 2024, and published on the Perugia University's website at

<https://www.unipg.it/didattica/percorsi-post-laurea/dottorati-di-ricerca/bandiavvisi-e-modulistica>

The notice will have the value of a formal convocation and no personal communications will be sent to the candidates in this regard.

IC²R and CIRCC are an equal opportunities employers, committed to promoting equality, diversity and fairness irrespective of age, disability, gender, marital status, race, religion or belief, sexual orientation or gender identity. UNIPG will ensure that equal opportunities are guaranteed to each applicant during the selection procedure.

Candidates admitted to the course must enrol within the deadlines that will be established by the measure approving the acts (published on the page web <https://www.unipg.it/didattica/percorsi-post-laurea/dottorati-diricerca/bandi-avvisi-e-modulistica>), exclusively by following the instructions that will be made available on the page web: <https://www.unipg.it/didattica/percorsi-post-laurea/dottorati-di-ricerca>, under penalty of forfeiture of the right of enrolment (will not be sent personal communications in this regard).

Before admission, the candidate needs to have her/his diplomas recognized by the Italian state. The validation can be carried out at local Embassies/Consulates.

Additional information about the hiring Organizations can be found at:

IC²R website: <https://www.ic2r.com>

CIRCC website: www.circc.it

NOTE:

Interested persons can contact the following Project PIs for detailed information about the application procedure:

michele.aresta@ic2r.com

angela.dibenedetto@uniba.it