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01/02/2021



## Post-doctoral researcher Bioinspired organic chemistry and asymmetric catalysis (M / F)



### Where to apply

Application Deadline: 22/02/2021 23:59 - Europe/Brussels

### Contact Details

**Where to send your application.**

#### COMPANY

CNRS

#### WEBSITE

<https://emploi.cnrs.fr/Candidat/Offre/UMR5248-GILGUI-003/Candidater.aspx>

### Hiring/Funding Organisation/Institute

#### ORGANISATION/COMPANY

CNRS

#### COUNTRY

France

#### DEPARTMENT

INSTITUT DE CHIMIE ET DE BIOLOGIE DES MEMBRANES ET DES NANOOBJETS

#### CITY

PESSAC

#### ORGANISATION TYPE

Public Research Institution

#### WEBSITE

<http://www.cbmn.u-bordeaux.fr>

#### ORGANISATION/COMPANY

CNRS

#### LOCATION

France › PESSAC

**RESEARCH FIELD**

Chemistry  
Environmental science

**RESEARCHER PROFILE**

Recognised Researcher (R2)

**APPLICATION DEADLINE**

22/02/2021 23:59 - Europe/Brussels

**TYPE OF CONTRACT**

Temporary

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**JOB STATUS**

Full-time

**HOURS PER WEEK**

35

**OFFER STARTING DATE**

01/05/2021

## OFFER DESCRIPTION

- multi-step organic synthesis
- asymmetric catalysis
- Chiral separations
- kinetic and mechanistic studies
- Written reports
- Presentations in group seminars

Applications are invited for a research project in the fields of supramolecular chemistry and organocatalysis whose main goal is to create original catalytic systems exploiting the chiral micro-environment of biomimetic helices (foldamers) to catalyze molecular transformations (formation of C-C bonds). This work capitalizes on previous finding from our group demonstrating cooperative activation of substrates with a combination of H-bond donor helical foldamers and an achiral Brønsted (J. Am. Chem. Soc. 2017, 139, 12524-12532 / <https://pubs.acs.org/doi/abs/10.1021/jacs.7b05802>). This system catalyzes the addition of enolizable carbonyl compounds to nitroolefins with excellent enantiometric control even at a very low chiral catalyst:substrate molar ratio. The main objective of this project will be to extend the scope and utility of this catalytic system to catalyze a broader range of asymmetric transformations. The possibility of reusing the catalyst will also be of interest in this project.

This project, which combines foldamer chemistry and asymmetric catalysis will be conducted in the Guichard group (<https://www.guichard-iecb.fr/>), a group leader at both CBMN and European Institute of Chemistry and Biology (IECB)

CBMN and IECB are highly dynamic and interdisciplinary research centers located on the campus of the University of Bordeaux, France. The Guichard laboratory is well equipped for organic synthesis with access to all technological platforms of the Institute, which combine cutting-edge instrumentation in physicochemical analysis (NMR, mass spectrometry, X-ray diffraction, etc.)

This project is funded by ANR, the National Research Agency, and associates in a very complementary way the group of asymmetric catalysis and chemical synthesis led by Professor Claudio Palomo at the University of the Basque Country (UPV / EHU, San Sebastian) as well as colleagues from the University of Bordeaux (Daniel Taton) and the University of Pau (Philippe Carbonnière). We anticipate that part of the work will be conducted in Professor Palomo laboratory as part of secondments at the University of San Sebastian.

## More Information

**ADDITIONAL INFORMATION**

## Eligibility criteria

- strong knowledge and expertise in organic chemistry and catalysis
- successful experience in asymmetric catalysis
- good experience of multi-step synthesis
- good skills in NMR analysis and chiral separations
- Very good command of English
- Writing and communication skills

- Adaptability and critical thinking

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## Additional comments

12-month contract with possibility of extension to 24 months

## Web site for additional job details

<https://emploi.cnrs.fr/Offres/CDD/UMR5248-GILGUI-003/Default.aspx>

### REQUIREMENTS

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#### Required Research Experiences

##### RESEARCH FIELD

Chemistry

##### YEARS OF RESEARCH EXPERIENCE

1 - 4

##### RESEARCH FIELD

Environmental science

##### YEARS OF RESEARCH EXPERIENCE

1 - 4

#### Offer Requirements

##### REQUIRED EDUCATION LEVEL

Chemistry: PhD or equivalent  
Environmental science: PhD or equivalent

##### REQUIRED LANGUAGES

FRENCH: Basic

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## Map Information



 Job Work Location  Personal Assistance locations

### WORK LOCATION(S)

1 position(s) available at  
INSTITUT DE CHIMIE ET DE  
BIOLOGIE DES MEMBRANES ET  
DES NANOBJETS  
France  
PESSAC

EURAXESS offer ID: 600263

Posting organisation offer ID: 17018

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