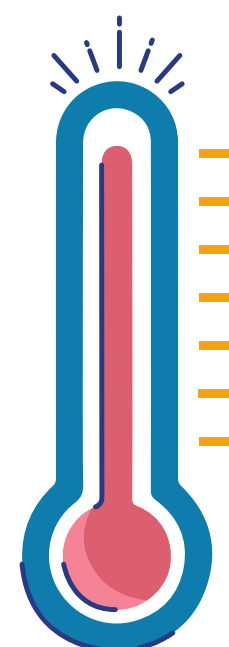
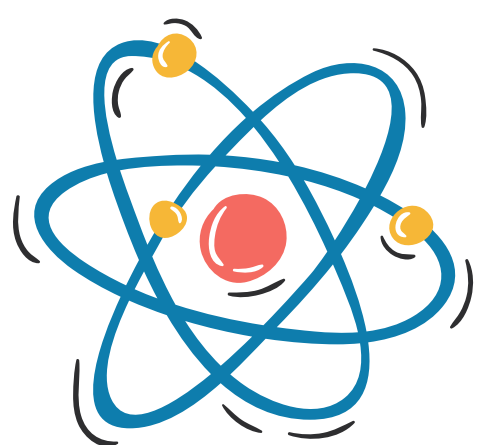


# PhD STUDENTS

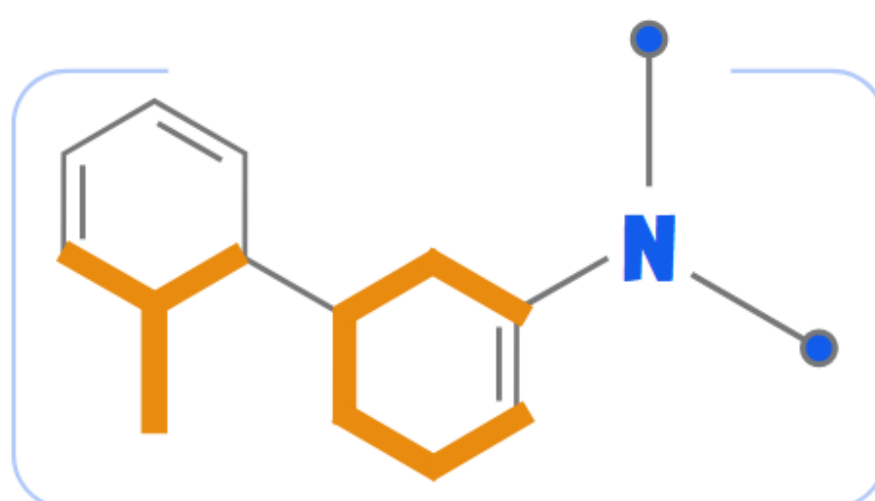
# BOOKLET 2022



# 6th Doctoral IEM AED



**17th May**



**YOUNG CHEMIST NETWORK**

# Introduction

## Purposes

The 6th Doctoral Day has three main goals:

- Enable PhD students to present their research work to the IEM members.
- Make master students aspire to a PhD and discover all the research thematics approached at the IEM
- Gather all IEM around a scientific day through presentations, video, posters and convivial moments

This day gives to the PhD students the opportunity to add value to their project, to share their skills, especially their different laboratory technics, and to lead their project to a constructive discussion about their work evolution. The master students will be able, for their part, to discover the work type's diversity and to refine their professional project. It is also the occasion for all the personnel of IEM to share and discuss around science.

## Organization

The event takes place in the IEM's hall and conference room. All the institute members are invited, since the success of this day strongly depend on their presence and their involvement in the diverse discussions.

The day has been divided into four sessions. While the latter, first and third year PhD students will present their project and show their work advancement through oral presentations. During the breaks multiple poster sessions will be held by second year PhD students in which you are invited to discuss with the students regarding their work.

Besides, former PhD students of IEM will give speeches to present how they felt about their PhD experience and what they have been doing since the end of their PhD thesis. Also, our guest speaker François Zaviska will hold a presentation about how to make a relevant communication and a video presenting engineers, post doc and technicians of the lab will be broadcasted. Finally, the day will end on the award of the three best performances (i.e. oral presentation, poster, and 180 seconds communication) followed by an afterwork on the doorstep of IEM.

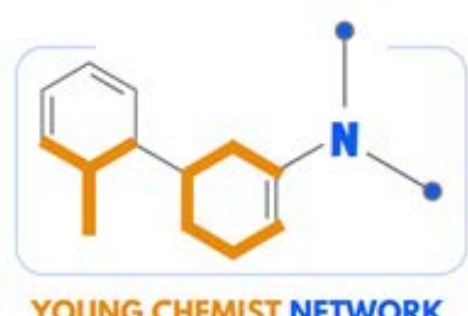
## Acknowledgements

YCN association acknowledges the direction of IEM for the technical and financial organization of this day. Finally, we thank all adherents of the association for allowing us to organize such gathering occasions and hope to meet you very soon for our next events...

Have a nice day!



Institut  
Européen des  
Membranes



*This booklet has been filled with information given by the PhD students*

# Program

**8h30:** Welcoming with coffee and croissant

**9h00:** Introduction by the laboratory and YCN association

**9h15:** Guest speaker  
**YOUSSEF Laurene**

former doctoral student of DM3 team

**9h30:** Presentations of 1st and 3rd year PhD students

**AGUILAR Daniel (1A)**

**CERVANTES DIAZ Karla Begonia (3A)**

**AUDOURENC Jules (1A)**

**DAAKOUR Sanaa (3A)**

**BADOURIC Lucie (1A)**

**DUQUET Fanny (3A)**

**DORY Hippolyte (1A)**

**10h15:** Coffee break and **Poster session for 2nd year PhD students**

**10h45:** Guest speaker

**ZAVISKA François**

« How to make a relevant communication »

**11h15:** Guest speaker:

**FRIEDRICH ESMILAIRE Roseline**

former PhD student of the IP2 team

**11h30:** Presentations of 1st and 3rd year PhD students

**EL HAYEK Joelle (3A)**

**JAYAKUMAR Sharath (1A)**

**REN Feihong (3A)**

**LIBERATI Ariella (1A)**

**12h00:** Bo&Co lunch break with **Poster session for 2nd year PhD students**

**14h00:** Guest speaker

**WITTMANN Erich**

former PhD student of DM3/IP2/GPM teams

**14h15:** Presentations of 1st and 3rd year PhD students

**PIRKIN-BENAMEUR Johanne (1A)**

**SANCHEZ Lucie (3A)**

**LEBESGUE Charlotte (1A)**

**SU Dan Dan (3A)**

**ROHITKUMAR Jadhav (1A)**

**14h45:** Video presentation of engineers and post-doctoral fellows

**15h00:** Coffee break and **Poster session for 2nd year PhD students**

**15h30:** Guest speaker

**RIES Lucie**

former doctoral student of DM3 team

**15h45:** Presentations of 1st and 3rd year PhD students

**TANOS Fida (3A)**

**SEABRA Ivna (1A)**

**WANG Wensen (3A)**

**SZEWCZYK Jakub (1A)**

**WU Huali (3A)**

**16h15:** Discussion and questions with Guest speakers

**16h30:** Jury Awards

**17h00:** Afterwork



# Summary

## Guest speakers

FRIEDRICH ESMILAIRE Roseline

RIES Lucie

WITTMANN Erich

YOUSSEF Laurène

### 1A

ADOURENC Jules

AGUILAR FERRER Daniel

BADOURIC Lucie

BALDO Héloïse

DORY Hippolyte

JAYAKUMAR Sharath

LEBESGUE Charlotte

LIBERATI Ariella

PIRKIN-BENAMEUR Johanne

ROHITKUMAR Jadhav

SEABRA Ivna

SZEWCZYK Jakub

### 2A

ABID Mahmoud

ANDREI Iuliana-Marilena

BOUE Jean-Félix

CASSETTA Jeanne

FROMAGER Bénédicte

GOMRI Chaimaa

LECLERE Maxime

LIU Jiefeng

MAKHOUL Elissa

MEYER Nathan

MOULIA Vincent

NURSI AH Kelvinraj

TAUK Myriam

### 3A

CERVANTES DIAZ Karla Begonia

DAAKOUR Sanaa

DUQUET Fanny

EL HAYEK Joelle

KARAMOKO Bonito

REN Feihong

SANCHEZ Lucie

SU Dan-Dan

TANOS Fida

WANG Wensen

WU Huali



# FRIEDRICH ESMILAIRE Roseline



Water  
treatment

IP2

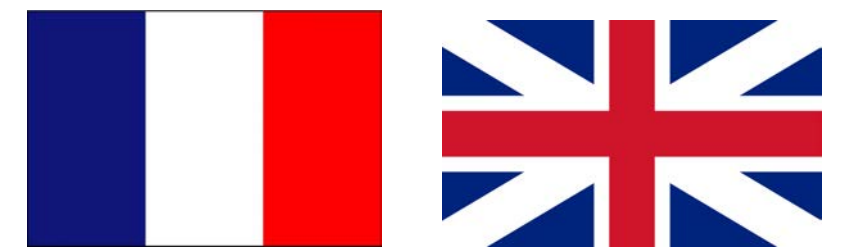


Electrochemical Advanced  
Oxidation Process using sub-  
stoichiometric titanium oxide  
as anode

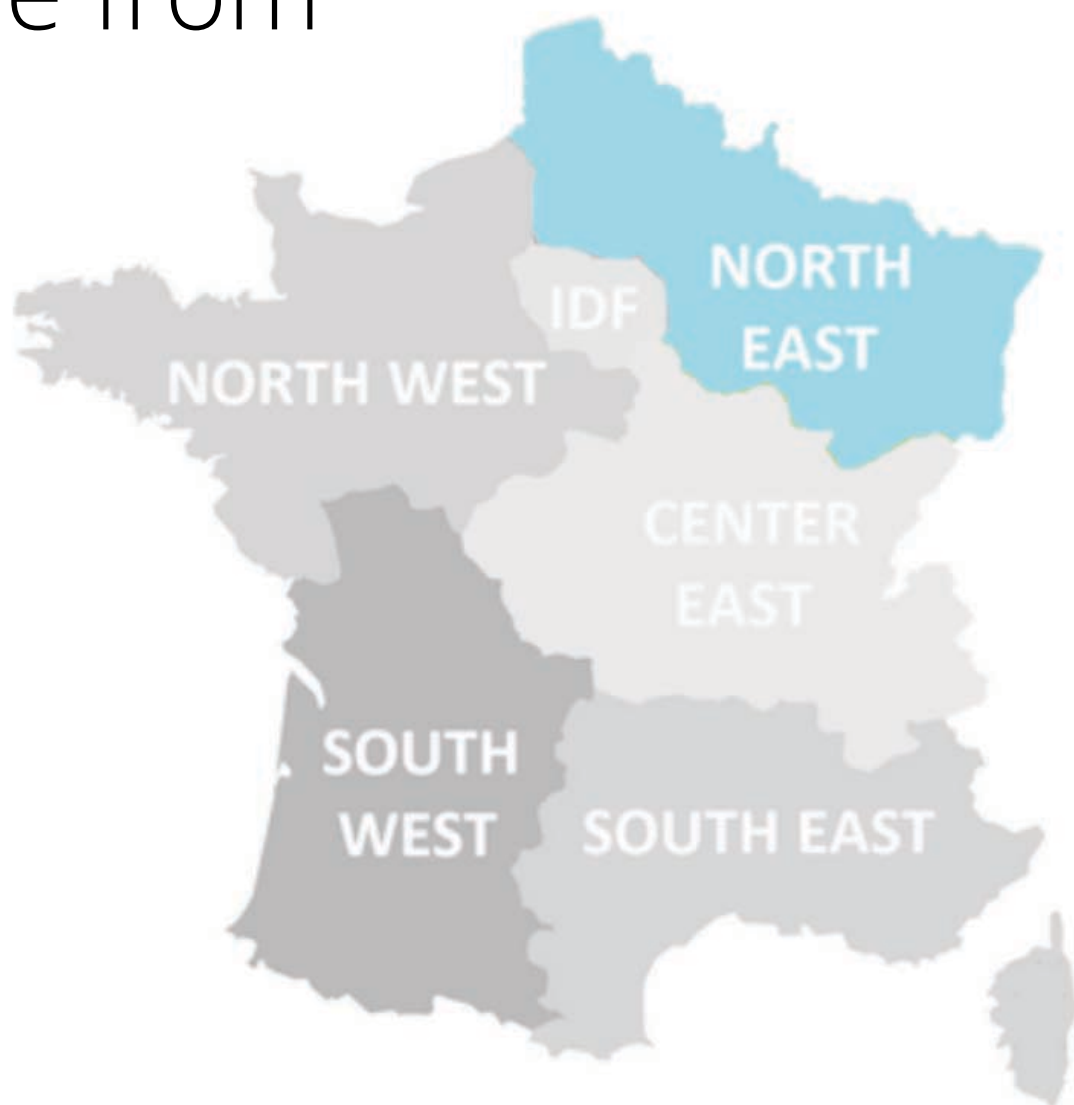


17/11/2017

*Pr. Marc Cretin*



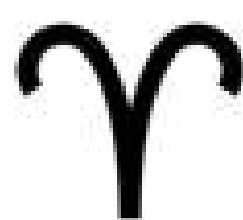
I come from



Favourite Food



PhD =  
Rewarding



ARIES

Hobby







Water  
treatment

DM3



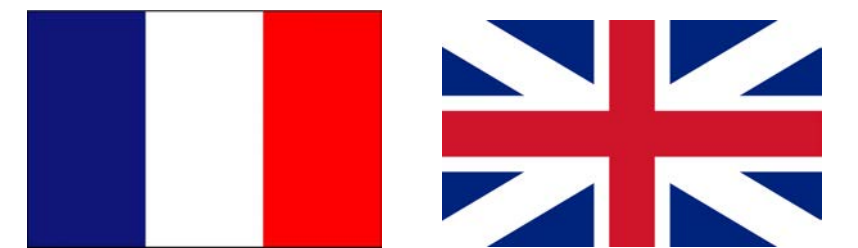
Functionalized two-dimensional  
(2D) MoS<sub>2</sub> nanosheets as  
building blocks for water  
purification membranes



26/11/2019

*Pr. Philippe Miele*

*Dr. Damien Voiry*



I come from



Favourite Food



Hobby



CAPRICORN

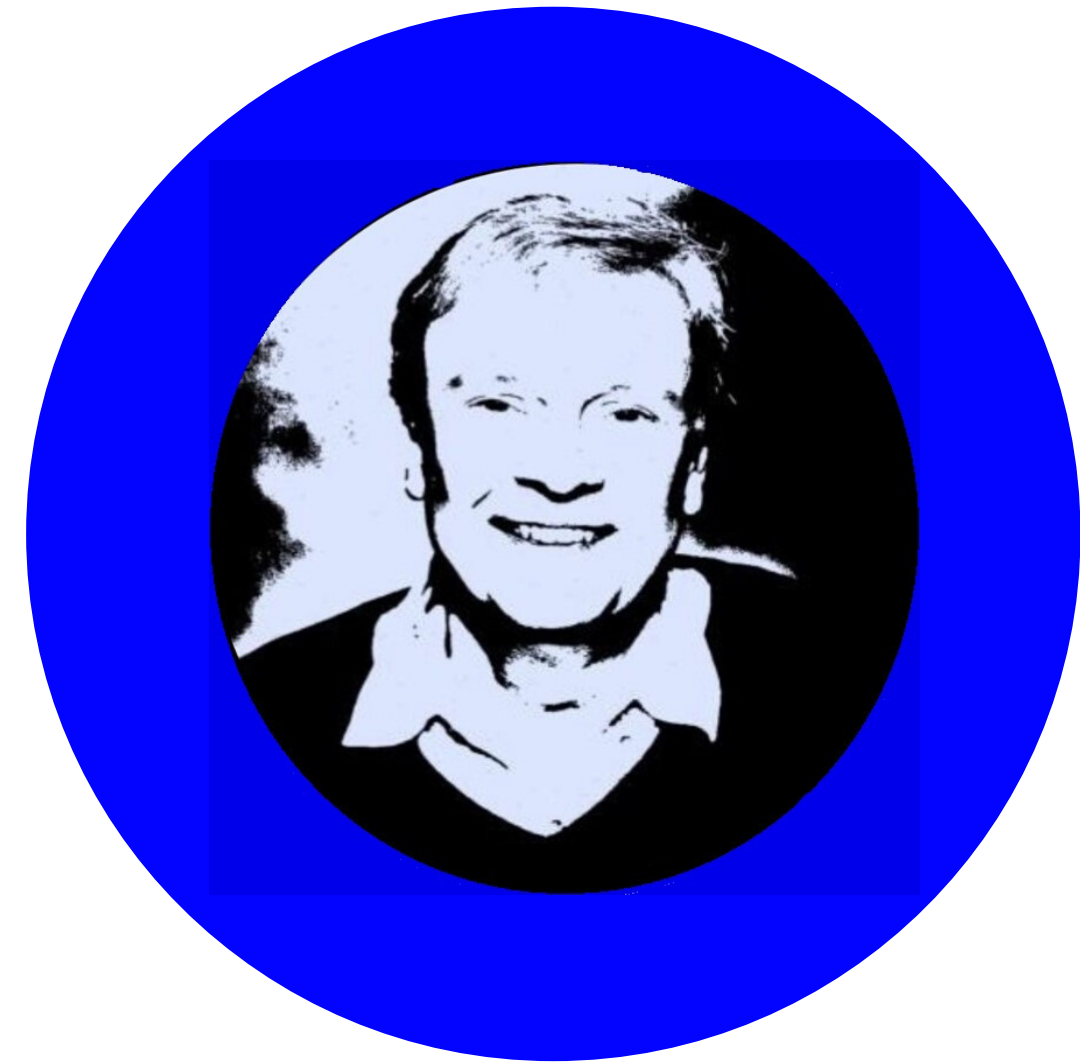


# WITTMANN Erich



Water  
treatment

DM3  
IP2  
GPM



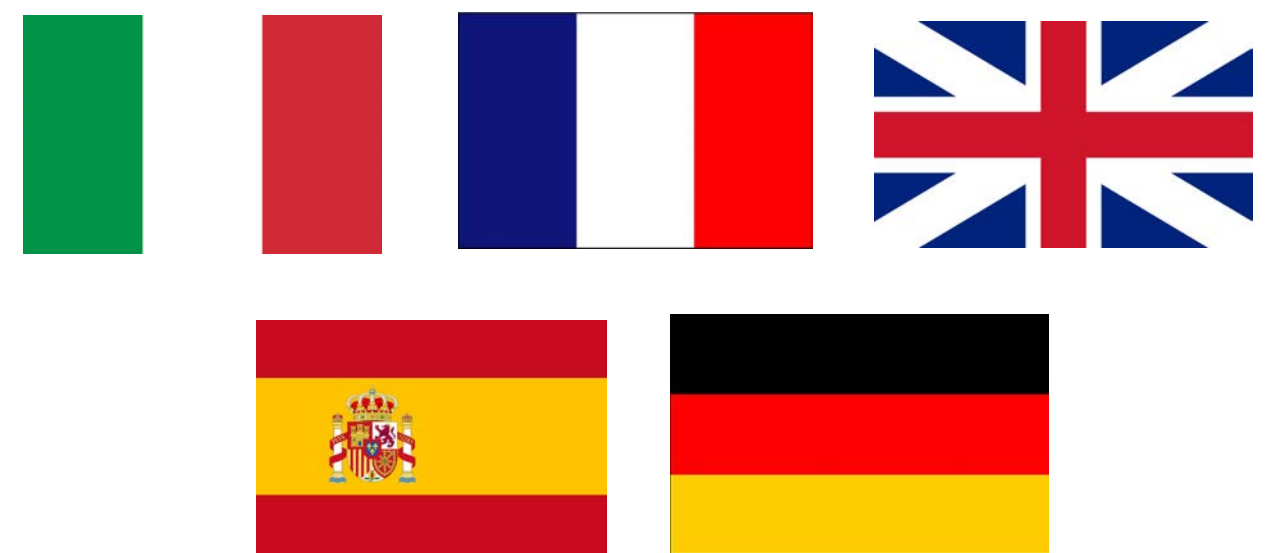
## Nanofiltration in water treatment: Application conditions and modelling

*Dr. José Sanchez*



1998

I come from



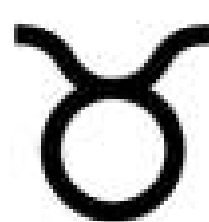
Favourite Food



Hobby



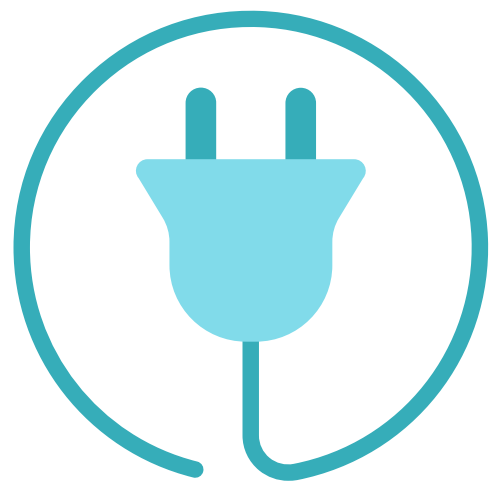
PhD =  
Pleasure



TAURUS



# YOUSSEF Laurène



Energy

DM3



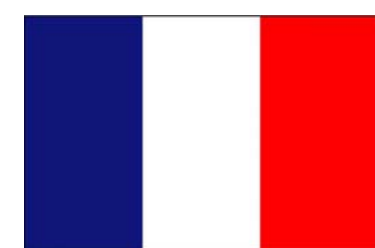
**Development by plasma processes of TiO<sub>2</sub> and N-TiO<sub>2</sub> thin films for hydrogen production by water photoelectrolysis under solar light**



19/11/2018

*Dr. Stéphanie Roualdes*

*Dr. Mirvat Zakhour*



I come from



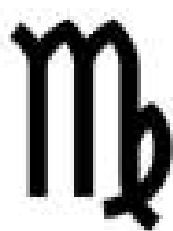
Favourite Food



Hobby



PhD =  
Great!



VIRGO



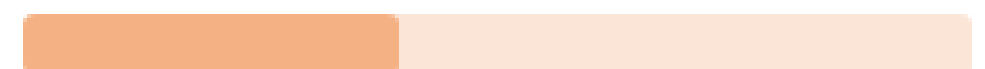


Water treatment

IP2



Development of new hydrophilic biosourced membranes for microfiltration



25 years old

*Dr. Suming Li*



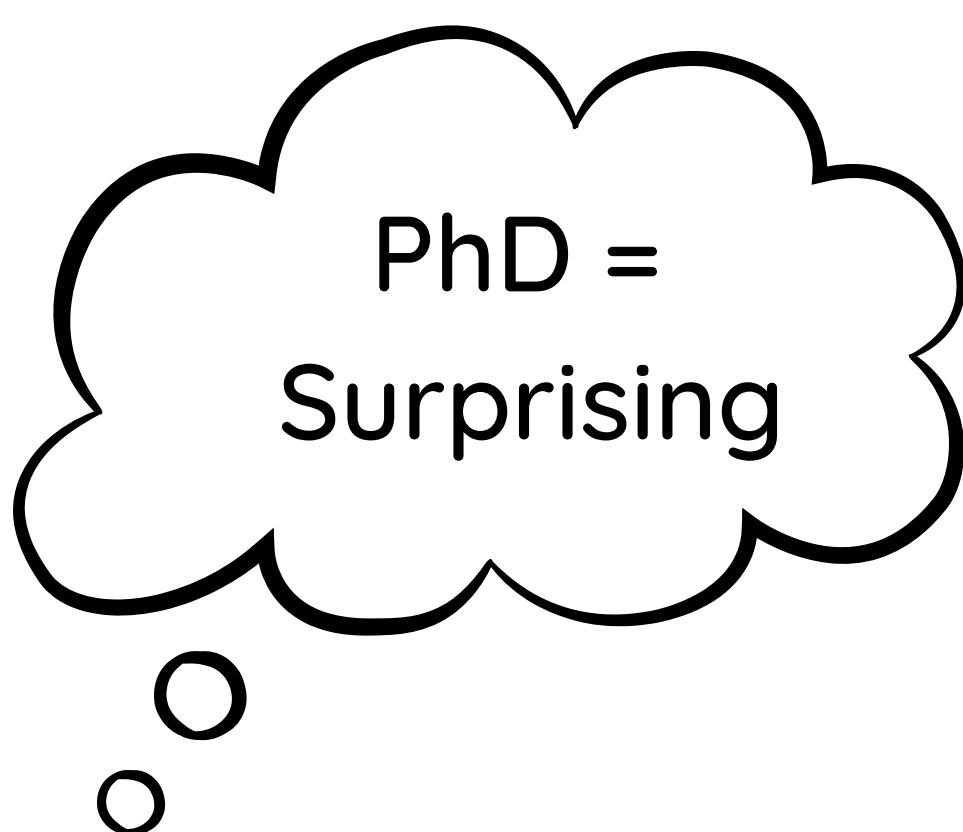
I come from



Favourite Food

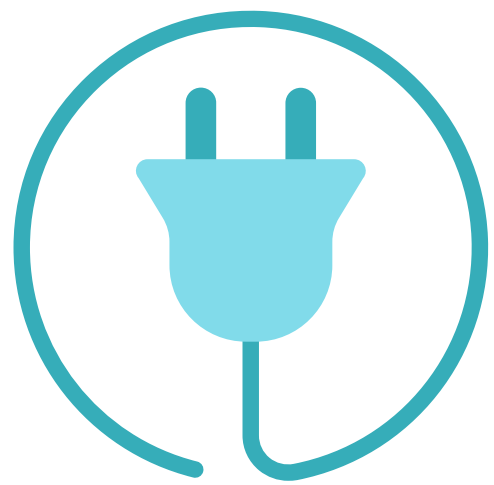


Hobby



SAGITTARIUS





Energy

DM3



Understanding the interface between semiconductors and PDA toward photocatalytic water splitting

27 years old

*Dr. Mikhael Bechelany*



I come from



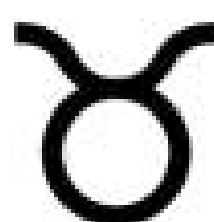
Favourite Food



Hobby

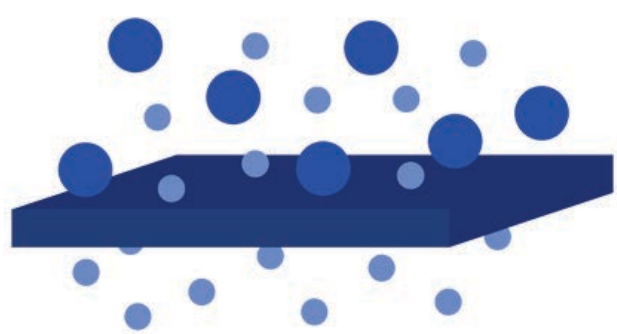


PhD =  
Enjoyable



TAURUS





Gas  
separation

## DM3

### Atomic Layer Deposition for novel hydrogen separation membranes

*Dr. Mikhael Bechelany*

*Dr. Anne Julbe*

*Dr. Martin Drobek*



23 years old



I come from



Favourite Food



Hobby



PhD =  
Intense



VIRGO





Environment  
methane valorisation

## GPM



An eco-efficient bioprocess for  
direct conversion of methane  
into methanol

*Dr. Laurence Soussan*

23 years old



I come from



Favourite Food



Hobby



PhD =  
Exciting



CAPRICORN





Water  
treatment

DM3



27 years old

Elaboration of ceramic  
membranes for wastewater  
treatment via 3D printing

*Pr. Philippe Miele*  
*Dr. Chrystelle Salameh*



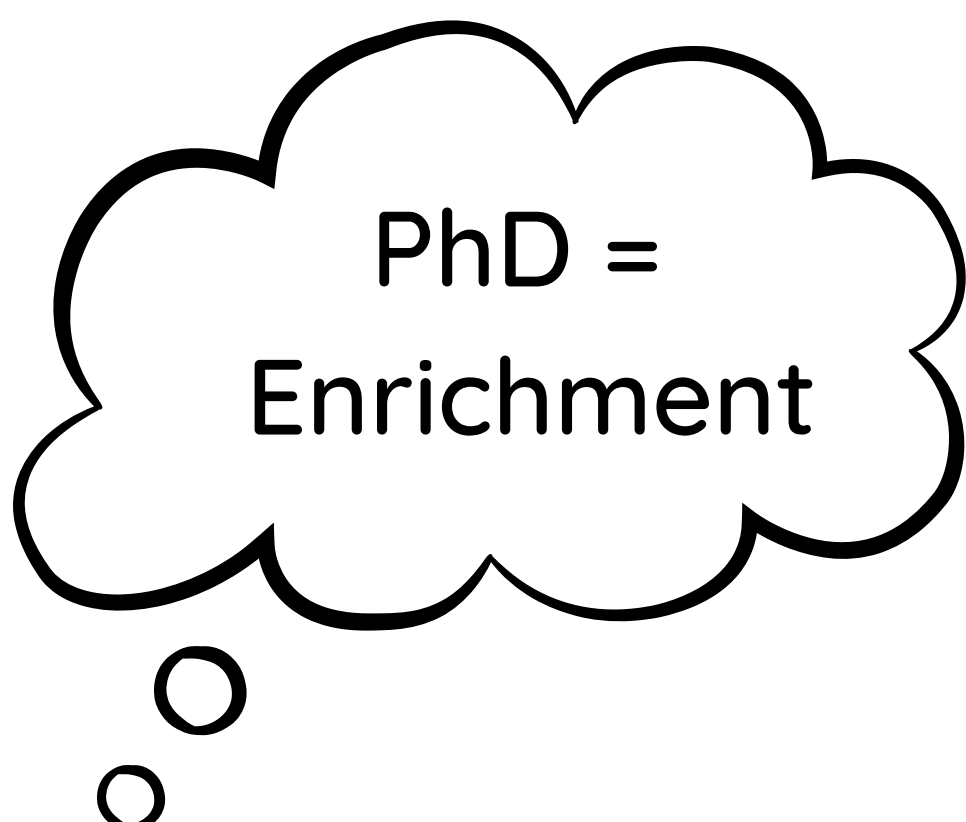
I come from



Favourite Food



Hobby



SAGITTARIUS





Water  
treatment

## DM3

Hydrophobic Ceramic Capillary  
membranes applied for  
desalination and oil removal

*Dr. Mihail Barbiou*



24 years old



I come from



Favourite Food



Hobby



PhD =  
Fun



LEO





Water  
treatment

DM3

IP2

Development of electroactive  
ultrafiltration membranes for  
water treatment

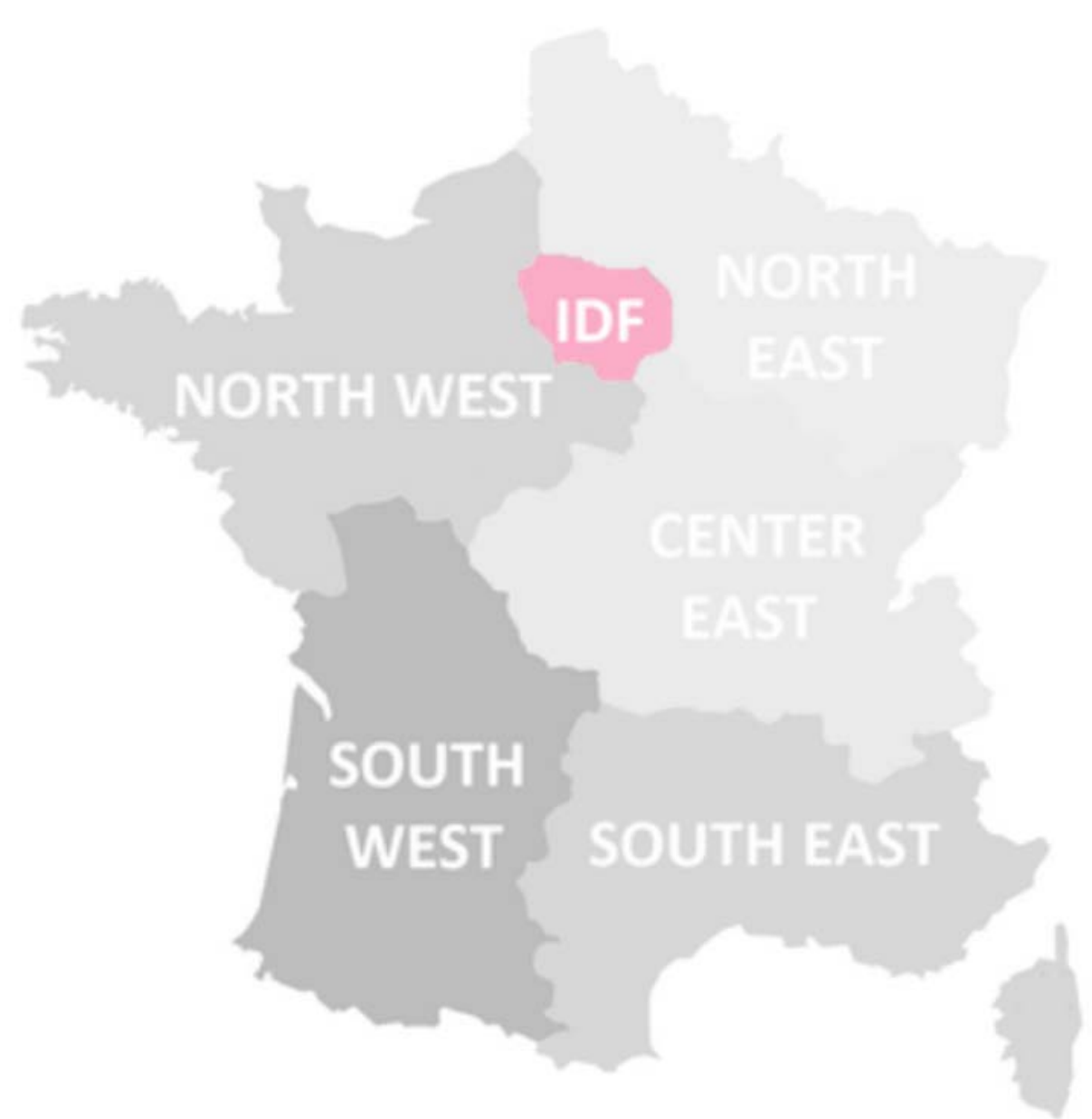
*Dr. Marc Cretin*



27 years old



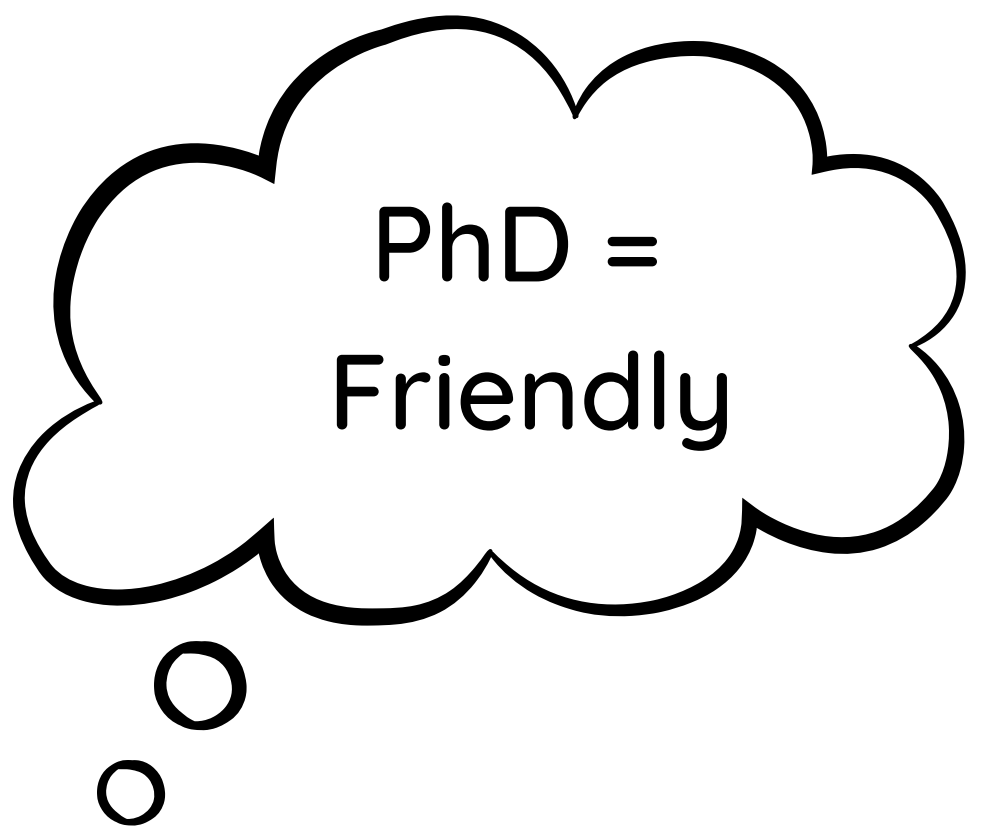
I come from



Favourite Food



Hobby







Recycling

GPM



Recovery of Lithium with smart polymers

*Dr. Catherine Faur  
Jean Pierre-Mericq*

23 years old



I come from



Favourite Food



Hobby



PhD = A socially and scientifically intense experience that is totally worth living



LEO





Water  
treatment

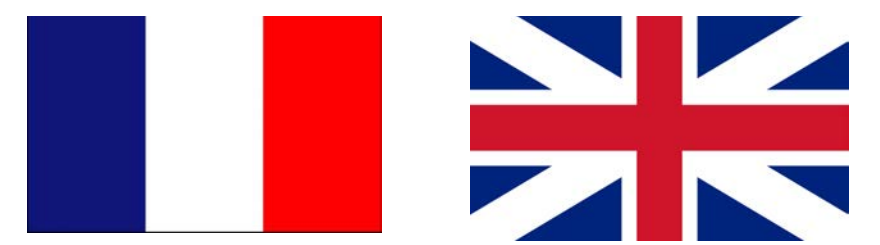
IP2



Self-oscillating membrane  
development for wastewater  
treatment

*Dr. Damien Quémener*

23 years old



I come from



Favourite Food

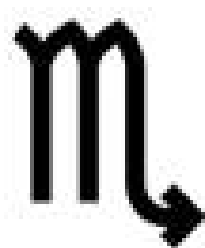


Hobby



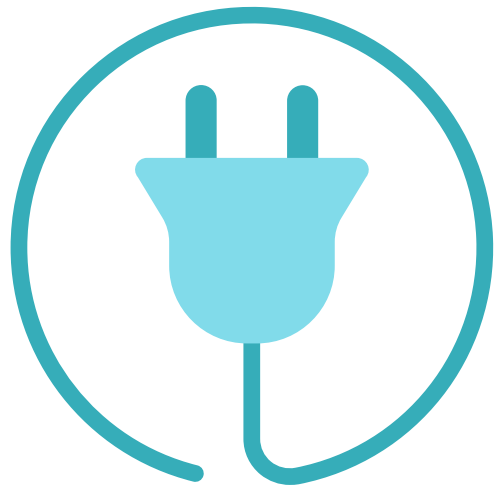
PhD =

Constant  
improvement



SCORPIO



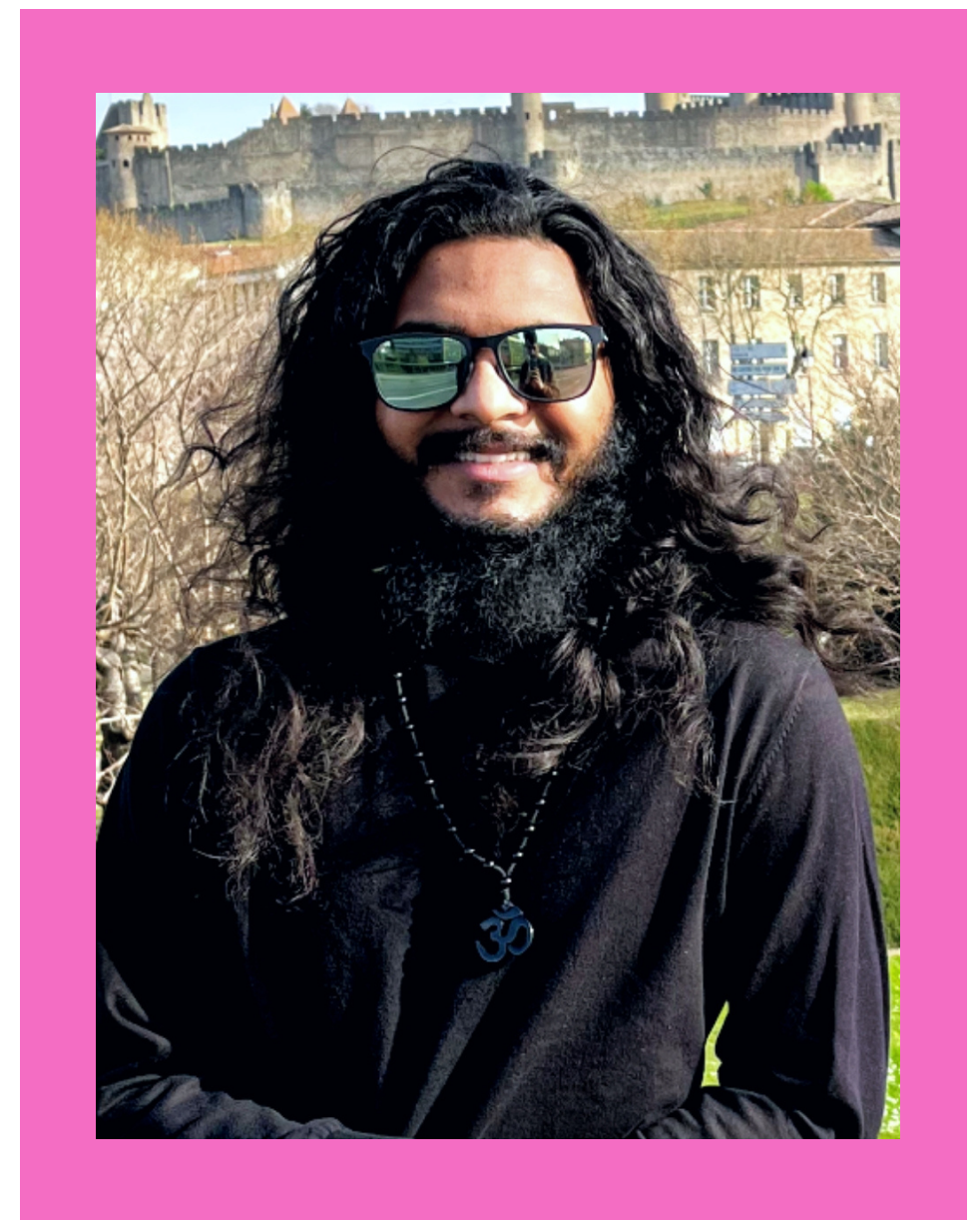


Energy

DM3

2-D - 3-D Mixed dimensional halide perovskites for photo-electrocatalytic reduction of CO<sub>2</sub>

*Dr. Damien Voiry*



25 years old



I come from



Favourite Food



Hobby



PhD =  
Exciting



LIBRA





Water  
treatment

## GPM

Treatment of effluent  
micropollutants by ozonation  
and nanofiltration



*Dr. Stephan Brosillon*

27 years old



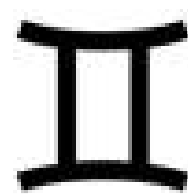
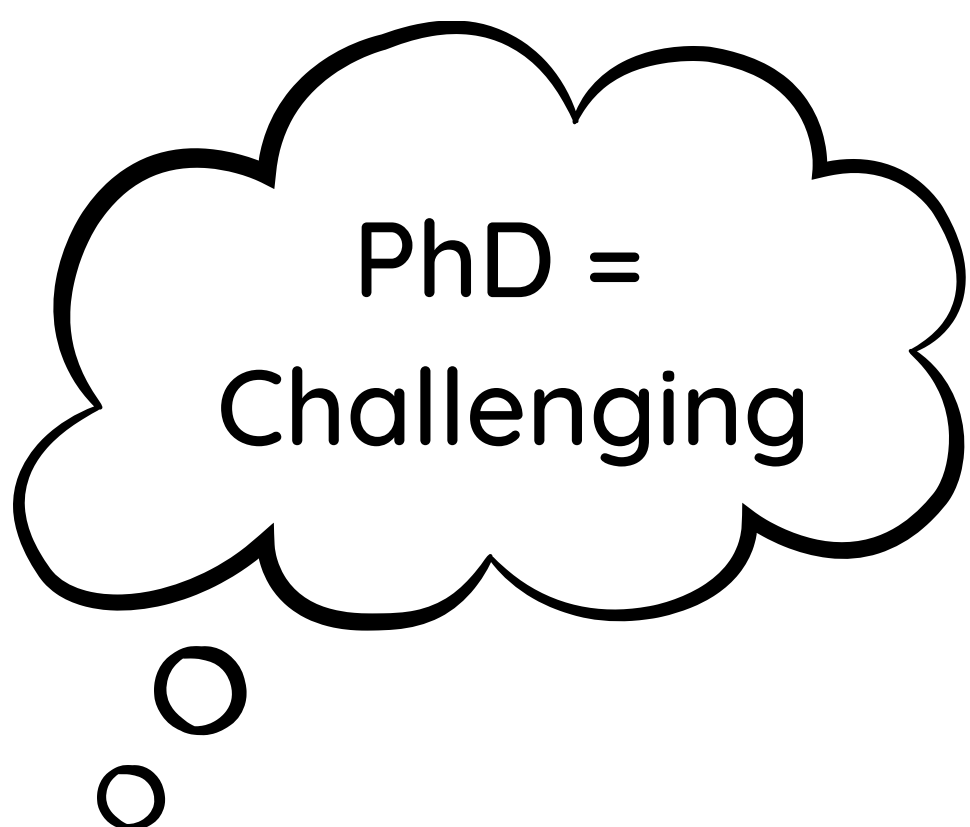
I come from



Favourite Food

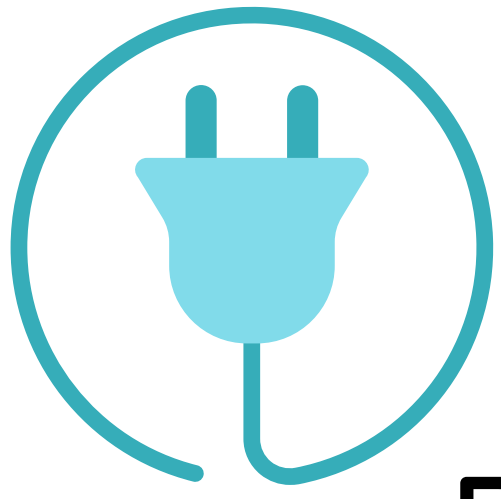


Hobby



GEMINI





Energy

DM3



Development and characterization of biomimetic polymer/semiconductor laminar heterojunctions for efficient photocatalytic water splitting

25 years old

*Dr. Mikhael Bechelany*



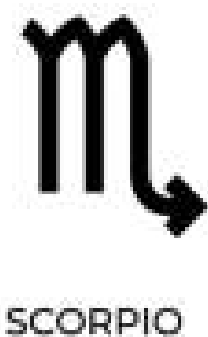
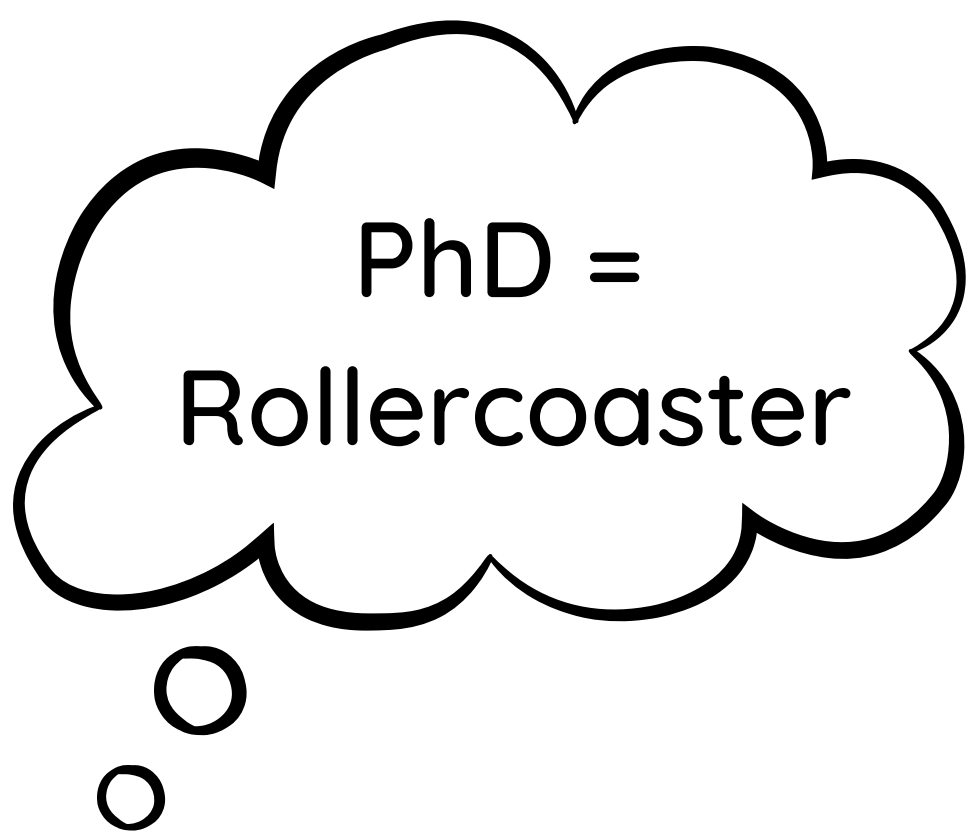
*Dr. Emerson Cory*

Favourite Food

I come from



Hobby







Water treatment

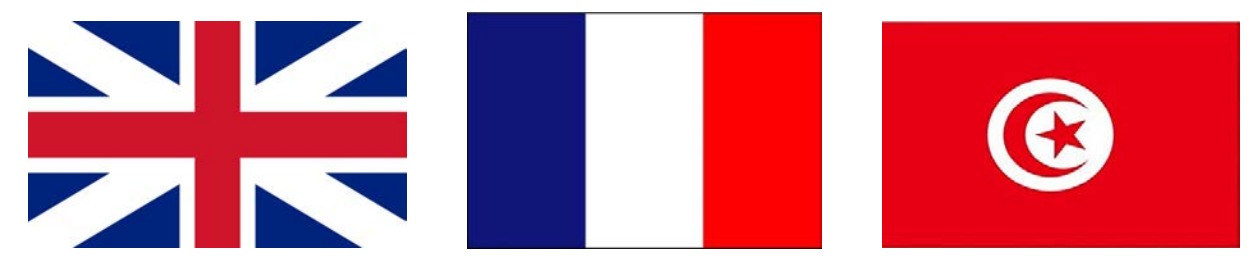
DM3

Design of halloysite-based nanocomposites for water treatment



Dr. Mikhael Bechelany

28 years old



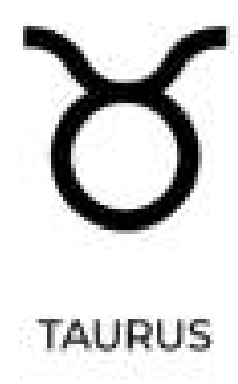
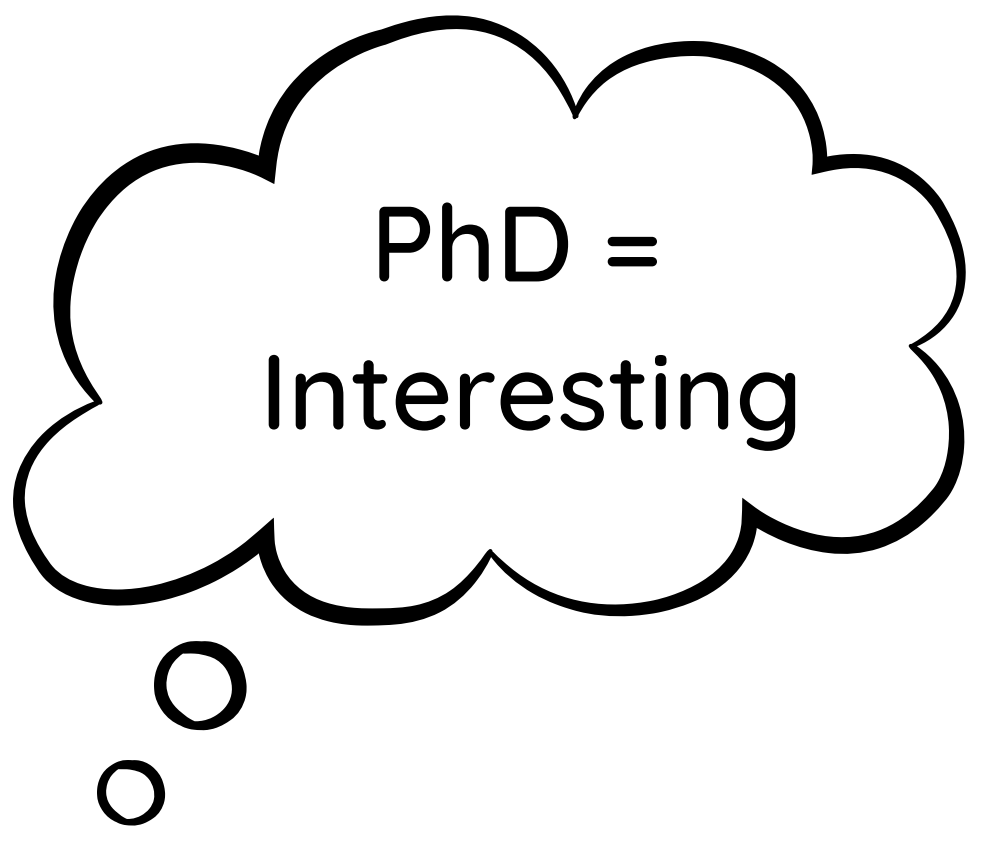
I come from



Favourite Food



Hobby







Water  
treatment

## DM3

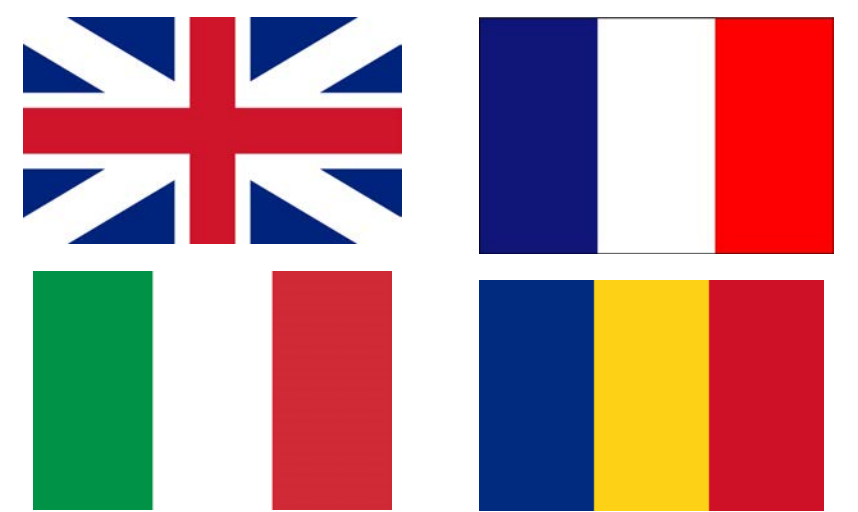
### Biomimetic artificial water and proton channels

*Dr. Mihail Barboiu*

I come from



26 years old



Favourite Food



LIBRA

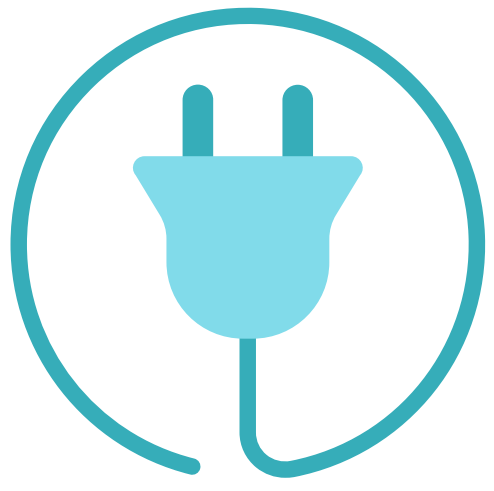
Hobby



PhD =  
Wordless







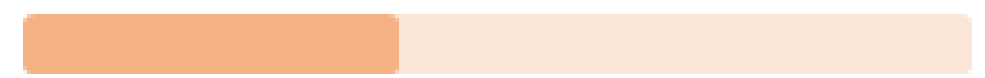
Energy

DM3



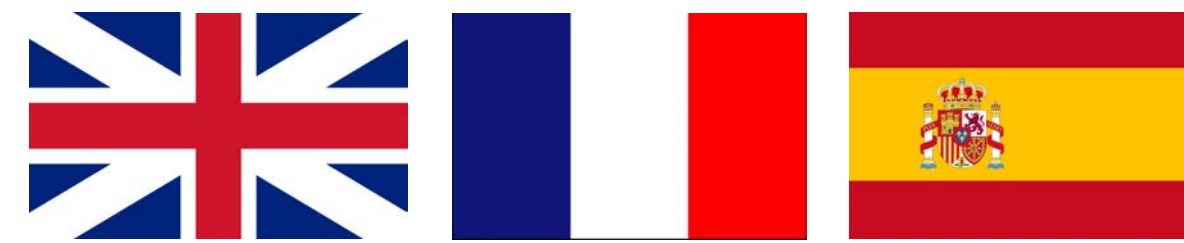
Nanostructured electrodes for H2 production

*Dr. Julien Cambedouzou*



25 years old

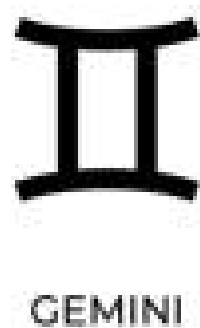
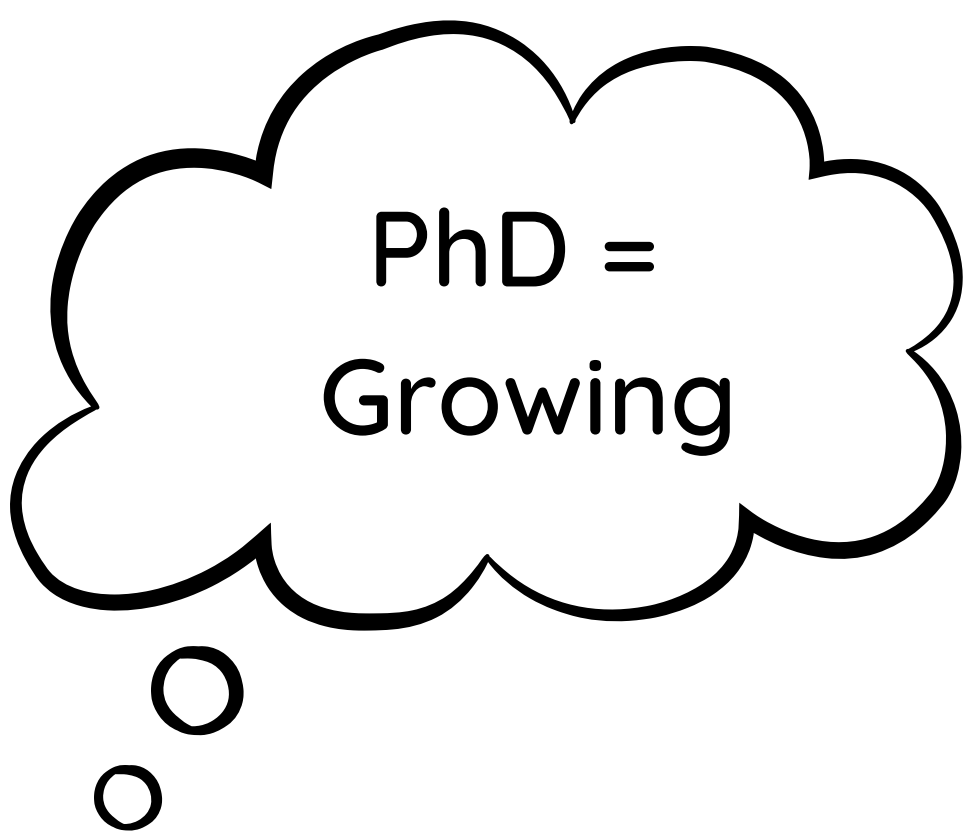
I come from



Favourite Food



Hobby







Water  
treatment

DM3  
IP2

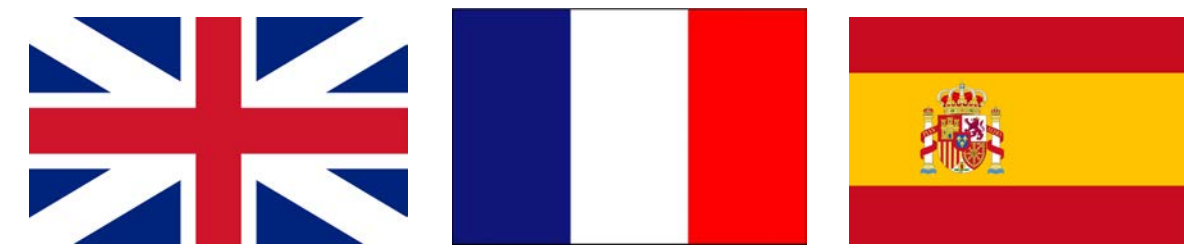


Synthesis of novel polymeric hollow fibers and modification of their surface for water treatment application



24 years old

*Pr. Philippe Miele*  
*Dr. Céline Pochat-Bohatier*  
*Dr. Mikhael Bechelany*



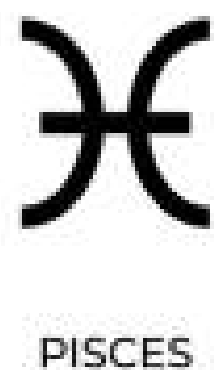
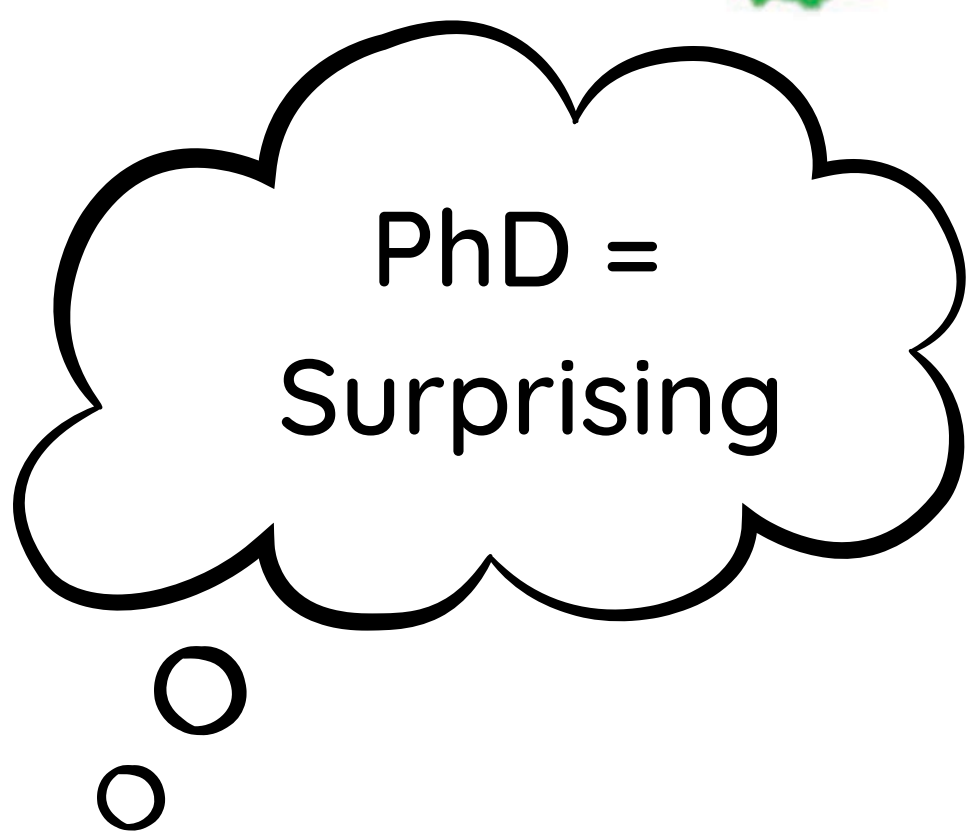
I come from



Favourite Food



Hobby







Health

DM3



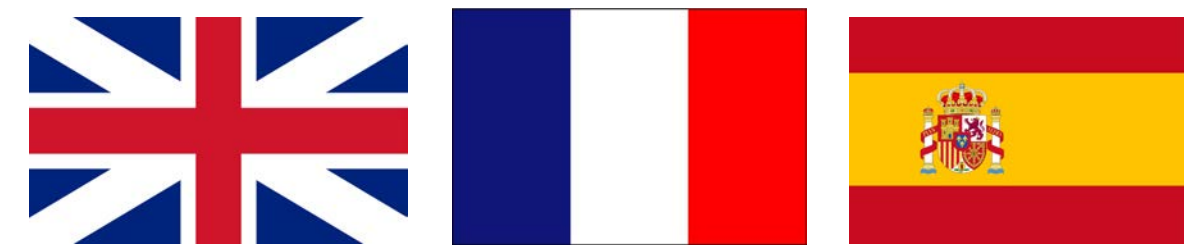
3D scaffold of PAN electrospun fiber for cell culture

*Dr. Julien Cambedouzou*

*Pr. David Cornu*

26 years old

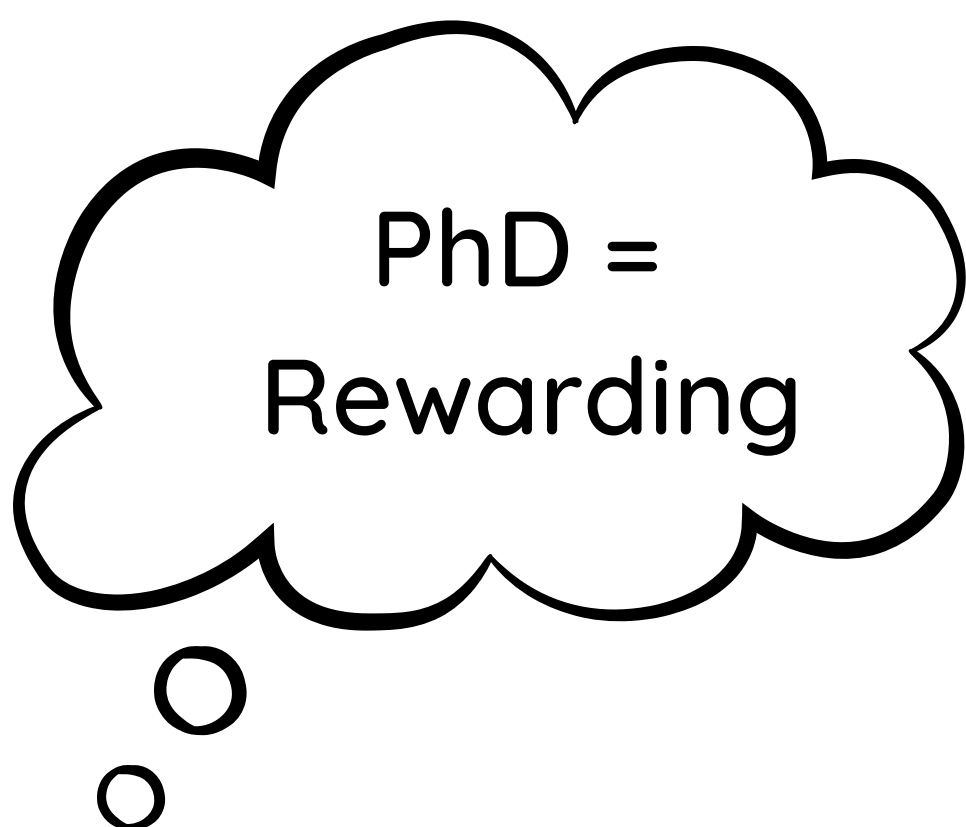
I come from



Favourite Food



Hobby



LEO

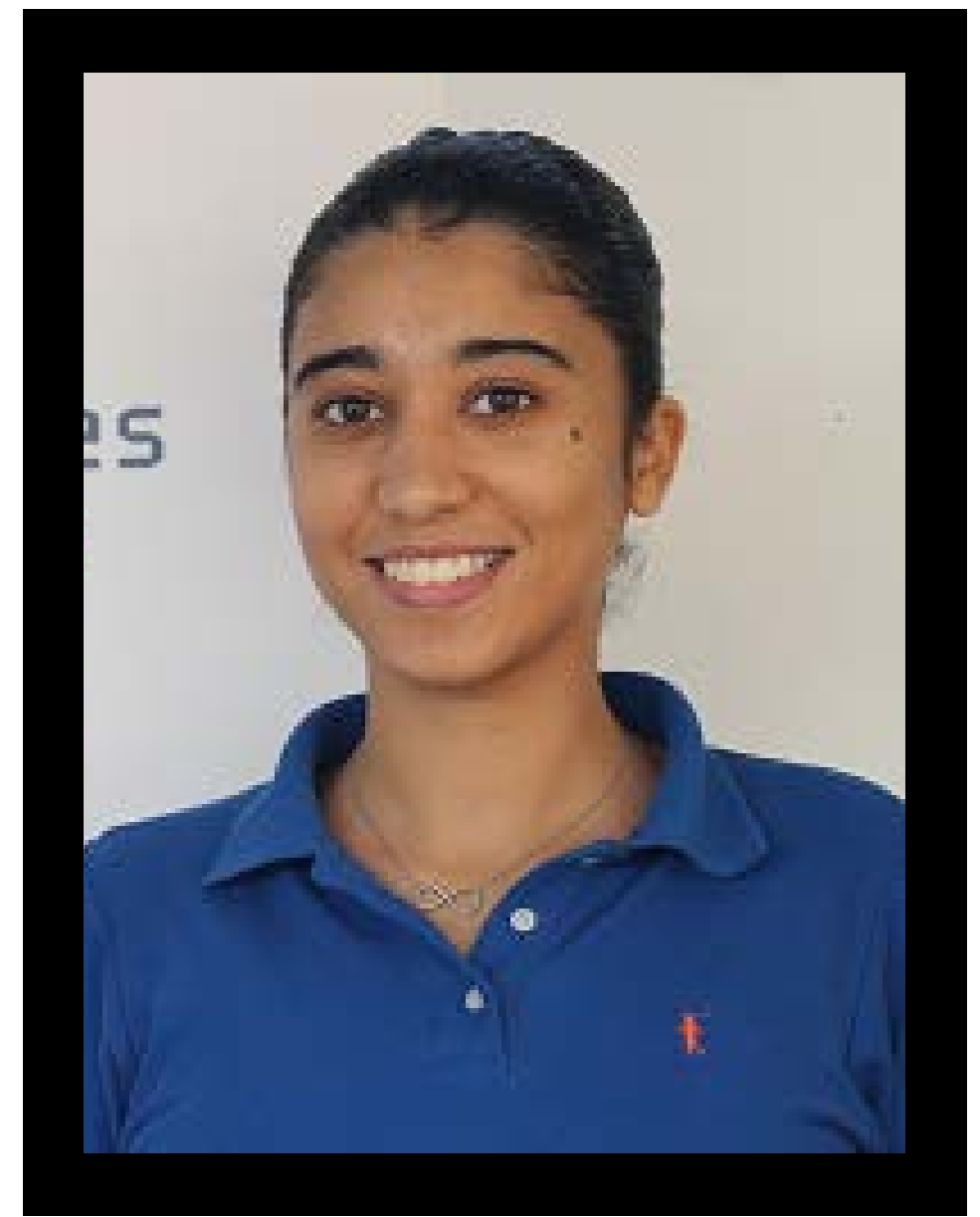




Water  
treatment

## IP2

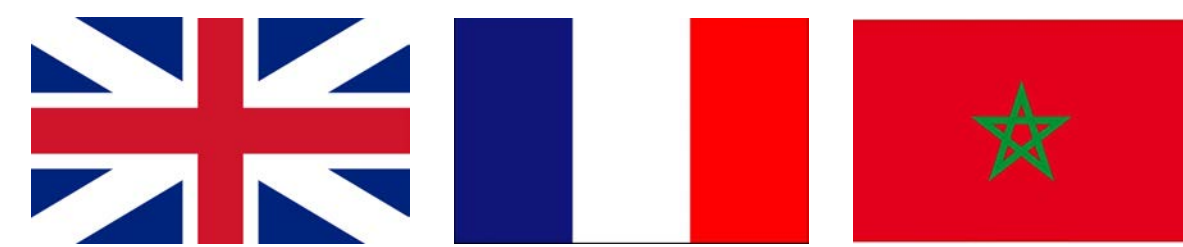
Design and synthesis of new composite membranes for the treatment of perfluoroalkyls and polyfluoroalkyls (PFAS)



28 years old

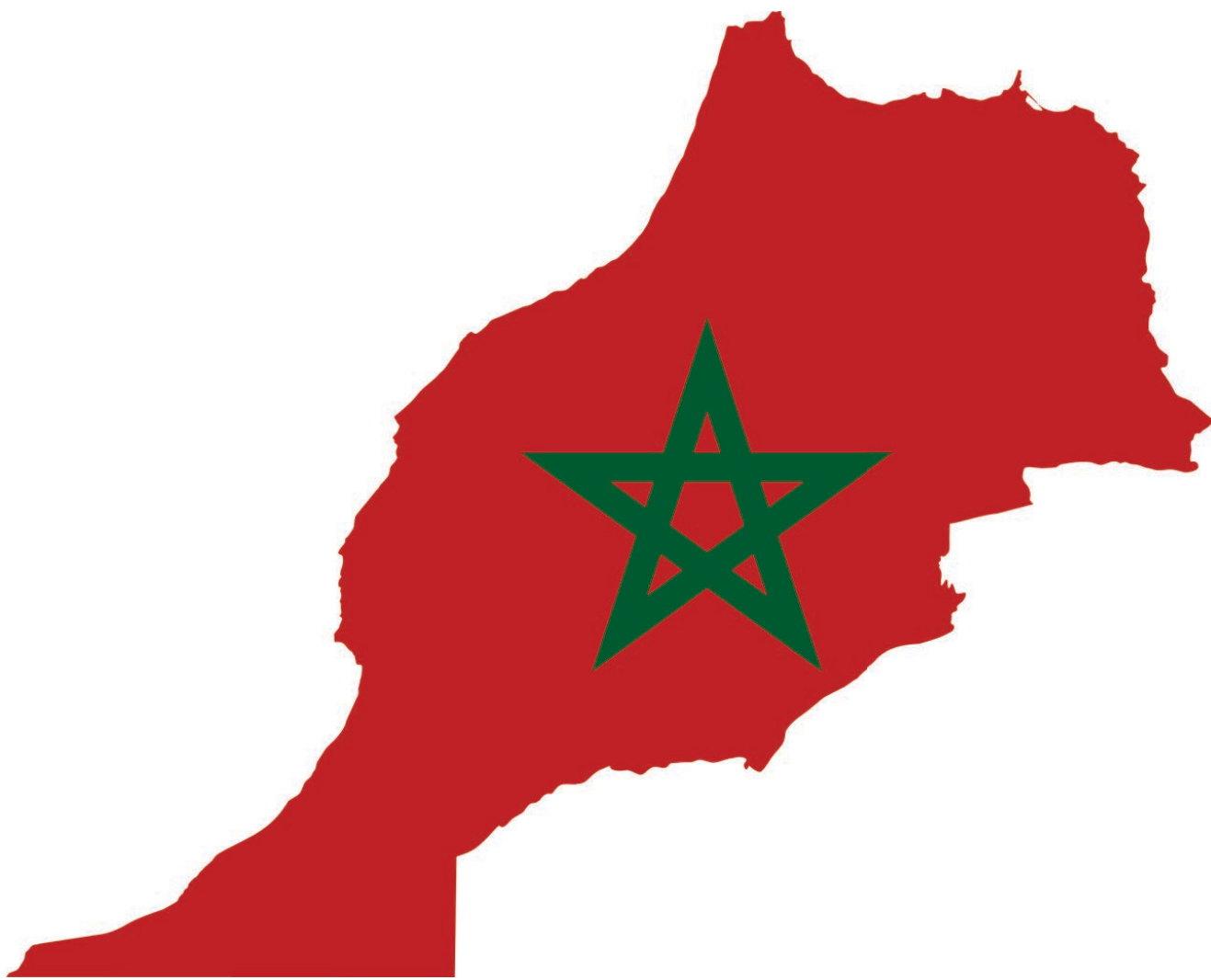
*Dr. Mona Semsarilar*

*Pr. Marc Cretin*

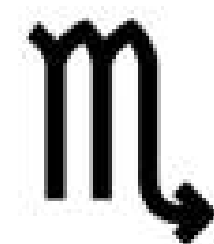
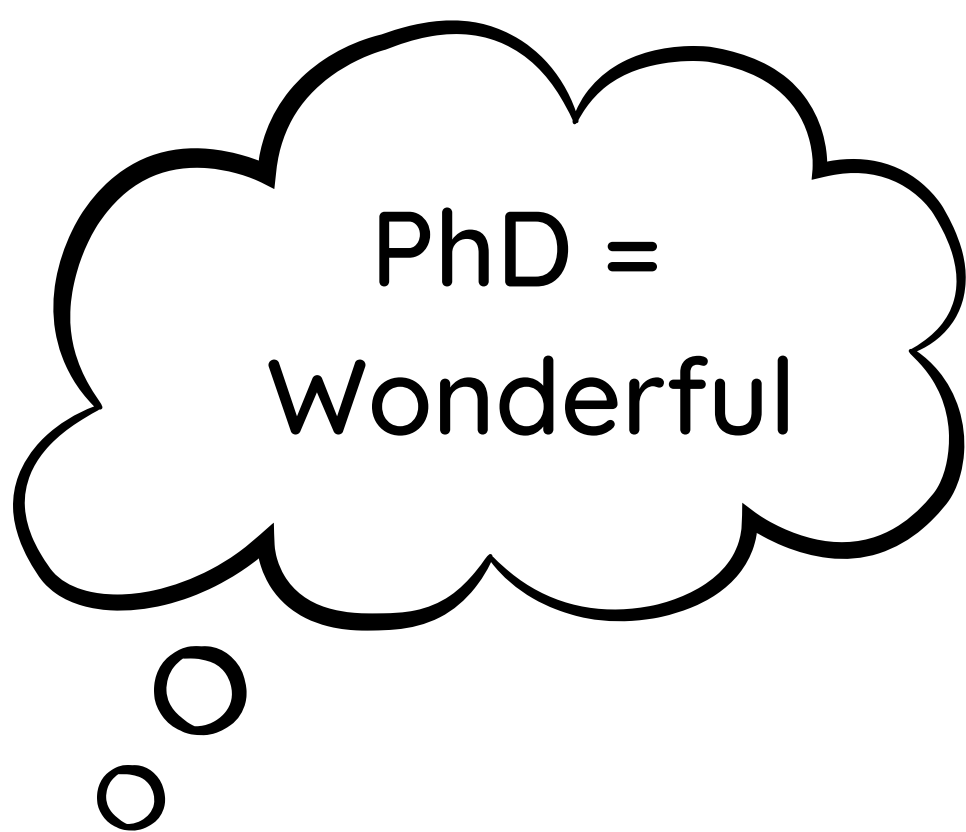


I come from

Favourite Food



Hobby



SCORPIO





Health

DM3

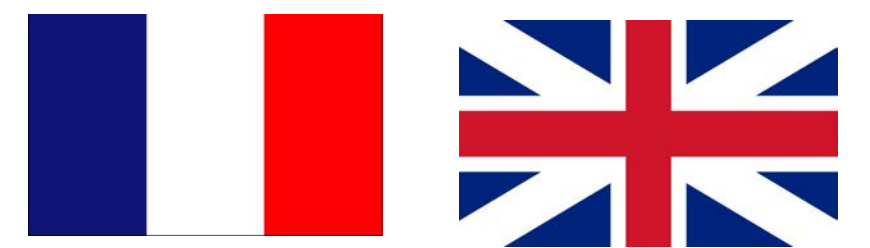


Anti-biofouling  
nanomembrane for drug  
delivery

*Dr. Mihail Barboiu*  
*Dr. Sophie Cerneaux*



28 years old



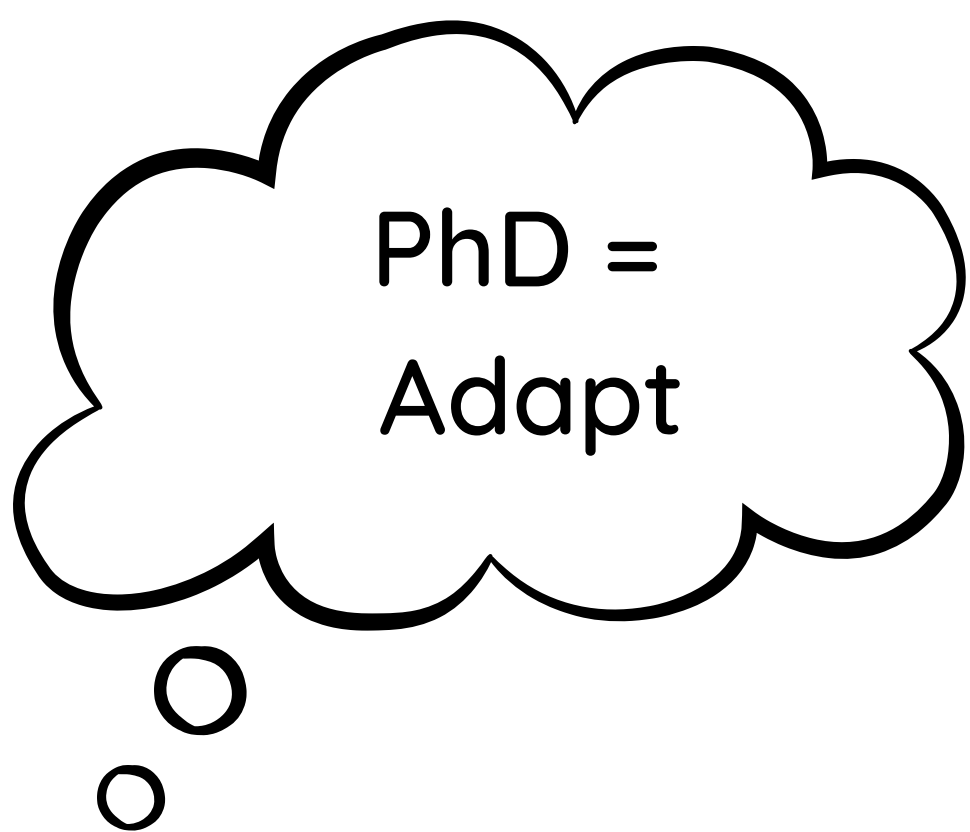
I come from



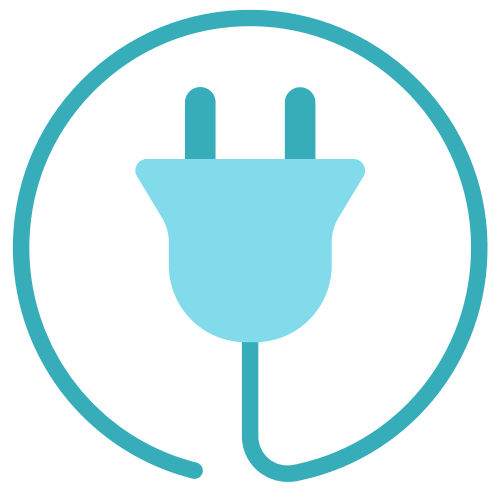
Favourite Food



Hobby

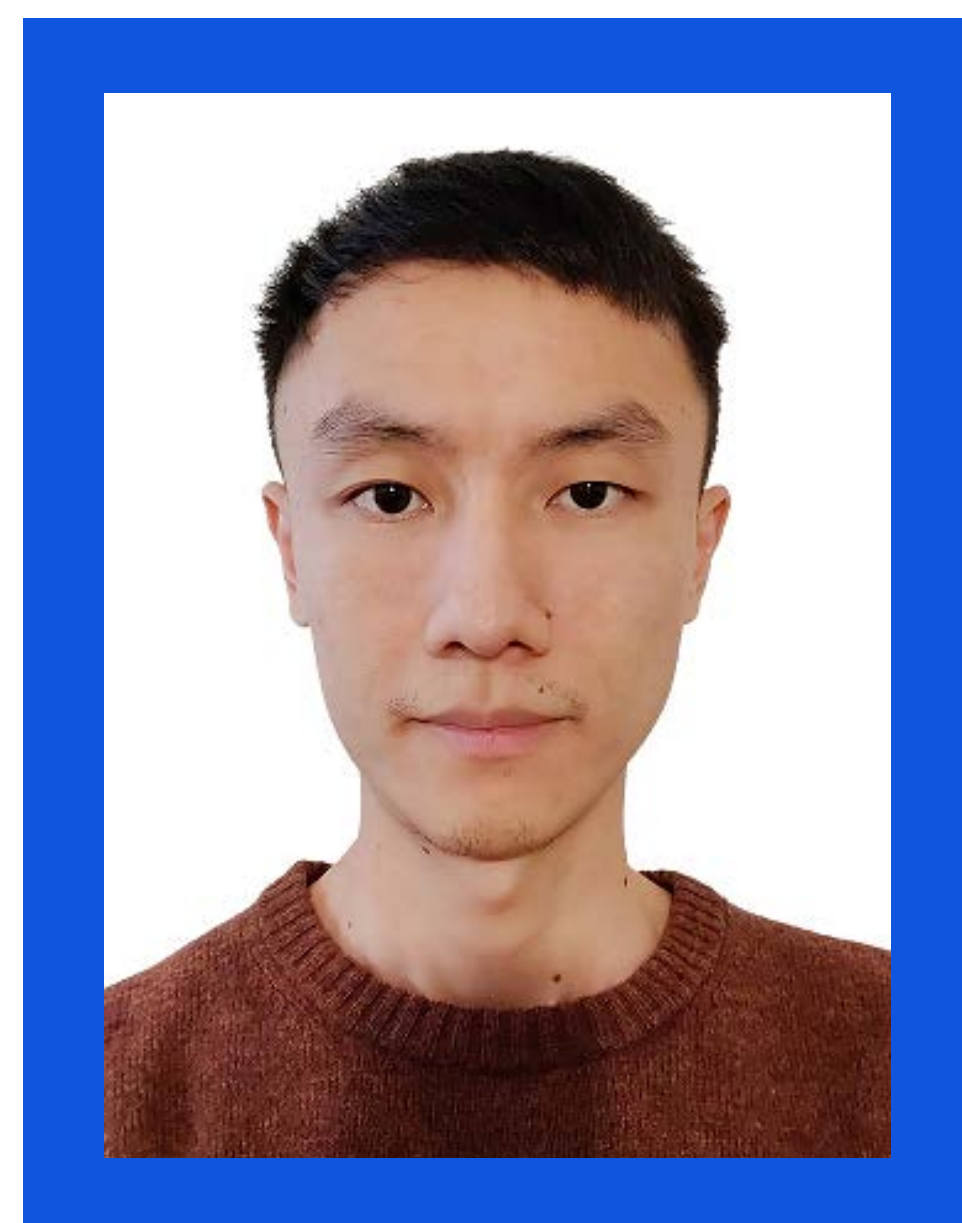






Energy

DM3



Electrocatalytic reduction of  
CO<sub>2</sub>

*Pr. Philippe Miele*

*Dr. Damien Voiry*

27 years old



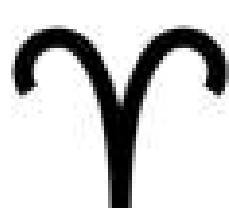
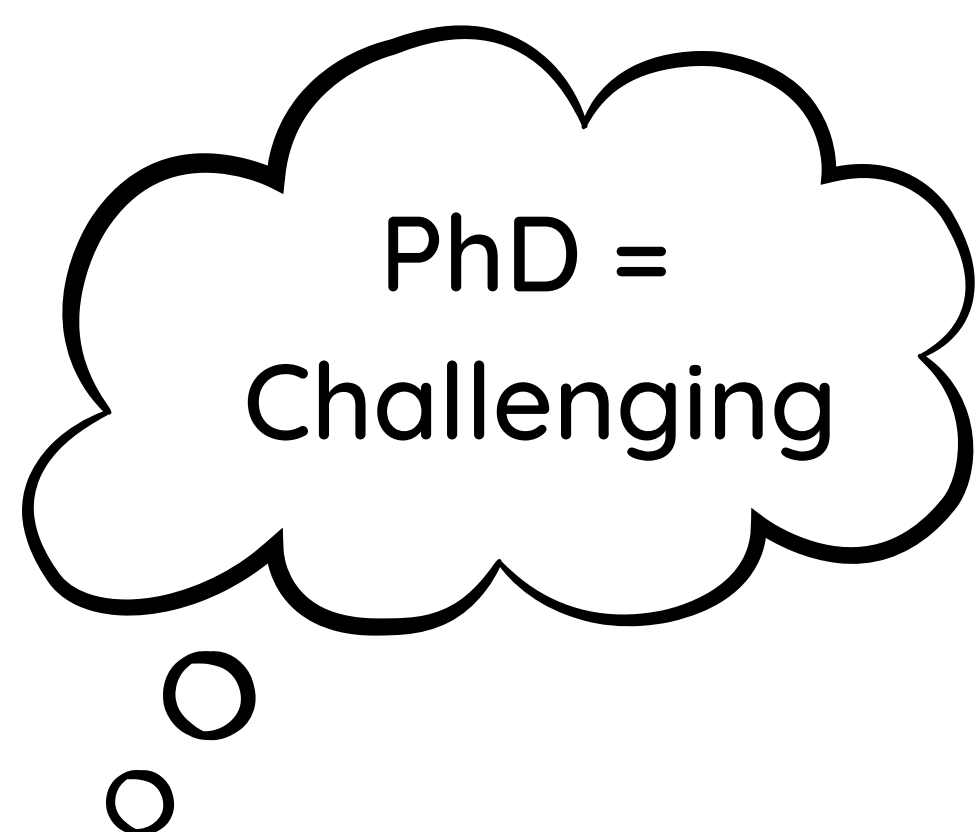
I come from



Favourite Food



Hobby



ARIES





Water  
treatment

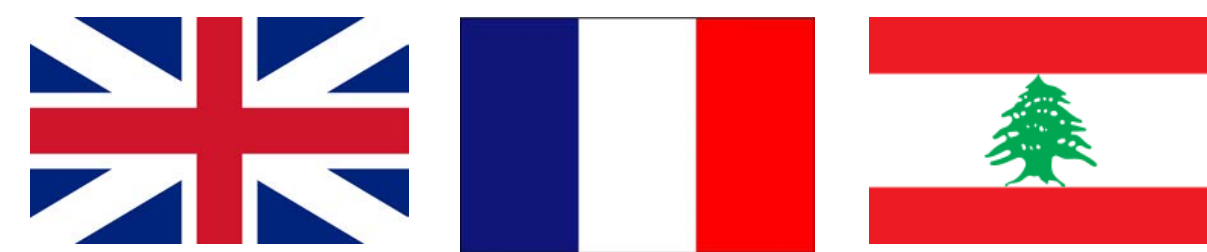
## DM3

### Biomimetic artificial water and proton channels



24 years old

*Pr. David Cornu*



I come from



Favourite Food



Hobby



PhD =  
?



LEO





Health

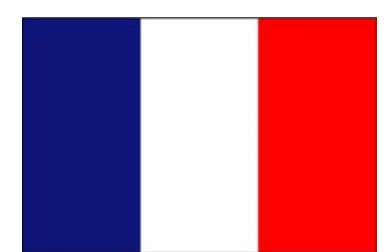
DM3



Study of the assembly dynamics of AB42 peptide by solid nanopore

*Dr. Sébastien Balme*

25 years old



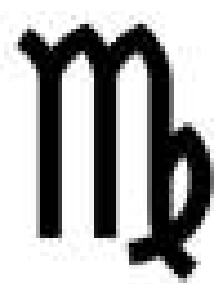
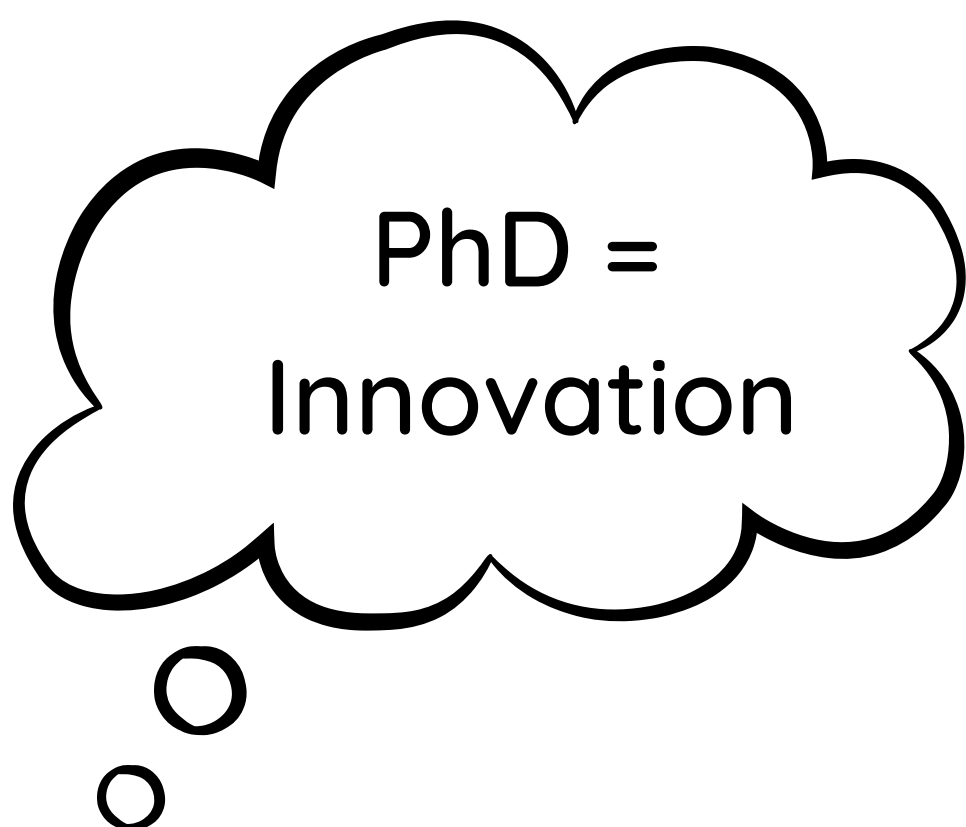
I come from



Favourite Food



Hobby



VIRGO





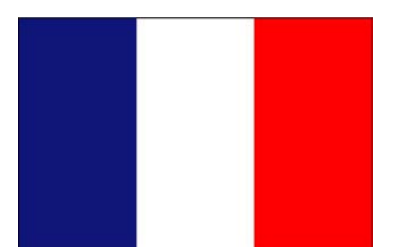
Water  
treatment

# GPM

Fate of contaminants and  
microbiome along treated  
wastewater/irrigation system/  
soil continuum



25 years old



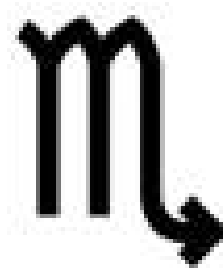
*Dr. Marc Heran*

*Dr. Nassim Ait-Mouheb*

I come from

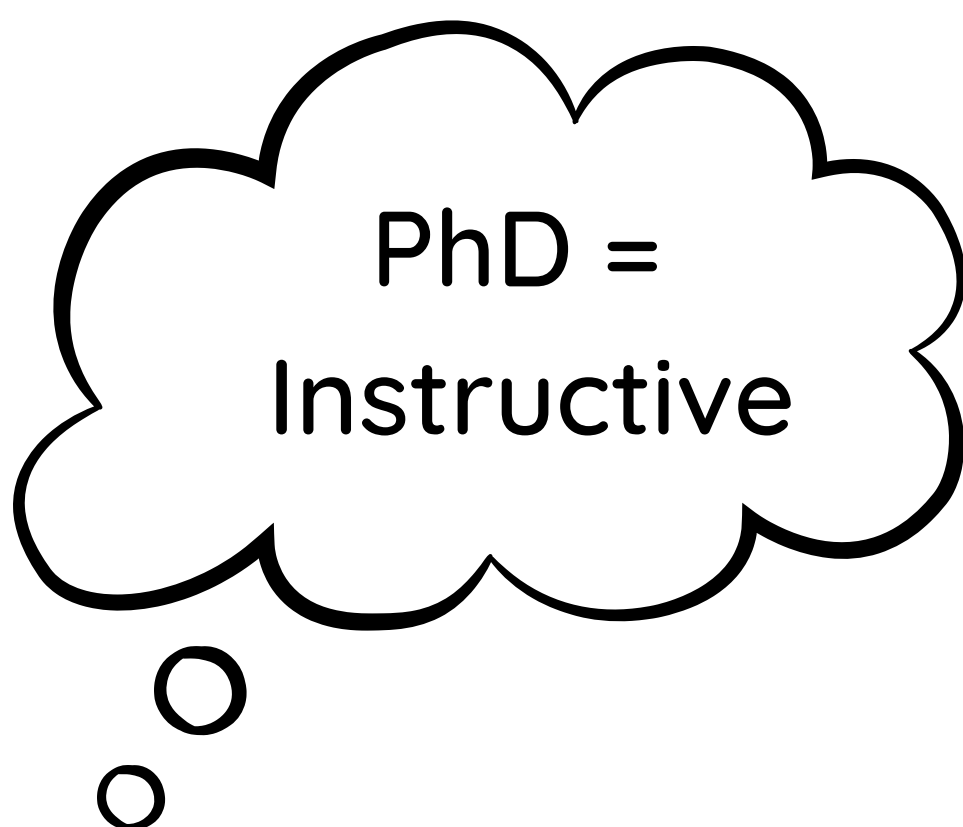


Favourite Food



SCORPIO

Hobby







Water  
treatment

## DM3

### Artificial Water Channels for Membrane Distillation

*Dr. Mihail Barboiu*

I come from



30 years old



Favourite Food

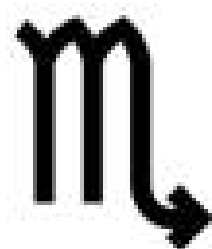


Hobby



PhD =

Management



SCORPIO





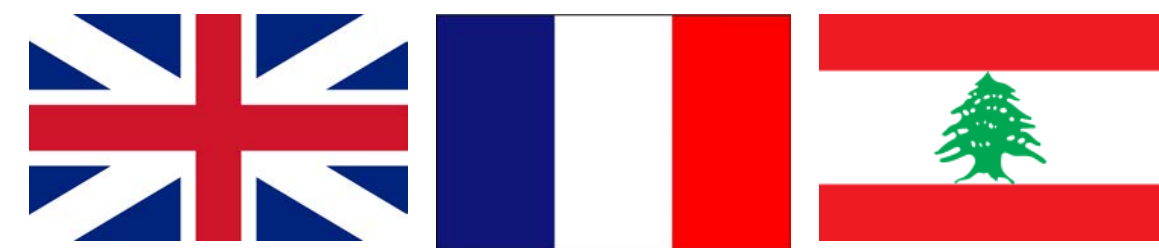
Water  
treatment

DM3  
GPM  
IP2



24 years old

Tuning, evaluation, and optimization of an electrochemical desalination process by flow capacitive deionization: from the material aspect to the process aspect



*Dr. Marc Cretin*

Favourite Food

I come from



Hobby



PhD =  
Wavy







Water  
treatment

DM3



30 years old

Design of mesoporous SIC  
membranes from polymeric  
precursors for water filtration

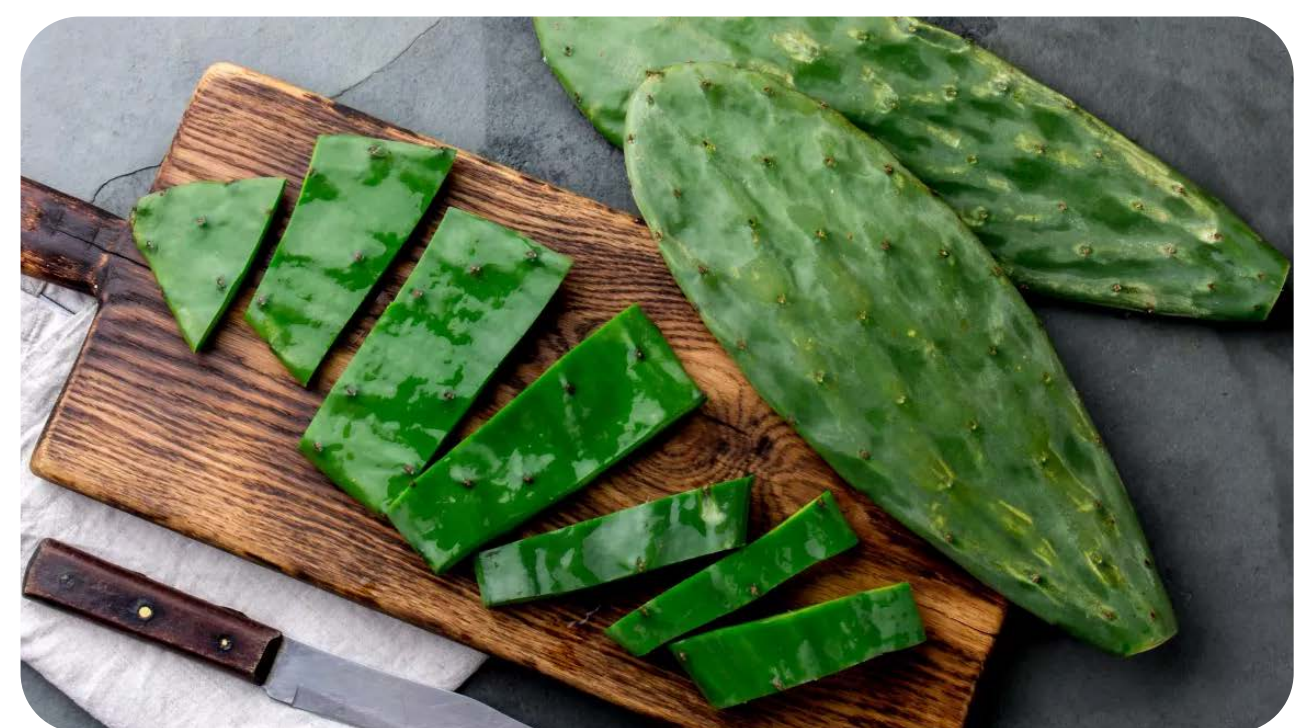
*Dr. Julien Cambedouzou*



I come from



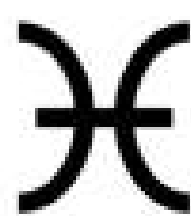
Favourite Food



Hobby



PhD =  
Good



PISCES





Health

DM3

Dynamic dendrimer-liposome system for transport and active channels



*Dr. Mihail Barboiu*

*Pr. Gihane Nasr*

26 years old



I come from



Favourite Food



Hobby

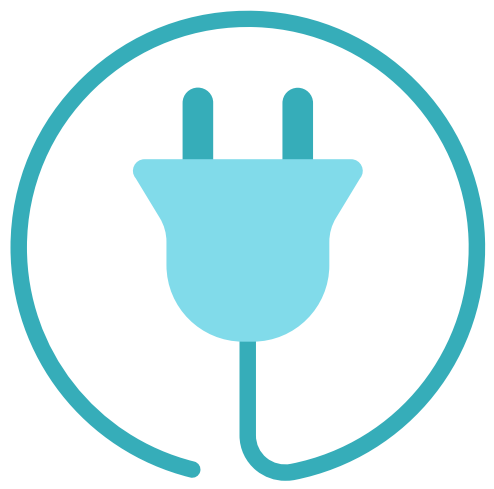


PhD = Frisson



LEO





Energy

DM3

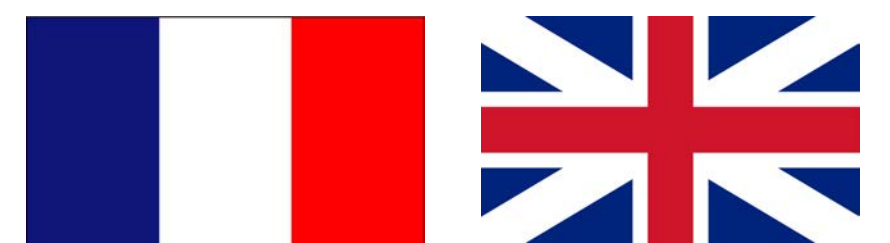


Modified Titanium oxide for hydrogen production by photoelectrocatalysis

*Dr. Stéphanie Roualdès*

27 years old

I come from



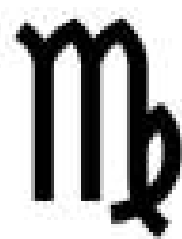
Favourite Food



Hobby



PhD =  
Coffee



VIRGO





Health

DM3



25 years old

Synthesis, functionalization and 3D printing of bioceramics for bone engineering

*Pr. Philippe Miele*



I come from



Favourite Food



Hobby

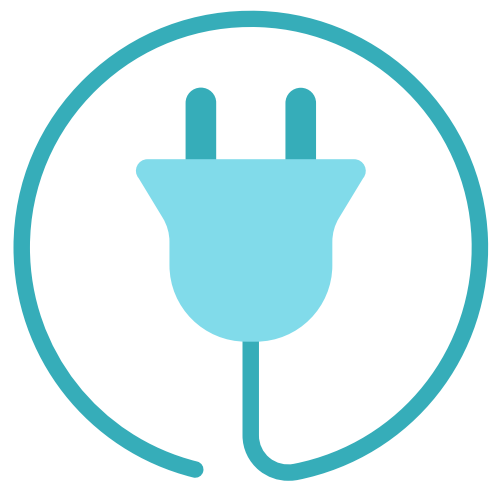


PhD =  
Good



ARIES





Energy

## DM3

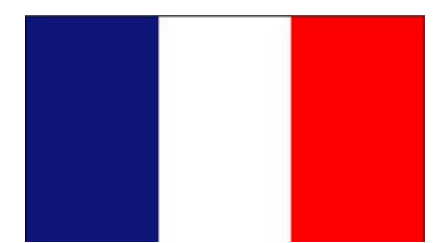


Exfoliated 2D polymer/material nano-composite membranes obtained by Pickering emulsion

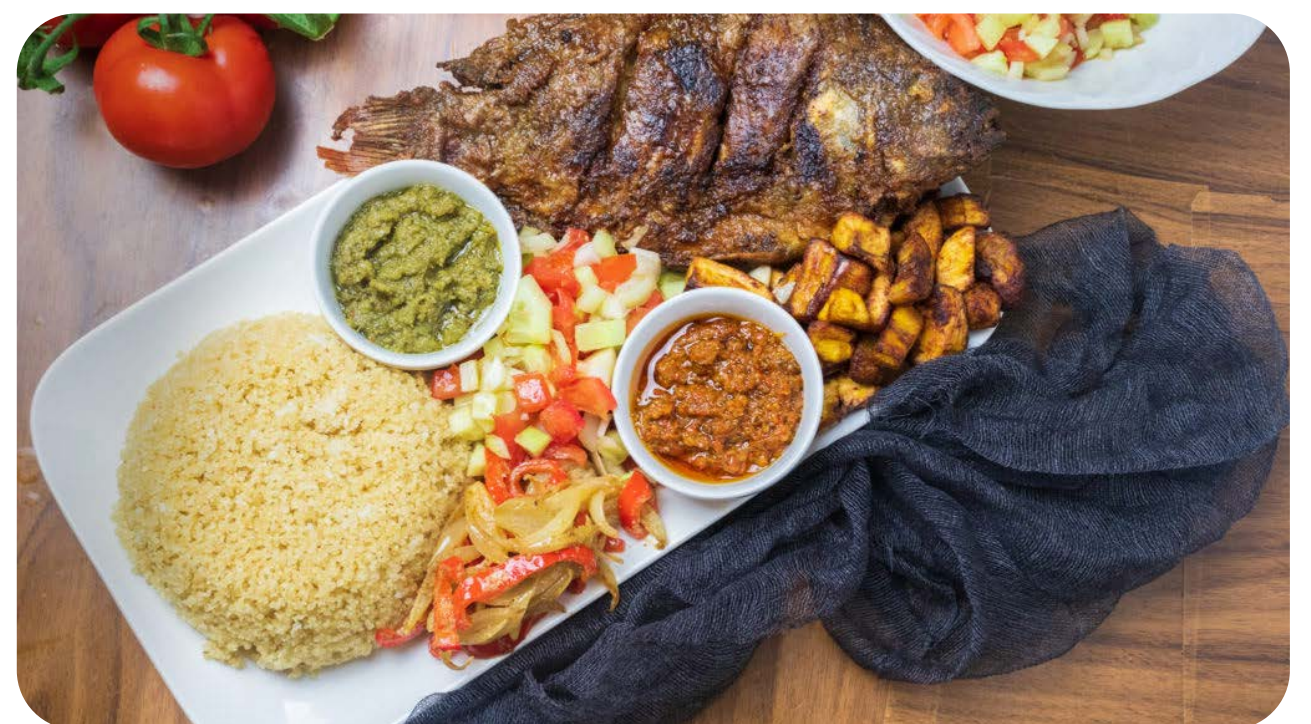
*Pr. Philippe Miele*

30 years old

I come from



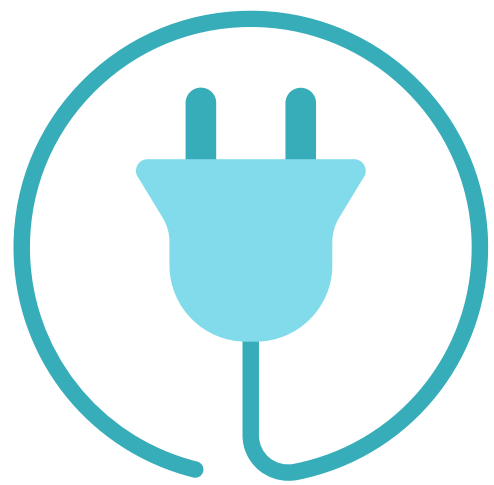
Favourite Food



Hobby







Energy

IP2

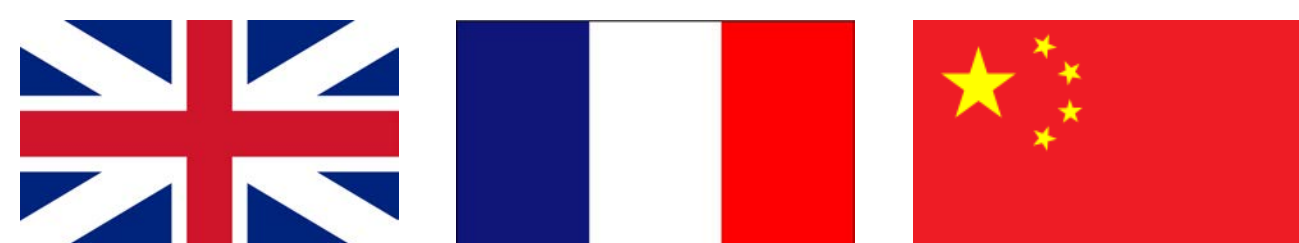


The study of Raman spectroscopy on Lithium metal batteries



28 years old

*Dr. Stefano Deabate*



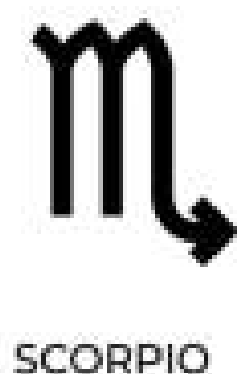
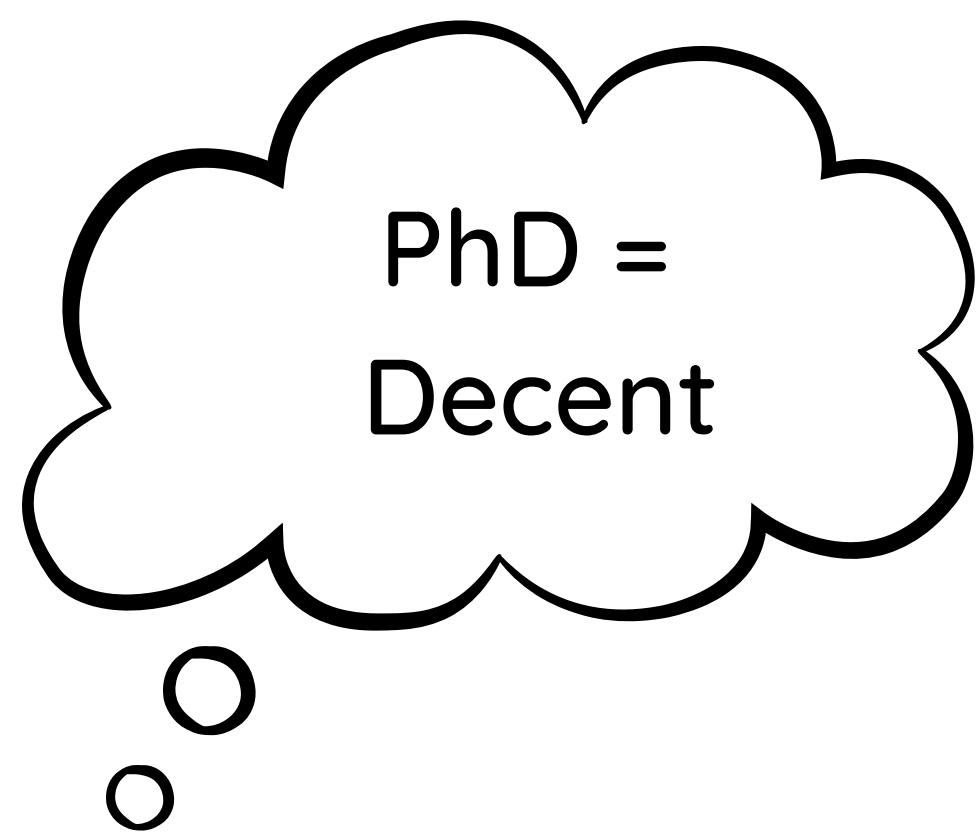
I come from



Favourite Food



Hobby







Water  
treatment

## GPM

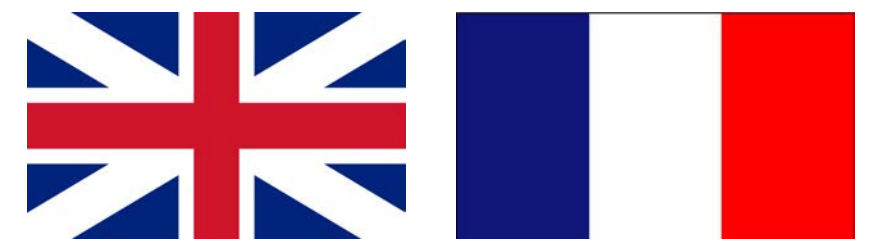
Positive energy domestic  
wastewater treatment by  
Granular Anaerobic

*Pr. Marc Héran*

I come from



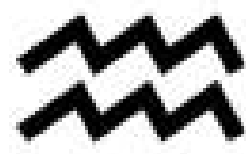
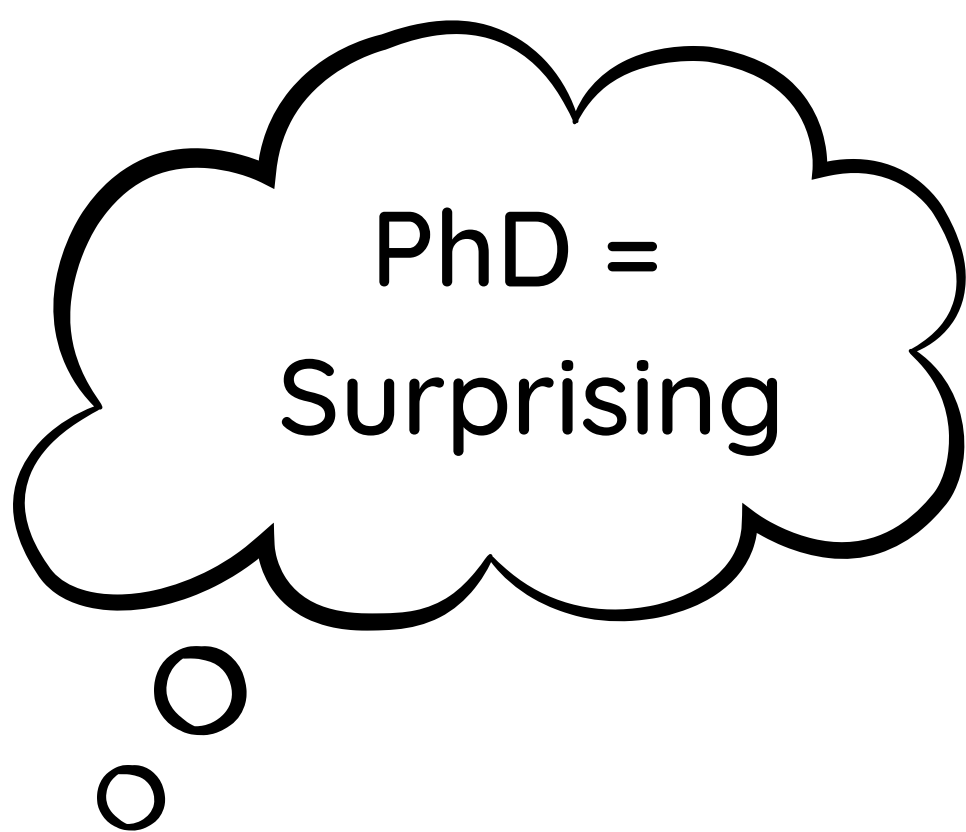
25 years old



Favourite Food

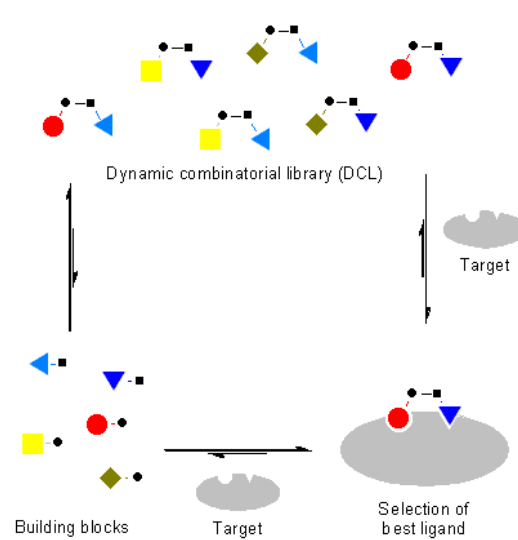


Hobby



AQUARIUS





Constitutional  
Dynamic  
Chemistry

## DM3



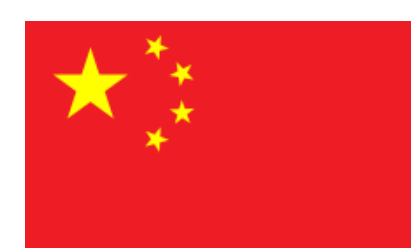
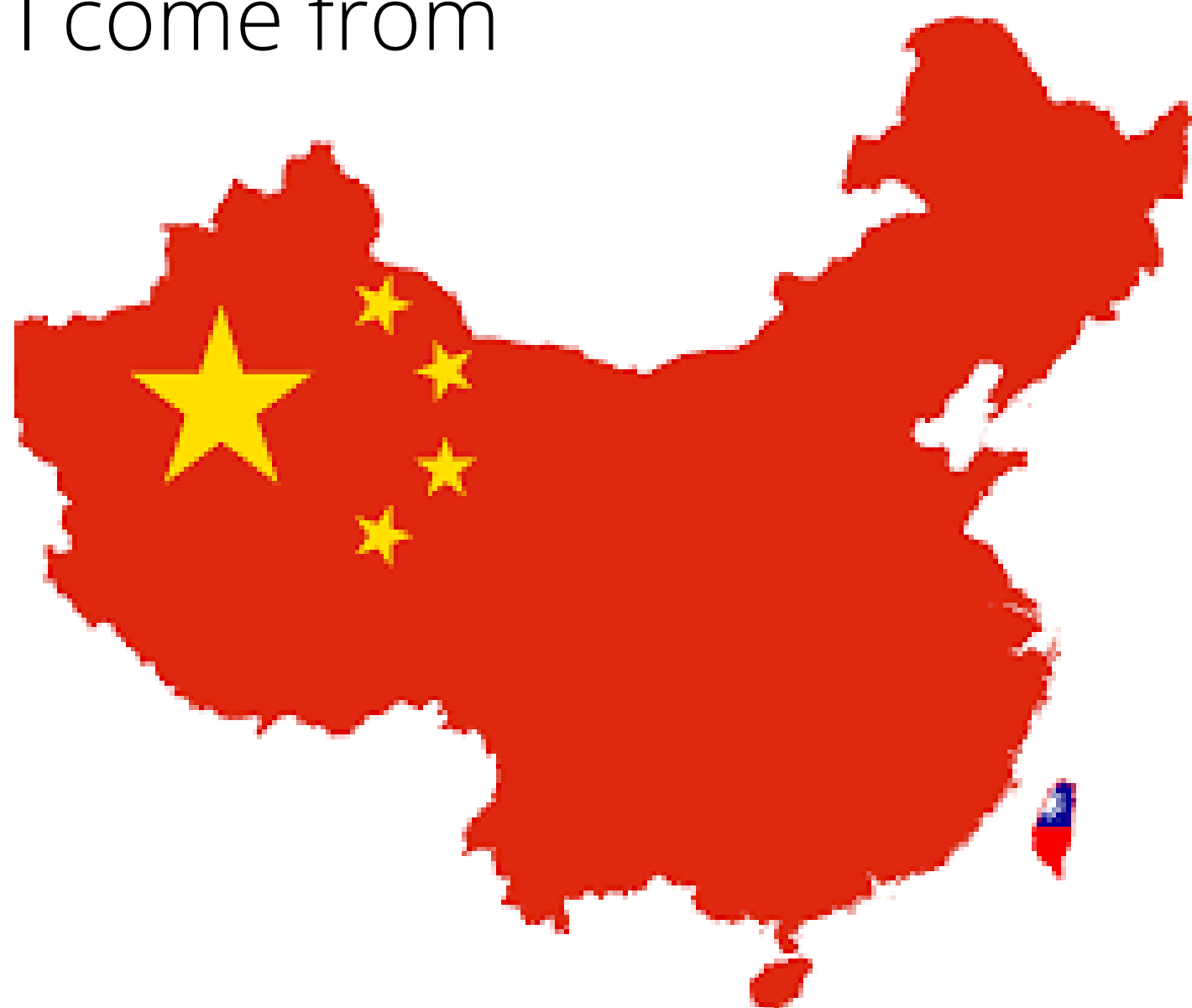
Dynamic covalent systems for  
bio-recognition: gene delivery,  
enzyme activation, active  
channels/carriers



28 years old

*Dr. Mihail Barboiu*

I come from



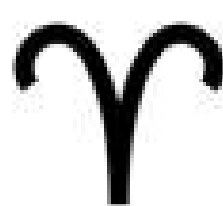
Favourite Food



Hobby

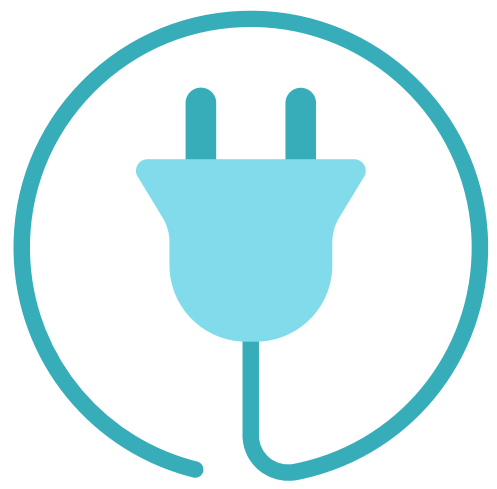


PhD =  
Exciting



ARIES



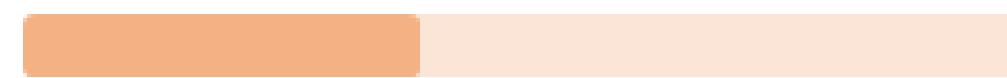


Energy

DM3



Oxide-based nanomaterials  
for photoelectrocatalytic  
water treatment



25 years old

*Pr. Marc Cretin*

I come from



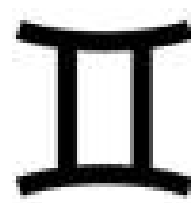
Favourite Food



Hobby



PhD =  
CCTO



GEMINI





Water  
treatment

## DM3

Investigations of nanolaminated  
membranes for gas separation  
and water purification

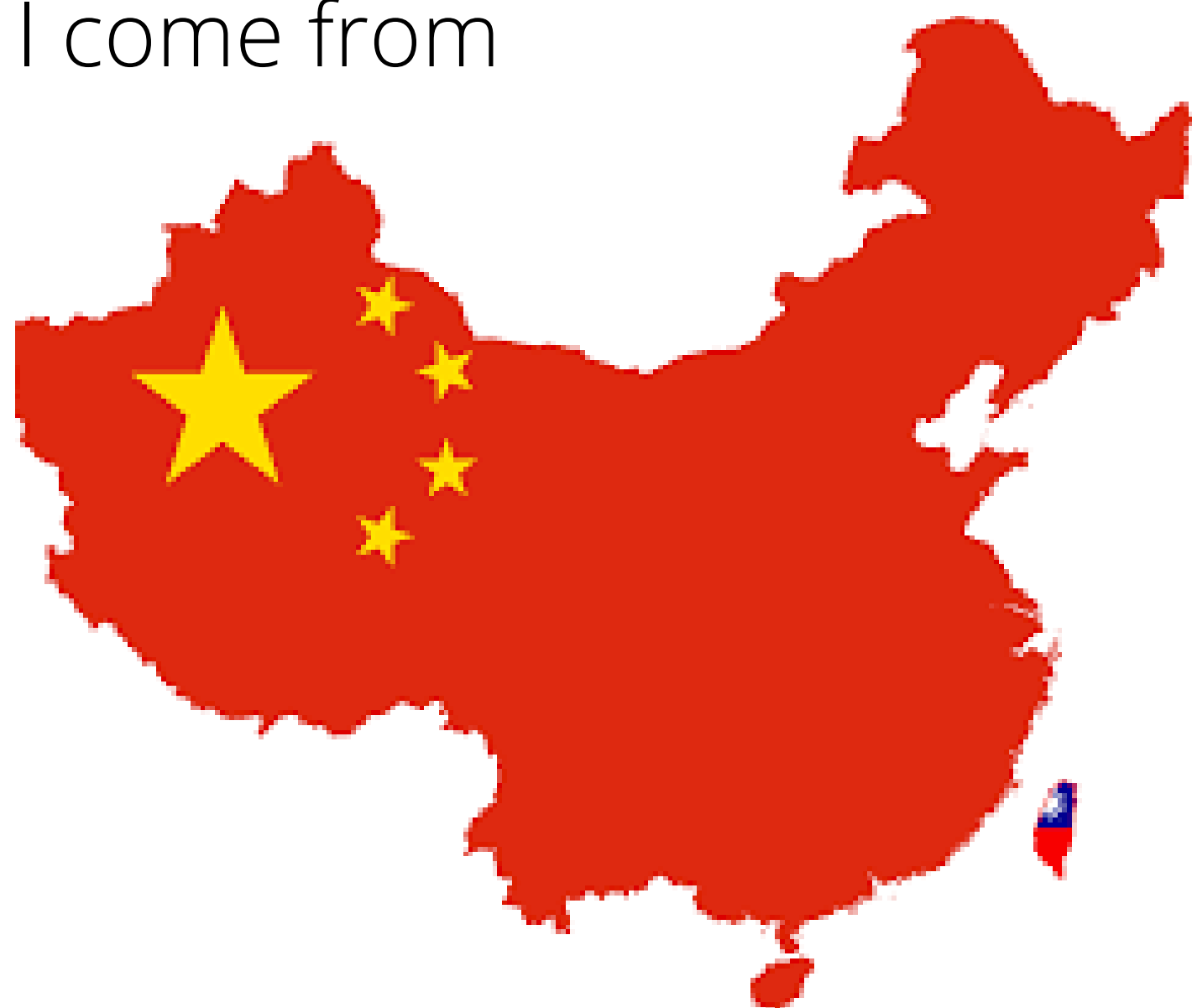


28 years old

*Pr. Philippe Miele*  
*Dr. Damien Voiry*



I come from



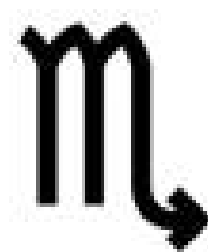
Favourite Food



Hobby

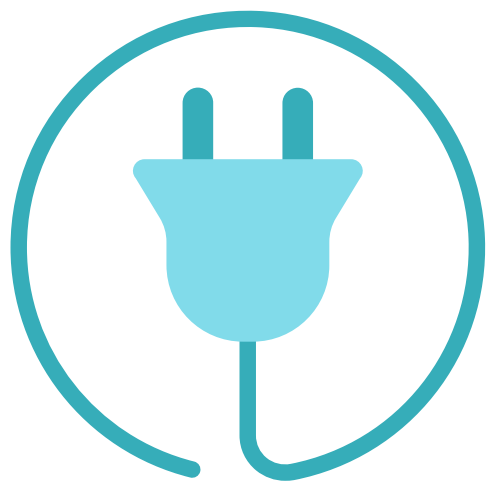


PhD =  
Tough



SCORPIO



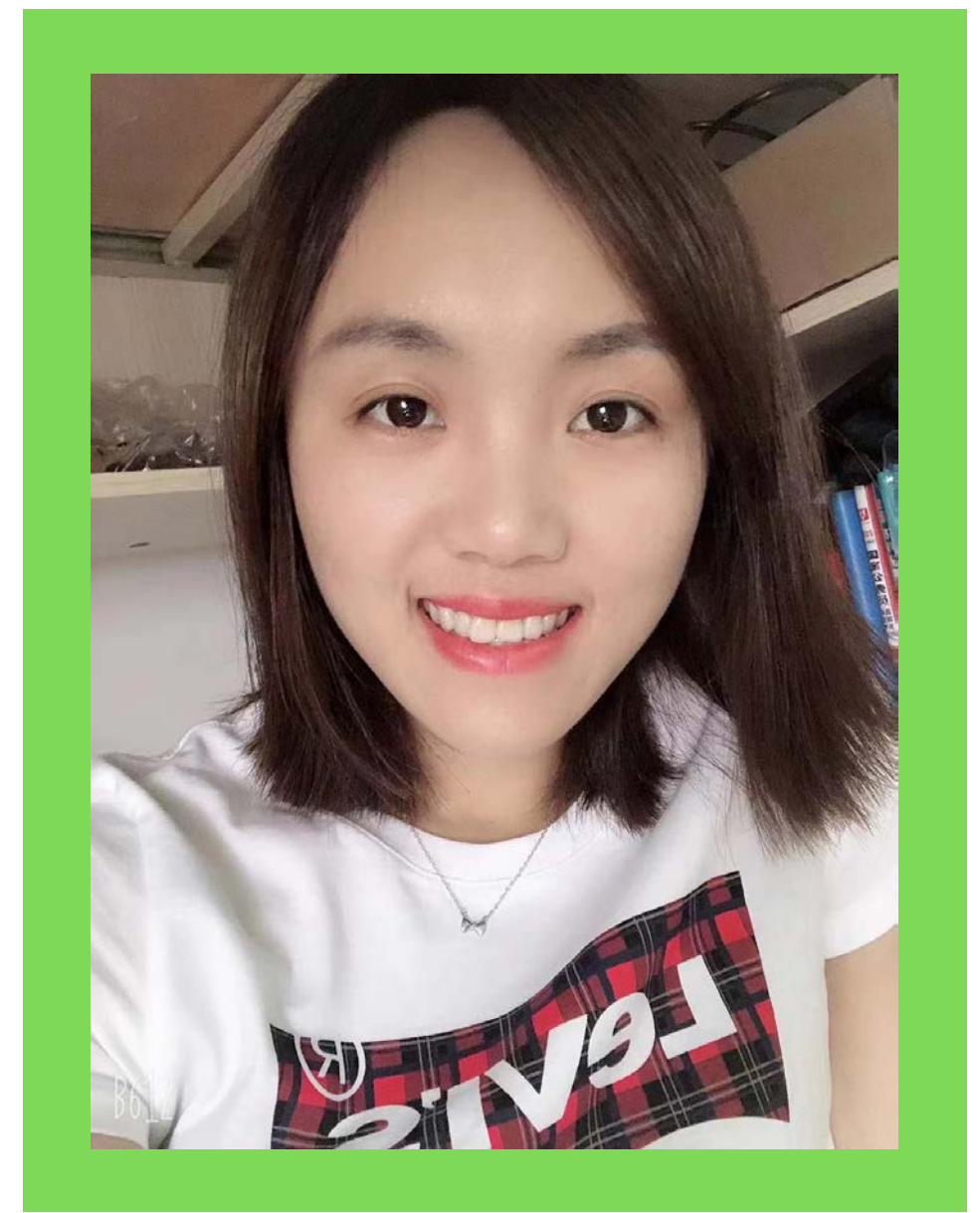


Energy

# DM3

## Electrochemical CO2 reduction

*Dr. Damien Voiry*



29 years old

I come from



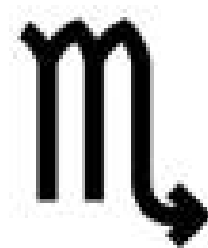
Favourite Food



Hobby



PhD =  
Busy

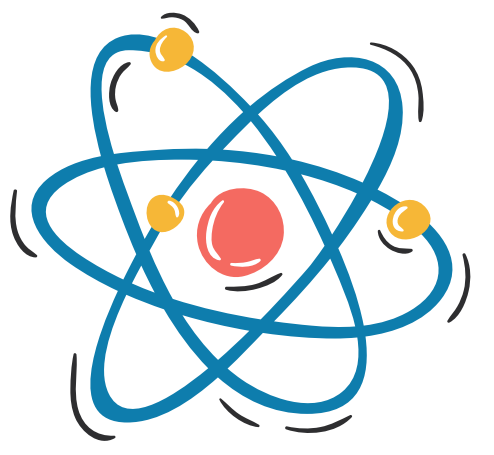


SCORPIO

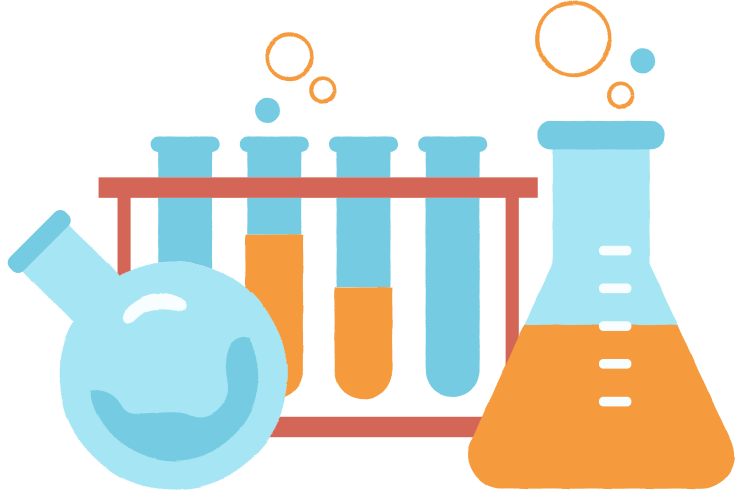




# NOTES







# NOTES

