



## We are looking for **PhD candidates**

**Competitive Fellow Application:** FPI – UPC (2023)  
**Funding organism:** Santander bank  
**Salary:** 17.652 € (gross amount/year), 3 to 4-year fellowship

### **R**equirements of the applicant

- Master degree (finished or to be finished about September) in Chemical Engineering or Materials Science. 300 ECTS, sum of Bachelor and Master credits.
- Academic degrees and qualifications (Master program) with an average mark of **at least 7.0** (scale 0 to 10).
- The candidates should not have a doctorate degree.
- The candidate can have the admission to the UPC's doctoral program in polymers and biopolymers.

### **T**he ideal candidate for this position is:

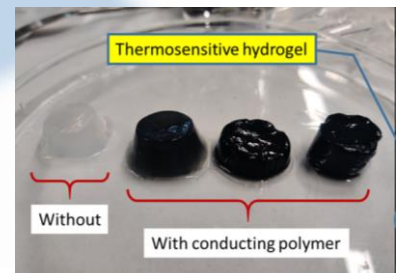
- Well organized person and very creative
- Motivated to research and proactive to achieve goals

### **P**roject title and summary

Development of conducting hydrogels to generate freshwater from brackish solutions

The temperature rise in the Mediterranean zone is higher than current global warming trends (+1.1°C). Meanwhile, global warming is projected to potentiate the scarcity in already water-stressed regions. The global demand for freshwater is estimated to accounting for an increase of 20 to 30% above the current level of freshwater resources in the next 10 years, thanks to population growth and agricultural intensification.

Hydrogels have attracted much attention as novel materials in water purification. When modified with thermoabsorber molecules, such as conducting polymers, they can potentiate the desalination processes. In this project, the researcher will work in solar evaporation and in the use of electrochemical processes to recover pure water from saline solutions. The scale-up of the prototype (TRL 6) for self-water production.



**Sustainable Development Goals (SDGs):** Targets 6 & 9.

### **W**hat we offer?

- Opportunity to work in a multidisciplinary and dynamic team, research group with fully equipped labs, international research collaborations to mobility training, transversal courses.

If you are interested, please, send an e-mail to: [joan.torras@upc.edu](mailto:joan.torras@upc.edu) or [elaine.armelin@upc.edu](mailto:elaine.armelin@upc.edu)

**DEADLINE: July 23th, 2023**