

Opening for a postdoctoral position in Brussels, Belgium:

## Biomimetic Fog Nets



trioS.lab – Soft Surfaces and Structures  
<http://trioslab.ulb.ac.be/>



GRASP - Group for Research and  
Applications in Statistical Physics  
<https://grasp-lab.org/>

### Project summary:

In some regions of the world, accessibility to water resources is weak. Two different technologies coexist for harvesting aerial water: fog nets and water condensators. Already installed in some arid environments, these systems present a low efficiency to collect water. We propose to optimize the water collection on fiber arrays designed by physical processes that we observe in nature. Indeed, plants evolving in deserts and arid environments could inspire scientists.

The scientific strategy is to perform fundamental studies about two processes: water collection and droplet transport based on the expertise of the research groups. Natural fibers will be identified in order to enhance significantly heterogeneous nucleation and/or droplet capture. Then, droplet transport along fibers will be investigated by changing physical parameters (wetting on fibers) and geometrical parameters (inclination angle, diameter, nodes).

At the end of the project, we expect to obtain a deep understanding of the physical processes involved in water collection in order to significantly increase the efficiency of the fog net systems.

### Job description and candidate profile:

The postdoc will be based in the Soft Structures and Surfaces lab (trioS.lab) at the University of Brussels (ULB) and will have to develop the project interacting with an interdisciplinary network including the GRASP in Liège.

We are looking for a strong experimentalist that is creative, can lead research projects, have strong collaboration skills and is able to work in an interdisciplinary environment. Background in soft matter, physical hydrodynamics or material science is highly desirable.

Ideal starting date is March 1st, 2017 and application will be opened until the position is filled. The contract is for one year with a possible extension of 1 year.

Applicants should send a letter of motivation, CV, list of publications and 2 or 3 recommendation letters to Denis Terwagne (Denis.Terwagne@ulb.ac.be).

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