

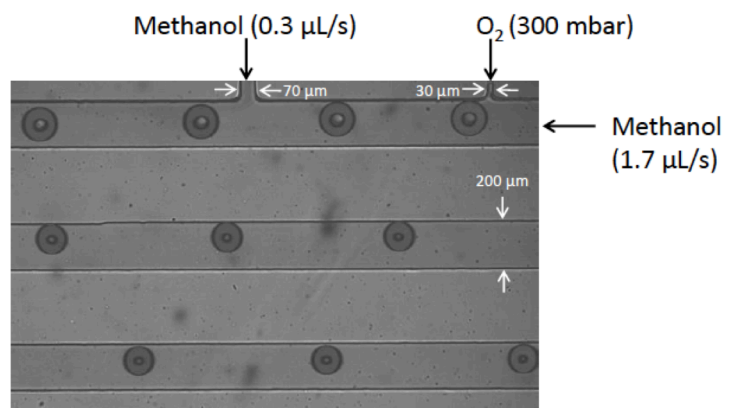
## Post-doctoral position at TIPS laboratory

*Université Libre de Bruxelles*

« Study and development of a continuous microfluidic absorption process for the production of hydrogen peroxide by direct synthesis »

### Context

Three years ago, the Walloon and Brussels regions have financed a research project, called MICROECO, whose objectives were to develop and optimize a new integrated and continuous microfluidic process in order to produce hydrogen peroxide by direct synthesis. This project is a collaborative project between our laboratory TIPS in Brussels, the COS laboratory in Namur and the Solvay company. We are today at the stage of integrating in a microfluidic device a microabsorber, a microreactor and a microseparator for the continuous production of H<sub>2</sub>O<sub>2</sub>.



*Bubble absorption of Oxygen into methanol.*

**In this framework, the TIPS laboratory hires a postdoctoral candidate** who will work on the liquid/gas microabsorption as well as on the catalytic heterogeneous reaction. The main tasks consist in

- coupling two gas bubble microabsorbers for a controlled ratio of reacting gases (H<sub>2</sub> and O<sub>2</sub>).
- developing a strategy for determining experimentally the kinetic reaction constants, based on an existing model.
- ensuring the complementarity with the latter stage of the process, namely the liquid/liquid separator.

The proposed postdoc will be realized at TIPS-ULB, under the supervision of B. Scheid and B. Haut on the Solbosch campus at the Université Libre de Bruxelles.

### Competences and required skills

The candidate will have a PhD in experimental microfluidics, mastering microfabrication techniques. The candidate will have background in physico-chemistry, chemical engineering,

soft matter, fluid physics, with affinity for experimental work in these fields. The candidate should also have a good level in mathematics and modelling. The knowledge of Mathematica is a plus. The candidate will also have good presentation (written and oral) skills in order to communicate his/her results on a regular basis to the other partners of the project. The candidate will integrate a dynamic team of 8 researchers (postdocs and PhDs) in the field of experimental and theoretical microfluidics. The TIPS laboratory is fully equipped in microfabrication techniques and optical characterization (clean room, 3D microscopy, high speed camera, fluorescence, pressure controller, ...)

**The postdoc position is available today.**

### **Contact**

The candidates will send their CV, a motivation letter and contact info (name + email + phone) for three references to Benoit SCHEID ([bscheid@ulb.ac.be](mailto:bscheid@ulb.ac.be)).

For more infos : <http://bscheid.ulb.ac.be>