

Laboratoire Colloïdes et Matériaux Divisés

Postdoc/Engineer:

Creation of functional hydrogel microparticles with microfluidics

The development of microfluidics technology allowed to revisit the fabrication of emulsions and offers now an efficient tool for making well calibrated emulsion droplets. In addition, to capability to encapsulate various components, to add process steps in serial, to parallelize droplet production and operations opened a new avenue for tailoring microparticles from emulsion droplet template. These functional microparticles find application in biotechnology where a precise control of particles features, like size or binding capacity, is needed.

For this project, we wish to develop new functional microparticles based on hydrogel by exploring various routes of fabrication, based on microfluidics techniques, that involve liquid fragmentation, polymerization and sol-gel transition. This project will be conducted in collaboration with a biotechnology company. This will thus offer the opportunity to combine scientific creativity and valorization.

We therefore look for a candidate having accomplished a PhD or having an engineer degree in applied chemistry or in physico-chemistry. Strong skills in physico-chemistry of soft matter, polymer chemistry and experimental work are desired. Knowledges in microfluidics are welcomed. High motivation, flexibility, autonomy, the ability to work in a highly multidisciplinary team and good interpersonal and communication skills are essential. Since this project is much oriented towards applications, we will be sensitive to a candidate having a strong motivation to continue this adventure in a startup context.

Start date: in 2019, once the best suited candidate is selected

Duration: 12 months

Salary: depends on profile and experience

Contact :

A motivation letter and a CV, including referent persons or letters of reference, should be sent to Nicolas Bremond (nicolas.bremond@espci.fr).