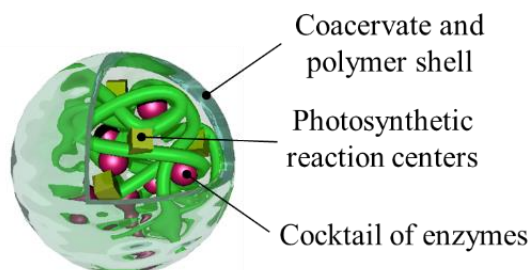




PhD Offer

Conversion of carbon dioxide in a water droplet

Due to the growing emissions of CO₂ in the atmosphere, which causing global climate warming, it is very challenging to find green and efficient solutions to CO₂ conversion. Tremendous efforts have been devoted to the design of artificial bioreactor mimicking natural photosynthesis. A very promising way to address this challenge is the use of droplet-based bioreactor to convert CO₂ into organic products. In particular, water-in-water emulsion, *i.e.* coacervates have the potential of opening up a novel dimension by offering efficient spontaneous sequestration and biological preservation. Thus, the objective is to design a biomimetic reactor gathering in a coacervate all the actors involved in the photosynthesis. It will result in a novel approach in artificial photosynthesis technology resulting from the synergy of all the involved components.



Keywords: Colloids, Self-assembly, Stimuli-responsive, Nanogels, Enzymes

Applicant profile: Background in physical chemistry, colloids and polymers.

Financial support: Expected fellowship from the Ministry of Research, French National Research Agency.

Contacts:

Adeline Perro
perro@enscbp.fr
ISM - ENSCBP 16 avenue Pey Berland 33607
Pessac
05 56 84 56 67

Valérie Ravaine
vravaine@enscbp.fr
ISM - ENSCBP 16 avenue Pey Berland 33607
Pessac
05 56 84 66 13