ESR 3 position

Project title: Gas Phase study of encapsulation processes

Location: Freie Universität Berlin, Germany

Supervisor: Prof. Christoph Schalley

Objectives of the individual project:

1) Gain expertise in modern mass spectrometric methods and gas-phase chemistry of noncovalent complexes (e.g. ionization and fragmentation methods, ion mobility MS etc.)
2) Learn about the types of non-covalent bonding depending on the environment under which they form (e.g. gas phase vs. solution).
4) Thermodynamic and kinetic characterization of capsule and complex formation.
5) Find out the importance of the industrial sector in research development (Industrial Secondment)

Expected Results:

The ESR will end the recruitment with having applied well-known gas-phase methods, but also with having developed new approaches to the gas-phase ion chemistry of non-covalent capsules and self-assembled cages. A thorough characterization of the capsules in solution and in the gas phase and in particular a comparison of both will add profound understanding of their behavior. Based thereon, capsule design and property prediction as well as the methodology for their characterization will advance significantly.

Planned secondment(s):


Industrial Secondment: From four- to six-month secondment at Biolitec facilities (Germany).

Eligibility requirements

EU eligibility criteria for candidates: Candidates of any nationality, but in order to be eligible for the positions the following criteria applies to all applicants:

- The applicant shall at the time of recruitment be in the first four years of his/her research career and have not been awarded a doctoral degree.
- The applicant must not have resided or carried out his/her main activity in Germany for more than 12 months in the 3 years immediately prior to the recruitment.

Candidates profile: candidates must hold a Master's degree in Chemistry with excellent academic transcripts. We are looking for highly motivated students with good communication skills. All candidates must prove full proficiency in spoken and written English (B2 certificate, TOEFL, or equivalent).

Questions regarding the recruitment can be sent to: garagay@iciq.es.
Questions regarding the project can be sent to: c.schalley@fu-berlin.de

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