LABORATOIRE DE CHIMIE ENS DE LYON

Post Doctoral Researcher Vacancy

Context

Applications are invited for an ERC-funded post-doctoral researcher position to work on shape shifting ultra-thin colloidal nanoplatelets. The overall goal of the project is to exploit the mechanical instability of thin nanoplatelets to synthesize new chiral and adressable nanoparticles. By applying forces at the surface of 2D thin objects, it is possible to create a wide variety of 3D shapes such as helices, twists and rolls. Our goal is to use this general principle to establish a new class of nanostructures that current synthetic strategies can not afford. Within this general framework, **the aim of the post-doctoral fellowship is to develop molecular dynamics simulations and theory of thin plates** to better understand the link between the structure of the self-assembled monolayer and the shape of the nanoplatelets. The researcher will work in strong collaboration with other members of the team who will study the synthesis, shape control and surface functionnalization of the nanoplatelets.

Profile

We are more specifically looking for a theoretical physical-chemist with a strong focus on **simulations and theory of thin plates** Previous experience in this domain would be considered as an asset but is not mandatory. Strong candidates with a will to learn in this area are encouraged to apply. We are seeking for applicants with one or more of the following area of expertise:

- molecular dynamic simulations,
- mechanics of thin plates, elasticity, stability of slender objects,
- colloidal nanocrystals, ligand adsorption on semi-conducting surfaces

Practical details

Informal inquiries by email or phone are welcome. The initial appointement is for 1 year but an extension could be granted upon mutual agreement. The start date is flexible and remote work is possible. Please send a CV with a list of publications and the name of 2 or 3 references. Application deadline is April 30 2021 but the position will remain open until filled. We offer a competitive salary (depending on previous experience) with full social security cover. The lab is located in École Normale Supérieure de Lyon in the south of Lyon, close to the city center, is easily accessible by public transportation and provides researchers with an ideal environment.

benjamin.abecassis@ens-lyon.fr | +33 6 67 69 20 40

http://perso.ens-lyon.fr/benjamin.abecassis/