

## Doctoral Researcher Vacancies

### Context

Applications are invited for two ERC-funded doctoral researcher positions to work under the supervision of Benjamin Abécassis 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 addressable 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. Moreover, minute changes on these forces can induce dramatic shape-shifting between different geometries. 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 PhD is to synthesize and fonctionnalize 2D nanoplatelets with complex shapes** and better understand the self-assembly of ligands at their surface. The doctoral researcher will work in strong collaboration with other members of the team who will study the formation mechanisms, shape control and surface fonctionnalization of the nanoplatelets.

### Profile

The successful candidate should have an good academic track record and a strong motivation towards experimental work. We seek candidates with a background in at least one the following fields: physical chemistry, materials chemistry, nanotechnology, soft matter. The PhD researcher will perform nanoparticle synthesis and will use different characterization tools such as UV-VIS spectroscopy, electron microscopy, X-ray diffraction and small angle scattering and dynamic light scattering. She or he will work in close collaboration with other members of the group and his/her supervisor, good communication skills are necessary.

### Practical details

Informal inquiries by email or phone are welcome. The appointment is for 3 years, the legal duration of a PhD in France. The start date is flexible but will not be before May 1st 2020. Please send a CV and the name of 2 or 3 references. Application deadline is April 30 2020 but the position will remain open until filled. We offer a competitive salary with full social security cover and the possibility to teach at the undergrad level. The lab is located in École Normale Supérieure de Lyon in the south of the city, close to the center. It is easily accessible by public transportation and provides researchers and students with an ideal environment.

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