**12-month post-doctoral position**
**Start date: 12/2021 negotiable**

*A new microfluidic strategy for metamaterials*

**Contacts**

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Today, we are able to synthetize micrometric coils by allowing the spontaneous winding of a fiber around a microfluidic droplet, the mechanism at play being the surface tension which balances the bending energy. Combining many of these units, we may form a material that can exhibit original optical properties. This idea combines concepts from three fields of engineering and physics: microfluidics, visco-elastocapillary self-assembly and optical metamaterials. Besides the scientific and engineering challenge of preparing such units and collections thereof, the potential for commercialization is important.

A candidate with expertise in microfluidic design and implementation, a good knowledge of continuum mechanics (elasticity and hydrodynamics), interfacial phenomena, and a desire to bring technology to market (*i.e.* through interactions with our industrial partners and the eventual creation of a startup) is thus desired. Working knowledge of light-matter interactions is also an asset.

The project *MimeCodr* is generously funded by the Institut Pierre-Gilles de Gennes' 2020 "High-risk topics" call and the 2020 PSL Research University *Prématuration PSL Valorisation Qlife* grants. The project will thus begin its development at the IPGG in Paris, France. Once the material is constructed, light-matter interactions will be measured, and continued developments within the market context mentioned above will be initiated. The duration of the project is 12 months.

Interested candidates should send a CV, cover letter –and arrange for at least one letter of reference to be sent– to the contacts noted above. While applications will be accepted until the post is filled, first interviews will take place during the first half of October. Therefore, it is advised to send applications before 24 September, 2021.