Postdoctoral position opening in the research group 'Spectroscopy of Biomolecules and Clusters' at Institut Lumière Matière in Lyon (France)

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A postdoctoral position is open at the "Institut Lumière Matière" in Lyon, France (iLM - UMR Université Claude Bernard Lyon 1, CNRS) in the frame of the European H2020 project MS SPIDOC "Mass Spectrometry (MS) for Single Particle Imaging (SPI) of Dipole Oriented protein Complexes" (see https://cordis.europa.eu/project/rcn/216338_en.html). The aim is to characterize the structure of macromolecular assemblies – such as viral capsids – without the need for crystallization. The protein complexes, kept in a native environment, then transferred to the gas-phase, mass filtered, ion-mobility filtered and dipole-oriented, will be imaged with the X-Ray beam of the European XFEL in Hambourg. The MS SPIDOC consortium combines internationally leading expertise in different fields relevant to the project: instrumentation, simulations, as well as working with biomolecules in the gas phase. The postdoc hired at iLM will be in charge of using our local expertise (ion mobility, mass spectrometry, spectroscopy and action-FRET, metal nanoclusters and protein complexes) to provide benchmark systems and reference structural data to the consortium. This includes modifying proteins models to enable grafting of chromophores for action-FRET, and running IMS/aFRET experiments in Lyon. The position also involves strong interaction with the partners and multiple stays in Hamburg to work on the benchmarking experiments directly at the XFEL site.

The candidate should have a PhD in Physical-Chemistry or (Bio/Analytical)-Chemistry. He/she should be experienced in MS, in particular MS of protein complexes: an expertise in native-MS will be particularly appreciated. Experience in IMS is a significant plus. Experience with spectroscopy is less crucial. However, the candidate should be comfortable with biological (protein) sample handling: modification, grafting, purification, storage and preparation for native-MS and have a critical eye on the evaluation of the structural integrity of the systems.

The contract duration is 1-year, full time (with possible extension), beginning early 2019. Salary: from 2000 € netto/month, depending on research experience. The employer will be the Université Claude Bernard Lyon 1, and the position will be based in the ILM premises (address below).

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