



**Post-doctoral position in photochemistry/photophysics  
(Bordeaux, France)**

**Studies of the influence of chirality on photoinduced electron transfer  
processes using aromatic oligoamide foldamers**

**Context:** In the framework of the *Grand Projet de Recherche "Light"*, we are inviting candidates to apply for a post-doctoral position in Bordeaux, France (initially 12 months with some possibility to extend). The research project (involving partners in chemistry (ISM) and physics (LOMA) departments) focuses on studying the optical properties of innovative chiral foldamer helicates developed in-house, including aiding in the development of new laser methodologies, with a particular focus on implication of chirality on electron transfer over different length and timescales.

**Research program:**

The candidate will be involved in performing a range of spectroscopic studies (steady-state and time-resolved fluorescence, CPL, transient absorption) to characterize photoactive molecules (up to several nanometers in length) and light-induced processes therein. Transmission of electrons through chiral biomolecules is believed to be under chirality-induced spin selectivity (CISS), notably with helical systems such as DNA or oligopeptides. A major aim of this project is to investigate this phenomenon in photoactive synthetic variants, namely novel chiral aromatic oligoamide single and double helices of variable lengths incorporating designer monomers ( $\pi$ -extended chromophores). Equally, participation in setting-up a new 3 pulse laser experiment to study electron transfer in chiral photo- and electroactive helicates in real time is envisaged.

**Skills:** A Ph.D. in chemistry or physics and experience in photochemistry and/or advanced spectroscopies are required. Experience in laser spectroscopies and enthusiasm for experimental research would be especially welcome.

**Application:** Please send a detailed CV and 2 recommendation letters to Dr. Nathan McClenaghan

E-mail: [nathan.mcclenaghan@u-bordeaux.fr](mailto:nathan.mcclenaghan@u-bordeaux.fr)

Further information upon request.

**References:**

[1] X. Li, N. Markandeya, G. Jonusauskas, N. D. McClenaghan, V. Maurizot, S. A. Denisov, I. Huc, *J. Am. Chem. Soc.* **2016**, *138*, 13568.

[2] E. Merlet, K. Moreno, A. Tron, N. McClenaghan, B. Kauffmann, Y. Ferrand, C. Olivier. *Chem. Commun.* **2019**, *55*, 9825.

[3] K. Moreno, E. Merlet, N. McClenaghan, T. Buffeteau, Y. Ferrand, C. Olivier *ChemPlusChem* **2021**, *86*, 496

Deadline for applications : 15<sup>th</sup> June 2024 (starting Autumn 2024)