Post-doctoral position

Sensitive Luminescent Surfaces for pH and cations detection in water.

Research Fields: Organic, Polymer and Surface chemistry ; Physical chemistry.

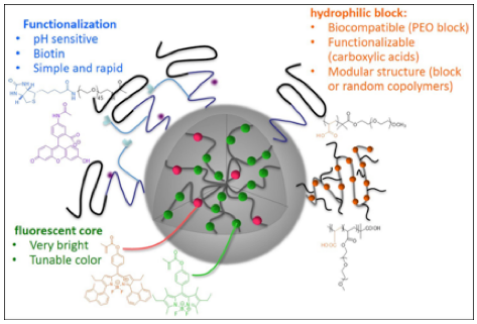
Work Place: Université Paris-Saclay (Ecole Normale Supérieure Paris-Saclay / Université Paris-Sud)

Research Laboratory(ies): Institut des Sciences Moléculaires d'Orsay (ISMO) UMR-8214 / Laboratoire de Photophysique et Photochimie Supra- et Macromoléculaires (PPSM) UMR-8531

Head(s) of the Scientific Project: Prof. R. Méallet-Renault (ISMO) / Dr. G. Clavier (PPSM)
Funding: Labex CHARMMMMAT (http://www.charmmmat.fr/en/)
Short term contract (12 months); net salary: 2605,99€ per month
Starting Date: Between 1st October 2018 - 1st January 2019

Scientific context: We have recently prepared **non-toxic and pH-sensitive fluorescent nanoparticles (FNP) that can monitor bacterial growth**. We wish to **demonstrate that these FNP can also be applied to monitor in real-time both pH and toxic cation (mercury, lead ...).**

The first step will consist in the development and characterization o*f new bi-functional FNP* that can emit green or red fluorescence. Secondly both types of FNP will be grafted onto a glass surface and then functionalized with selective probes. The final goal is to design *dual luminescent surface sensitive both to pH and cations*. By gathering the FNPs on surfaces we shall gain in contrast and sensitivity.



Our recent publications about this research project:

- C.Grazon et al. J. Phys. Chem. C (2014) 118(25),13945
- C. Grazon et al. Macromol. (2013) 46 (13), 5167
- Y. Si et al. Biosensors andBioelectronics 75 (2016) 320
- C. Grazon et al. Polym. Chem. (2016), 7, 4272

Required skills: The candidate should have performed his/her PhD in organic chemistry, and eventually surface chemistry. Skills in photo-physical measurements would be a bonus. The project is a collaborative work between two research groups thereby the candidate is expected to have team-working capabilities and good communication skills.

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