

3 years PhD position: Development of metal complexes as molecular switches to investigate their bioactivity and mechanism of action

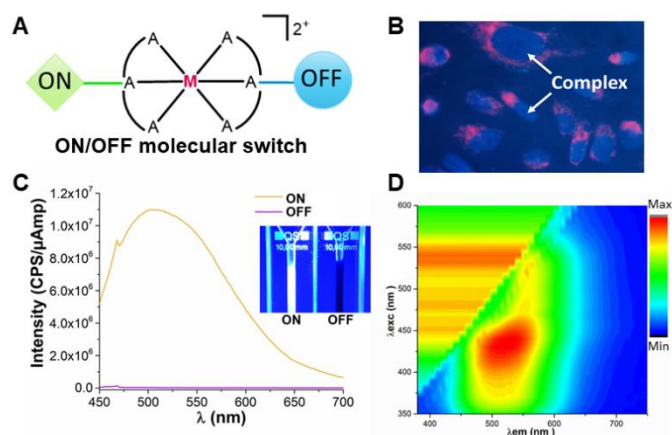
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Keywords: Coordination chemistry; Medicinal chemistry; Optical imaging; Molecular switch.

Description: Numerous metal complexes display high therapeutic potential and their biological activity is tightly correlated to their reactivity in living systems.^[1-4] Hence, the administered complexes are often pro-drugs that metabolize to active species. However, this metabolization can also be a significant source of toxicity and failure in clinical trials. Therefore, drug candidates that can be tracked by imaging and are capable to switch their signal after their bio-transformations would be ideal to understand both their *in cellulo* fate and mode of action, for enabling their rational pharmacomodulation.^[5,6]

The aim of this PhD project is to develop innovative molecular switches to simultaneously track the localization of a series of metal-based drug candidates, and image their bio-transformations, to understand the intricate relationship between their *in cellulo* fate and bioactivity. This project will involve collaborations between a group of coordination chemistry, a group of molecular biologists and a group of theoretical calculations.



Requirements: We are looking for a highly motivated candidate with experience in coordination chemistry and/or organic chemistry. Knowledge in spectroscopic characterizations and good English skills will be highly valued. She/he must demonstrate its ability to work in cooperative environments and be open to work at the chemistry-biology interface.

To apply, send a cover letter, CV, grades obtained in master's degree, and two contact names to:

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Deadline : September 1st 2021

References :

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