Laboratoire Cobra | Chimie organique, Bioorganique, Réactivité et Analyse.

Thomas Poisson, PhD.
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Ph.D. Thesis Offer

Title: "New electrochemical formation of silyl radicals, their use in basic transformations and mechanism understanding"
Position: Full Doctorate (number of position available: 1)
Keyword: Radical Chemistry; Synthetic methodology; Electrochemistry; Reaction Mechanism

Nowadays, the quest for new methodologies and reagents to efficiently synthesize valuable silicon containing building block is very important and very appealing for scientists. In addition, the understanding of these transformations is still important to push the contemporary boundaries of knowledge. Indeed, only few scientific reports discussed the mechanism of these reactions, hampering their use.
Besides, electrochemistry, although known for years is a powerful tool to develop new transformations, impossible so far. Thanks to the newly developed commercially available set-up, which are worldwide supplied, electrochemistry is in its renewal.
Taking advantage from our expertise and willing to push beyond the boundaries of knowledge in radical chemistry, particularly the silicon radical chemistry, we intend to develop new electrochemical transformations to develop more efficient transformations with a better understanding. The addition of silyl radical, on cyclic, aromatic, and original scaffold has been poorly studied and will be achieved within this project. A strong emphasis will be devoted to the fundamental understanding of the reaction mechanisms to decipher the nature of the reactive radical. These fundamental results will be share with the whole community through publications.
To support this research program, we are looking for an outstanding and highly motivated candidate to pursue his PhD within our group.

Requirement for the position: a Master degree in chemistry.

Laboratory: INSA Rouen, UMR 6014, C.O.B.R.A.
URL: http://www.lab-cobra.fr/?equipe=synthese-de-biomolecules-fluorees

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