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## Ph.D. Thesis Offer

**Title:** "New developments in organofluorine chemistry – toward new photocatalyzed transformations using first row transition metals"

**Position:** Full Doctorate (number of position available: 1)

**Keyword:** Organofluorine Chemistry - Photocatalysis - Organometallic reagents - First row transition metals - Synthetic methods

Nowadays, organofluorine chemistry is a research field of prime importance as fluorine-containing molecules are compounds of interest for agrochemicals, pharmaceuticals and material science. Consequently, the quest for new methodologies and reagents to efficiently introduce various fluorinated groups to access a panel of fluorine-containing building blocks renders this blooming research area very appealing for scientists.

Besides, photocatalysis recently appeared as a powerful tool to develop new transformations impossible so far. However, one of the main current drawbacks of this impressive synthetic tool is the use of expensive and poorly abundant noble transition metal, like Ir or Ru for instance.

Aiming at taking benefit from our home expertise and willing to push beyond the boundaries of knowledge in organofluorine chemistry, we intend to develop new photocatalyzed transformation to develop transformation impossible to date. In that purpose we want to focus on the use of first transition metal based photocatalysts. The combination of light and the newly developed catalyst will allow the development of new transformations. Note that the newly developed transformations will be quickly tested in flow chemistry.

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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