

**Exploring a new reaction that combines
a well-chosen ketone and two molecules of an aldehyde**

Keywords: Ketones, Aldehydes, Reformatsky reaction, Organometallic Chemistry, Mechanistic studies.

Supervisor(s): Yvan Six		Laboratory:
Phone: +33 (0)1 6933 5979	E-mail: yvan.six@polytechnique.edu Web page : https://yvansix7.wixsite.com/sixteam	LSO

Project:

We very recently disclosed an intriguing transformation. It takes place starting from a certain α -bromo ketone and an aldehyde, in the presence of zinc. Instead of the expected Reformatsky reaction product, a more complex compound is obtained, having incorporated two molecules of the aldehyde partner. This appears to be unprecedented.

We are going to investigate the mechanism of this reaction (monitoring by NMR spectroscopy, etc.), try and understand why it occurs (special case linked to the choice of the reactants or presence of a reactive contaminant in the zinc dust used?), explore its scope and see if we can extend it.

Required skills: The student should have a strong background in Organic Chemistry, a high level of motivation, good communication skills and the ability to work within a team.

Funding: A grant application can be submitted to the LabEx Charm₃at.

References:

See our Laboratory web page: <https://yvansix7.wixsite.com/sixteam>