

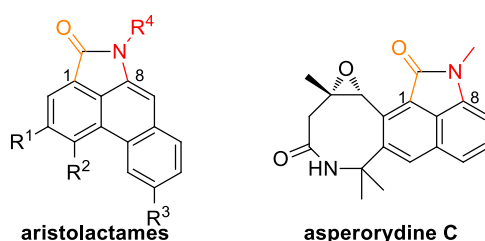
C8- amination of naphthalenes *via* C-H activation: application to natural product synthesis

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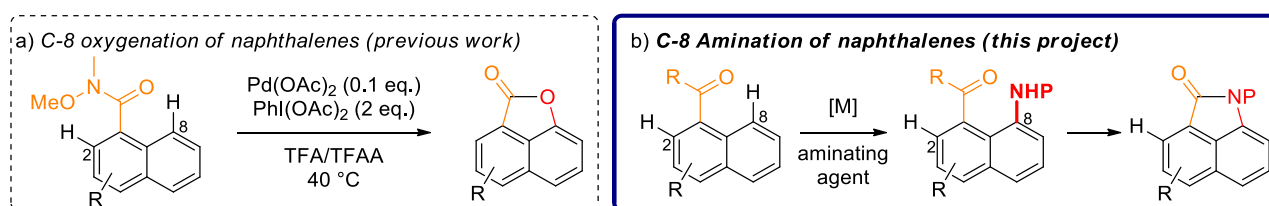
Subject:

Naphtholactam are aromatic skeletons present in a lot of natural products exhibiting interesting biological properties (Scheme 1).¹ In the literature, syntheses of these compounds have been scarcely reported and the employed strategies required a large number of steps. Our strategy would be a late stage functionalization of the C8 position *via* C–H activation thanks to a carbonyl derivative as directing group which would also be the precursor for the lactam ring.



Scheme 1. Natural products bearing a naphtholactam skeleton

In this context, we recently disclosed palladium catalyzed C8-functionalizations of naphthalenes (Scheme 2.a).² Based on this work, we are aiming at finding conditions to introduce a nitrogen in C8 position (Scheme 2.b). This strategy would allow a very fast access to natural products such as aristolactames which could be then biologically tested.



Scheme 2. Objective of the internship: C8-amination of naphthalenes

The applicant must have a strong background in organic chemistry and good laboratory practice. This project is funded by the ANR.



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² a) J. Garrec, M. Cordier, G. Frison, S. Prévost, *Chem. Eur. J.* **2019**, *25*, 14441. b) C. Berrou, S. Prévost, *Adv. Synth. Catal.* **2021**, *363*, 4091.