Green and Stereoselective Synthesis of New imidazolones as Potential Candidates for Crop Protection.

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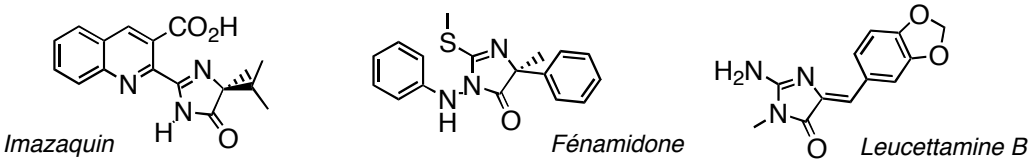
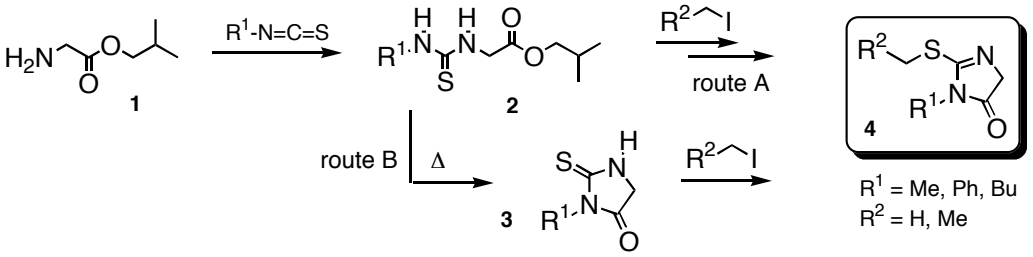
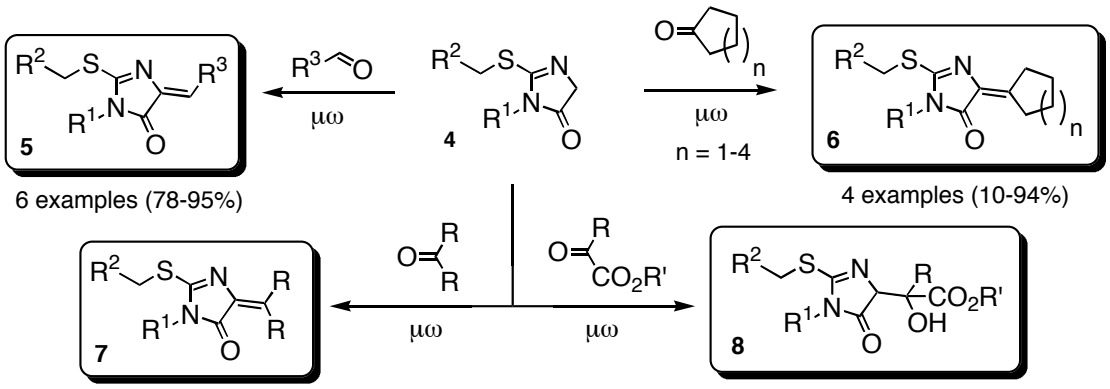
The imidazolone ring often appears as the core structure in many drug substances, covering a wide range of agropharmaceutical activities (the *Imazaquin*® of Cyanamid as herbicide and the *Fenamidone*® of Rhone-Poulenc Agro as fongicide). Moreover, the imidazolone derivative (*Leucettamine B*) isolated from the marine sponge *Leucetta microraphis* showed an important role as mediator of inflammation.



In continuation of our interest in imidazolone chemistry[1], we have studied the reactivity of 2-alkylsulfanyl 3,5-dihydro-imidazol-4-ones **4** with various aromatic aldehydes, cycloketones and actived ketones using solvent-free reaction conditions assisted by focused microwave technology[2] (in the Synthewave® 402 reactor).



We have also developped two suitable, efficient and cheap preparations of **4** with high yields and also the stereoselective synthesis of precursor of *Leucettamine B*[3].



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1 J.M. Lerestif, J. Perrocheau, F. Tonnard, J.P. Bazureau, J. Hamelin, *Tetrahedron*, **1995**, *51*, 6757.

2 J.R. Chérouvrier, J. Fraga-Dubreuil, J.P. Bazureau, *Green Chemistry*, **2000**, *2*, 226.

3 J.R. Chérouvrier, J. Boissel, F. Carreaux, J.P. Bazureau, *Green Chemistry*, **2001**, under press.