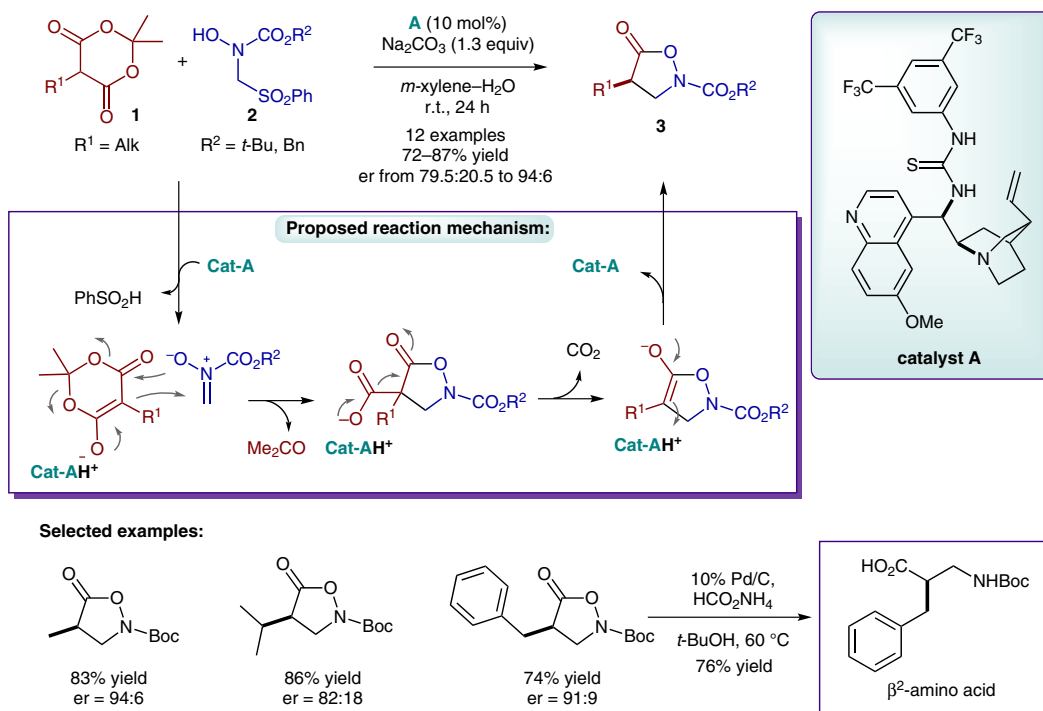


T. TITE, M. SABBAB, V. LEVACHER, J.-F. BRIÈRE\* (NORMANDIE UNIVERSITÉ, UNIVERSITÉ DE ROUEN, AND CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE, MONT SAINT AIGNAN, FRANCE)

Organocatalysed Decarboxylative Protonation Process from Meldrum's Acid: Enantioselective Synthesis of Isoxazolidinones

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## Isoxazolidinones via Asymmetric Decarboxylative Protonation



**Significance:** An organocatalytic approach for the synthesis of isoxazolidinones **3** is reported by the Brière group. The methodology is a tandem process promoted by the quinidine-derived catalyst **A**. An initial formal [3+2]-cycloaddition process couples 5-substituted Meldrum's acids **1** and nitrones derived from sulfonamides **2**. Then, an asymmetric decarboxylative protonation takes place via a putative stepwise mechanism. The desired products are generally obtained with good yields and with modest to good enantioselectivities.

**Comment:** Asymmetric protonation reactions are a fascinating topic in organic chemistry. In this area, decarboxylative protonation processes have attracted the interest of the scientific community due to the elegant in situ generation of the reacting enolate upon release of carbon dioxide (see Review below). Based on this concept, the authors present a novel straightforward approach to the synthesis of isoxazolidinones, which are useful precursors for β<sup>2</sup>-amino acids.

**Review:** J. Blanchet, J. Baudoux, M. Amere, M.-C. Lasne, J. Rouden *Eur. J. Org. Chem.* **2008**, 5493–5506.

**SYNFACTS Contributors:** Benjamin List, Mattia Riccardo Monaco  
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