Efficient oxidative cleavage of α-ally and α-benzyl *N*-acyl cyclic amines and application to synthesis of quaternary amino acids

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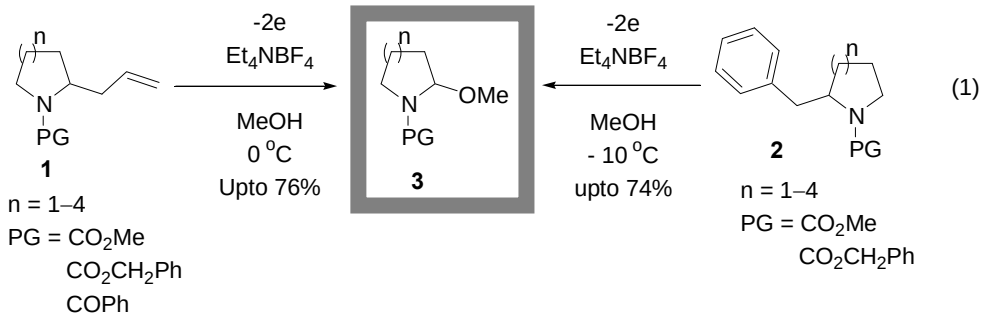
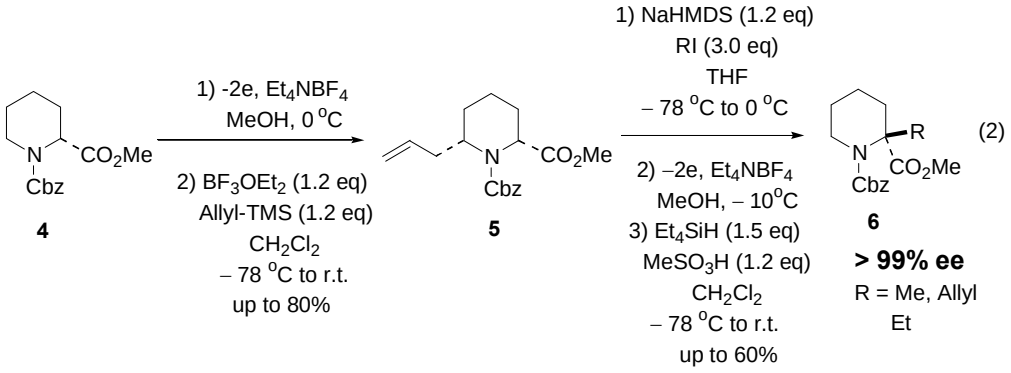
While C-C bond forming reactions using electrochemical oxidation as a key step has received considerable attention and success,[1] its only recently that anodic oxidation has been applied in C-C bond cleavage reaction as in the case of *N*-acyl-α-amino acids and *N*-acyl-β-hydroxyl amines. We set out to explore the potential of this technique to C-C bond cleavage of *N*-acyl-α-ally cyclic amines **1** and *N*-acyl-α-benzyl cyclic amines **2**. As postulated, electrochemical oxidation in methanol proceeded to afford the corresponding α-methoxylated derivatives **3** with moderate to high yields (Eq. 1). We then used this anodic de-allylation reaction as a key step in the synthesis of optically active *N*-acylated α-alkyl-α-amino acid esters **6** with up to 99% ee (Eq. 2).[2]





＜References＞

1) O. Onomura, P.G. Kirira, T. Tanaka, S. Tsukada, Y. Matsumura, and Y. Demizu, *Tetrahedron* **2008**, *64*, 7498-7503.
2) P.G. Kirira, M. Kuriyama, O. Onomura, *Chem. Eur. J.* **2010**, in press.

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