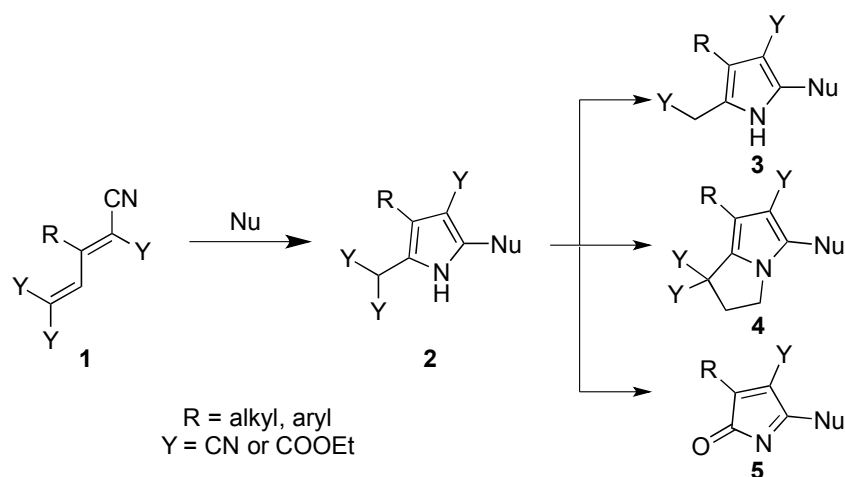


The simple and versatile synthesis of tetrasubstituted pyrroles and subsequent functionalization

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The cycloaddition–retroelectrocyclization reaction is a useful reaction for the conversion of electron-rich alkynes and electron-poor alkenes into buta-1,3-dienes.¹ We have recently shown that this reaction is more widely applicable to ester-substituted alkenes to afford compounds of type **1**.² In this presentation we will describe how compounds of type **1** can be efficiently and rapidly converted into highly substituted pyrroles **2**. Further one-step functionalization allows isolation of substituted pyrroles of type **3** and **4** and 2*H*-pyrrol-2-ones **5**, the latter of which exhibit strong chromophoric behaviour and a bathochromic shift upon protonation.



1. T. Michinobu, J. C. May, J. H. Lim, C. Boudon, J.-P. Gisselbrecht, P. Seiler, M. Gross, I. Biaggio, F. Diederich, *Chem. Commun.* **2005**, 737–739.

2. T. A. Reekie, E. J. Donckele, L. Ruhlmann, C. Boudon, N. Trapp, F. Diederich, manuscript submitted.