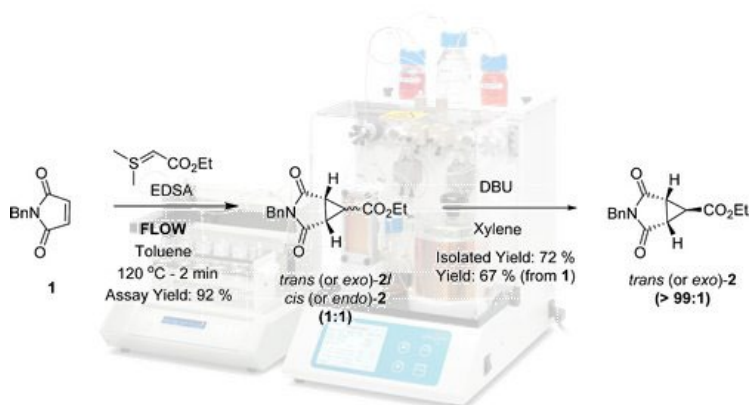


Publication 43: Developing Multi-kilogram Continuous Flow Cyclopropanation



Following reaction optimisation using a FlowSyn, a convenient and high yielding flow cyclopropanation process using EDSA following by a base mediated isomerisation was developed to afford trans-(dioxo)-azabicyclo[3.1.0]-hexane carboxylate

Efficient controlled mixing was shown to be a key requirement to obtain a high yield and minimise side-product formation.

In this way, the reaction yield was increased significantly under flow conditions in comparison to batch and the robustness and reproducibility of the process was demonstrated by the synthesis of this key intermediate on a multi-kilogram scale.

[F. G. Buono, M. C. Eriksson, B.-S. Yang, S. R. Kapadia, H. Lee, J. Brazzillo, J. C. Lorenz, L. Nummy, C. A. Busacca, N. Yee, C. Senanayake, *Org. Process Res. Dev.*, 2014, 18 \(11\), pp 1527–1534](#)