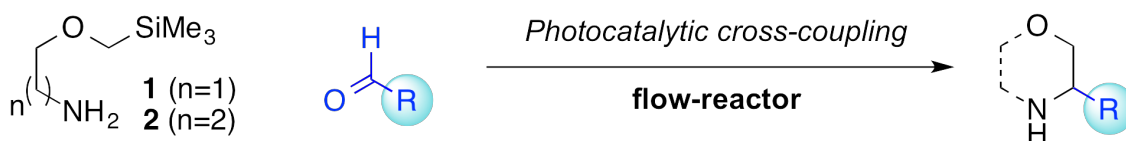


Continuous Flow Synthesis of Morpholines and Oxazepanes with Silicon Amine Protocol (SLAP) Reagents and Photoredox Catalysis

M. K. Jackl¹

¹ETH Zürich

A protocol for the synthesis of various substituted morpholines, oxazepanes, thiomorpholines and thiazepanes has been developed by photocatalytic cross-coupling of easily accessible silicon amine protocol (SLAP) reagents and commercially available aldehydes under continuous flow conditions. This reaction tolerates a variety of functional groups and gives access to a tin-free alternative to the related SnAP (tin amine protocol) chemistry.



To establish the utility of this method, a total of 32 examples with different substitution patterns and a variety of functional groups were prepared. The advantage of the continuous flow setup for reaction scale up was demonstrated by reaction on a 5.0 g scale simply by expanding the reaction time.

