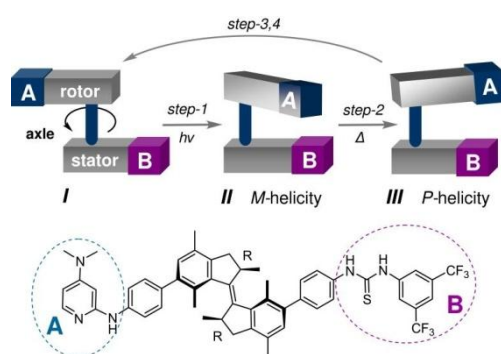


# Towards new photoswitchable organocatalysts

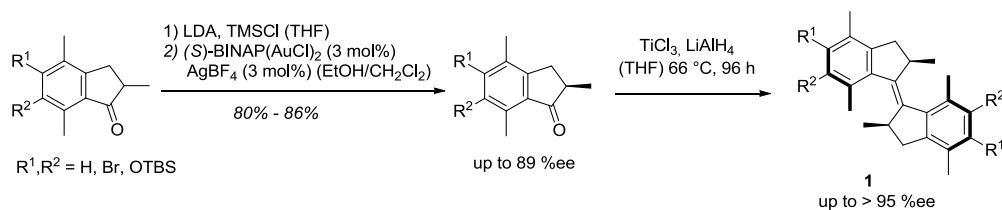
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Photoswitchable catalysis is a fast growing field, which uses photochemical isomerisations to alter the result of chemically catalysed reactions.<sup>1</sup> In 2011 it was shown by our group that by using a molecular motor, it is possible to control stereochemical outcome of reaction by external triggers. The molecular motor was used to control the orientation of two catalytic moieties (A and B) of an organocatalyst by external triggers in order to produce the racemate or each individual enantiomer of a reaction product in a well-controlled fashion.<sup>2</sup>



For the development of new molecular motor-based chiral organocatalysts it is necessary to establish a short and efficient route for the main precursors **1** by an general asymmetric synthesis, which is presented in this contribution. The asymmetric synthesis could be accomplished by a combination of catalytic enantioselective protonation of silyl enol ether with cationic gold(I) complex and a McMurry reaction, where a further amplification of chirality takes place to give the main precursors **1**.<sup>3</sup>



These substituted motors **1** will be used for the synthesis of chiral catalysts with an intrinsic addressable function that allows dynamic control of selectivity or activity by a non-invasive external signal.

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