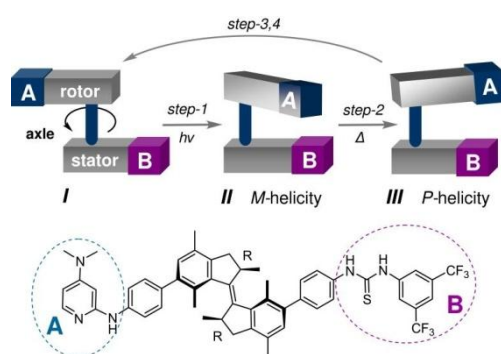


Towards new photoswitchable organocatalysts

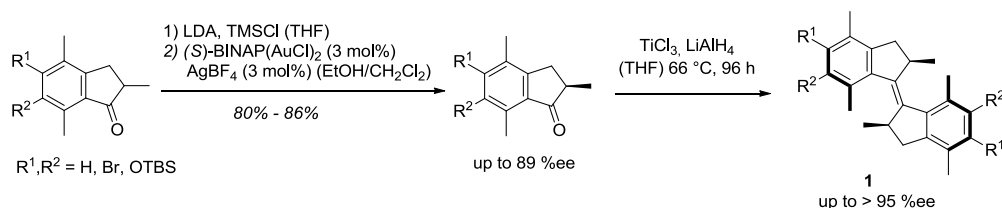
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Photoswitchable catalysis is a fast growing field, which uses photochemical isomerisations to alter the result of chemically catalysed reactions.¹ In 2011 it was shown by our group that by using a molecular motor, it is possible to control stereochemical 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.²



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**.³



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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