Enantioselective Hydroamination of Unactivated Internal Olefins

Selected examples:

Proposed reaction mechanism:

Significance: Previous hydroaminations of alkenes have been achieved with a restricted range of substrates (for example, styrenes or terminal olefins). Here, the authors succeed in asymmetric hydroamination of nonactivated internal olefins. This system provides ready access to various α-branched chiral amines with high enantioselectivities (≥96% ee).

Comment: Electron-rich hydroxylamines are used as aminating reagent to suppress undesired reductions of hydroxylamines. The late-stage modification of pharmaceutical compounds is also demonstrated.

SYNFACTS Contributors: Hisashi Yamamoto, Yasushi Shimoda

SyNfacts 2015, 11(9), 0946 Published online: 18.08.2015
DOI: 10.1055/s-0035-1560099; Reg-No.: H09815SF