ABSTRACT

In order to extend the earlier work in the group,¹ we endeavored to explore the ability of the terpene-derived pyridine *N*-oxide organocatalyst (+)-METHOX to catalyze allylations of non-aromatic, α,β -conjugated aldehydes with allyltrichlorosilane in CH₃CN. This thesis describes the synthesis of 5 novel homoallylic alcohols of high enantioselectivities (\leq 96% ee).

R H + SiCl₃
$$\xrightarrow{\text{METHOX} \atop 10 \text{ mol\%}}$$
 OH R $^{\text{OH}}$ $^{\text{CH}_3\text{CN}}$ $^{\text{CH}_3\text{CN}}$ $^{\text{CH}_3\text{CN}}$ $^{\text{CS}}$ $^{\text{CS}}$ 96% ee

(+)-METHOX

¹ Malkov, A. V.; Bell, M.; Castelluzzo, F.; Kočovský, P. Org. Lett. 2005, 7, 3219