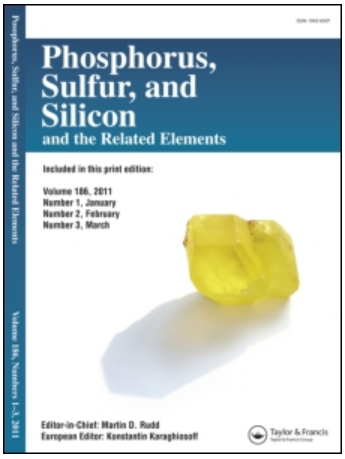

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KINETIC RESOLUTION OF RACEMIC FERROCENYL PHOSPHINE COMPOUNDS USING OPTICALLY ACTIVE CYCLIC SELENOXIDES AS OXIDANT

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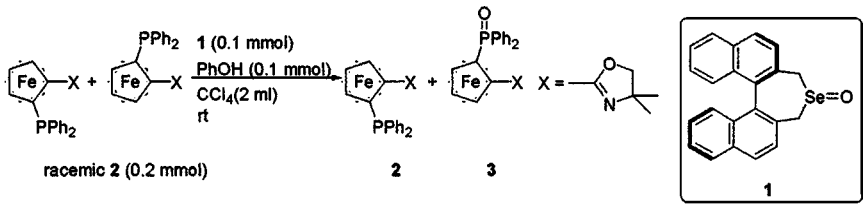
Chiral phosphines and phosphine oxides are useful ligands or reagents in asymmetric synthesis. Organoselenium (IV) compounds such as selenoxides are known to be reagents for oxidation of phosphines to phosphine oxides. This fact prompted us to examine kinetic resolution of racemic phosphine compounds using optically active cyclic selenoxides as oxidant. Treatment of a racemic oxazolinylferrocenylphosphine **2** with optically active selenoxide **1** (0.5 equiv) and phenol (0.5 equiv) in CCl_4 at rt afforded the corresponding phosphine oxide **3** in 52% yield with 13% ee. The unreacted phosphine **2** was also recovered in 48% yield with 29% ee. Although the kinetic resolution proceeded so far with moderate enantioselectivity, this reaction may provide a novel synthetic method for chiral phosphine compounds after further development.



SCHEME 1

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