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Oxazine derivatives

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09-239

[HCo(CO)₄]-Catalyzed Three-Component Cycloaddition of Epoxides, Imines, and Carbon Monoxide: Facile Construction of 1,3-Oxazinan-4-ones. —

An efficient three-component reaction of imines, epoxides and carbon monoxide is developed using HCo(CO)₄ as in situ generated catalyst from Ph₃Si-Co(CO)₄ and MeOH. A range of 1,3-oxazine-4-ones with different substitution patterns is obtained in good yields. — (LIU, L.; SUN*, H.; Angew. Chem., Int. Ed. 53 (2014) 37, 9865-9869, http://dx.doi.org/10.1002/anie.201403998; Dep. Chem., Nankai Univ., Tianjin 300071, Peop. Rep. China; Eng.) — Mais

$$\begin{array}{c} \text{(II), (III)} \\ \text{Ph} \\ \text{N} \\ \text{R}^{3} \end{array} \begin{array}{c} \text{A), 50°C} \\ \hline [-> \text{c}] [48 \text{ h}] \end{array} \begin{array}{c} \text{R}^{2} \\ \text{Ph} \\ \text{V} \end{array} \begin{array}{c} \text{a} \text{ R}^{2} : -\text{Et}; \text{R}^{3} : -\text{H} & 84\% \\ \text{b} \text{ R}^{2} : -\text{Bn}; \text{R}^{3} : -\text{H} & 55\% \\ \text{c} \text{ R}^{2} \cdot -\text{H}; \text{R}^{3} \cdot -\text{Ph} & 71\% \\ \text{VI} \end{array}$$