

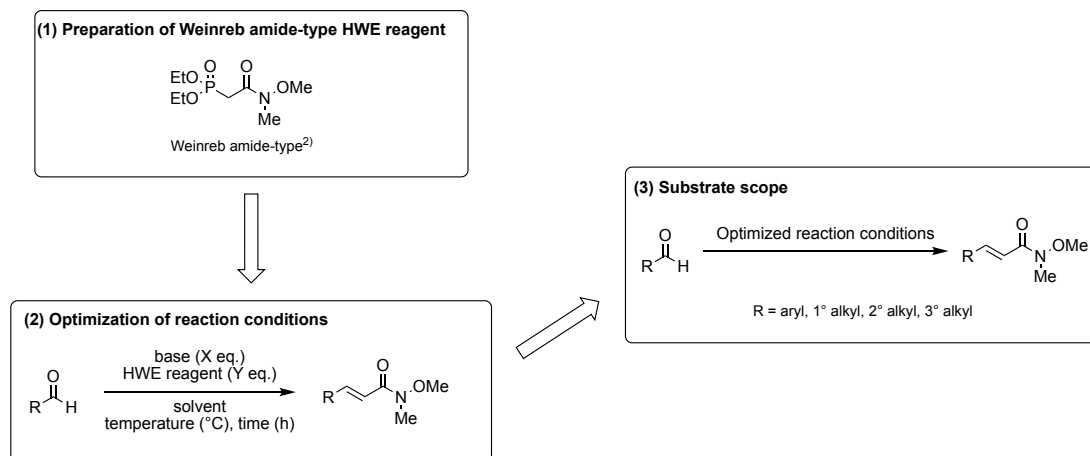
E-Selective Elongation Reaction of Aldehydes by Weinreb Amide-type Horner–Wadsworth–Emmons Reagent

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Horner–Wadsworth–Emmons (HWE) reaction is an often-utilized method in variable syntheses. The products obtained in these syntheses are valuable for functional group conversion reactions. Some researchers reported HWE reagents that facilitate functional transformations. However, only simple optimization of the reaction conditions and structural investigations of a few compounds have been examined in the above reports. Therefore, it is required to develop the HWE reaction facilitating to convert products into related ones easily. We recently accomplished total synthesis of antibiotic tanzawaic acid B¹⁾ through the *E*-selective HWE reaction using the Weinreb amide-type HWE reagent²⁾ developed by Nuzillard *et al.*

As shown in the figure below, we will report three items: (1) a Large-scale synthetic method of the Weinreb amide-type HWE reagent was developed; (2) HWE reaction using the Weinreb amide-type HWE reagent was reinvestigated^{3–5)}; (3) Limitation of the substrate scope was defined, and the effective substrate-conversion using this reagent was clarified.



- 1) Unpublished results.
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