HIGHLY DIASTEREOSELECTIVE MICHAEL ADDITION REACTIONS TO ETHYL 3-TRIFLUOROMETHYLACRYLATE

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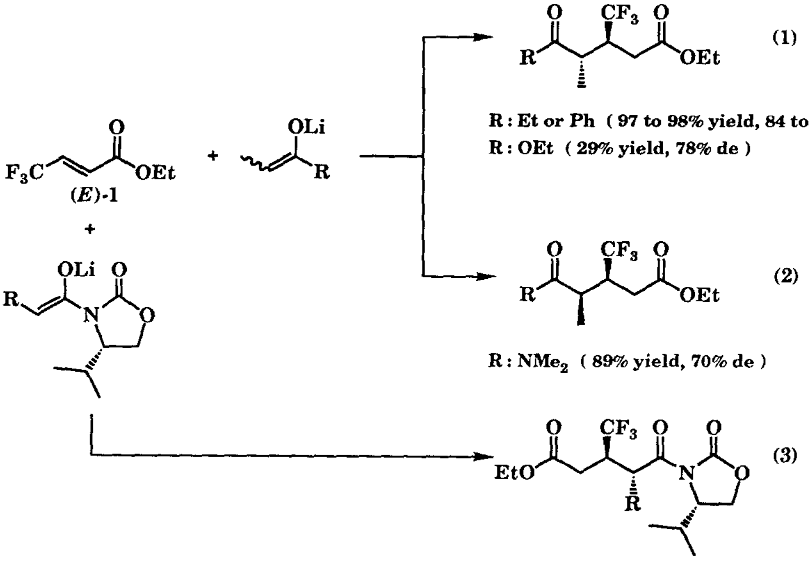
The authors would like to report our recent result on highly diastereoselective Michael addition of enolates derived from ketones, esters, and amides towards ethyl 3-trifluoromethylacrylate **(*E*)-1**. Lithium enolates were found to react with this acceptor smoothly to afford 5-oxoesters with *anti* selective fashon when ketone or ester enolates were employed as a Michael donor (eq 1), while *syn* selectivity was realized with amide enolates (eq 2). On the other hand, reaction with enolates derived from chiral acylated oxazolidinones furnished a single compound out of four possible stereoisomers (eq 3). Determination of relative stereochemistry and the enolate structure dependence of reactivity will be also discussed.



R : Et or Ph (97 to 98% yield, 84 to >98% de)
R : OEt (29% yield, 78% de)

R : NMe_2 (89% yield, 70% de)

R : Me, Et, *i*-Pr, BzlO
(36 to 97% yield, 97 to >98% de)