

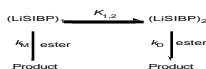
# The Role of Aggregates in Claisen Acylation Reactions of Imidazole, Pyrazole and Thioesters with Lithium Enolates in THF

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## Supporting Information

The following figures are analyzed according to the following scheme in which (LiSIBP) is the formal concentration of p-phenylsulfonylisobutyrophenone, 1.



$$\text{Rate} = k_M [\text{Monomer}] [\text{Ester}] + k_D [\text{Dimer}] [\text{Ester}] \quad (1)$$

$$\text{Rate} / [\text{Dimer}] [\text{Ester}] = k_M [\text{Monomer}] / [\text{Dimer}] + k_D \quad (2)$$

A similar analysis applies to 4 and the ratio [Monomer]/[Tetramer]. Rates used are the initial rates for reaction (first 5-10%).

Figure S1. Reaction of 0.001-0.004M 1 and 0.025M o-cresyl m-chlorobenzoate.  
Equation of line shown:  $(0.179 \pm 0.012)x + 0.00586 \pm 0.00165$  ( $R^2 = 0.969$ ).

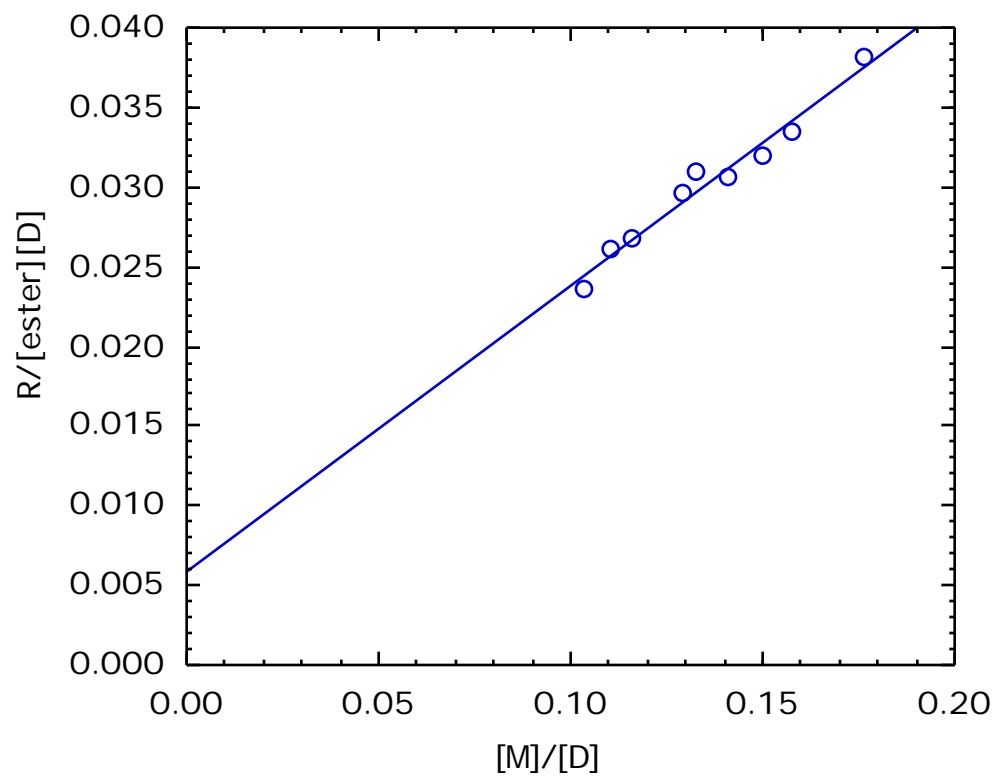


Figure S2. Reaction of 0.0007-0.003M 1 with 0.0204M phenyl thiobenzoate.  
Equation of line shown is  $(0.315 \pm 0.014)x - 0.0060 \pm 0.0026$  ( $R^2 = 0.986$ ).

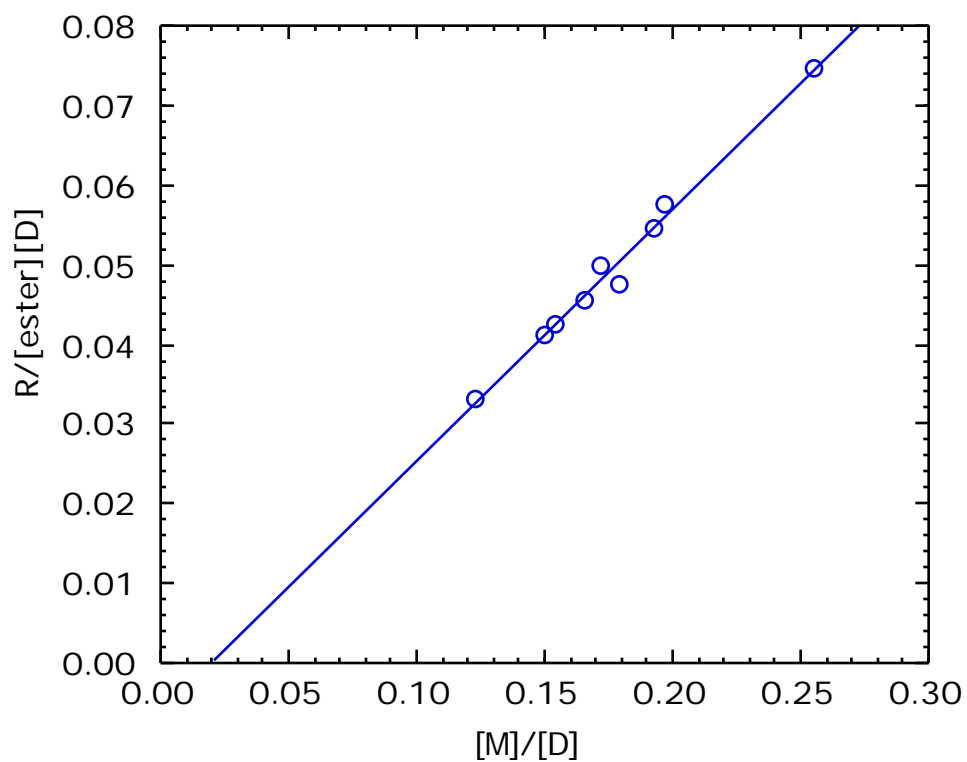


Figure S3. Reaction of 0.002-0.01M 4 with 0.0301M phenyl thiobenzoate. Line shown has the equations:  $(0.138 \pm 0.002)x + 0.0026 \pm 0.0030$  ( $R^2 = 0.998$ ).

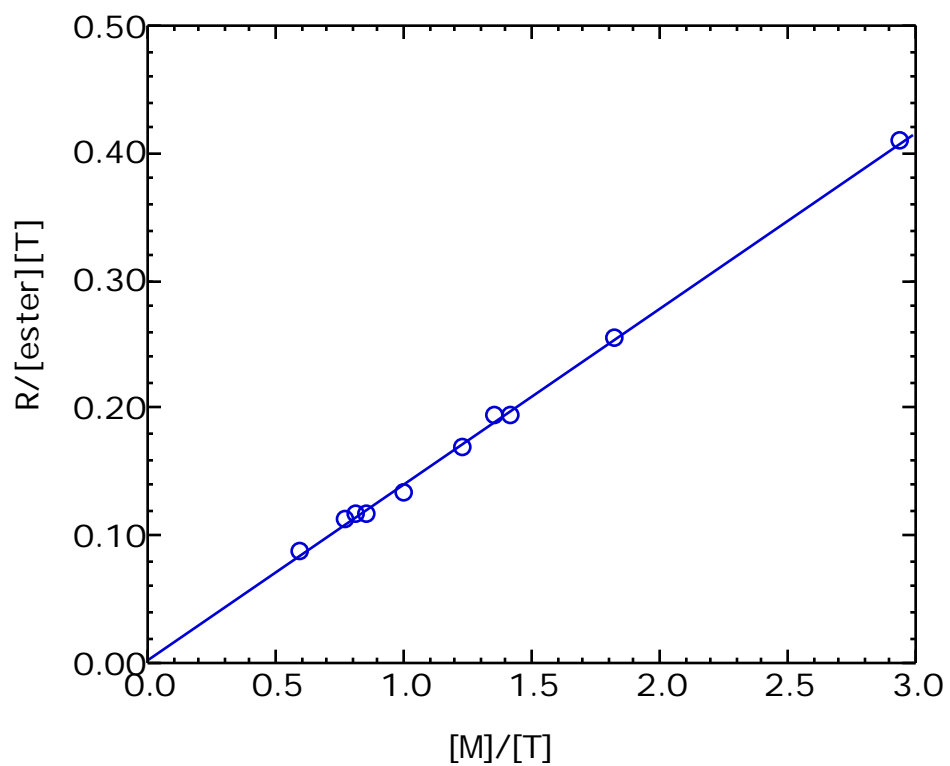


Figure S4. Reaction of 0.0007-0.003M 1 with 0.012M 1-(p-t-butylbenzoyl)imidazole. Equation of line shown is  $(2.97 \pm 0.25)x + 0.037 \pm 0.041$  ( $R^2 = 0.932$ )

