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Enantioselective Baeyer–Villiger Oxidation: Desymmetrization of *Meso* Cyclic Ketones and Kinetic Resolution of Racemic 2-Arylcyclohexanones

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Enantioselective Baeyer–Villiger Oxidation

Desymmetrization of *meso*-cyclic ketones:

Kinetic resolution of racemic cyclohexanones:

Selected examples of desymmetrization:

Selected examples of kinetic resolution:

Significance: The asymmetric Baeyer–Villiger oxidation of prochiral and racemic cyclic ketones effectively synthesized optically active *ε*- and *γ*-lactones. The desymmetrization of racemic cyclohexanones interestingly showed a reversal of migratory aptitude with high levels of enantioselectivity.

Comment: The authors continued their use of chiral *N,N'*-dioxide-metal catalysts for the Baeyer–Villiger oxidation reaction. During the desymmetrization of *meso*-cyclohexanones and *meso*-cyclobutanones, the electronic and steric nature of the substituents appeared to have no effect on enantioselectivity; the opposite was true for the kinetic resolution of racemic cyclohexanones.

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