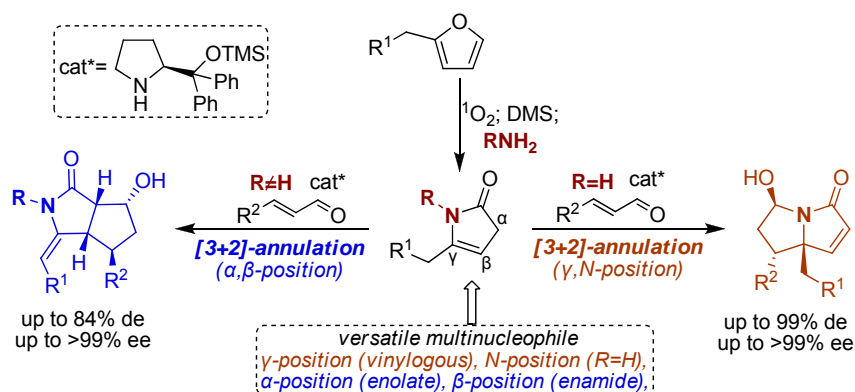


ORGANOCATALYTIC [3+2]-ANNULATIONS OF β,γ -UNSATURATED- γ -LACTAMS WITH α,β -UNSATURATED ALDEHYDES

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Novel asymmetric formal [3+2]-annulations of γ -alkyl- β,γ -unsaturated- γ -lactams (prepared by photooxygenation of simple furans [1]) with α,β -unsaturated aldehydes, catalyzed by a LUMO-lowering organocatalyst have been disclosed. These site-selective cyclizations (dependent on the substitution pattern of the nitrogen) afford chiral bicyclic γ -lactams bearing up to four newly formed stereocenters with significant levels of diastereo- and enantioselectivity [2].



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