Studies in our group have shown that α’-oxy enones react in the presence of Brønsted base catalysts with 3-substituted oxindoles, cyanoesters, 5H-oxazol-4-ones, 1H-imidazol-4-(5H)-ones and azlactones to give the corresponding 1,5-dicarbonyl Michael adducts with a fully substituted carbon center in high enantioselectivity. For example, the reaction between azlactones 2 and enone 1 is efficiently promoted by catalyst C1 to led, after desilylation, to the corresponding products 3 with good yields and ee’s. In each case, reactions proceed with high site selectivity and no products from reaction at the C2-position of the azlactone ring are observed.\(^1\)

Besides their utility for the installation of aldehyde and ketone functionality, α’-oxy enones, through simple oxidative cleavage of the ketol moiety in the resulting adducts, act as α-β-unsaturated carboxylic acid surrogates for which successful methodologies are notably deficient.