

# The Unique Abilities of MAP Catalysts for Olefin Metathesis

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"Third generation"  $M(NR)(CHCMe_2R')(OR)(Pyr)$  (MonoAlkoxidePyrrolide or MAP) species, isolated or prepared *in situ*, can be remarkably active and efficient metathesis catalysts.<sup>1</sup> MAP species have characteristics that make them unique for many metathesis reactions, among them *Z*- and enantioselective ring-opening/cross-metatheses, *Z*-selective ROMP to give *cis,syndiotactic* polymers, ethenolysis of internal olefins such as oleates, *Z*-selective coupling of terminal olefins, *Z*-selective cross coupling of terminal olefins. *Z*-selective syntheses of large rings such as Epothilone C and Nakadomarin A, and *Z*-selective ethenolysis of *E/Z* mixtures to give pure *E* isomers.

## References:

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