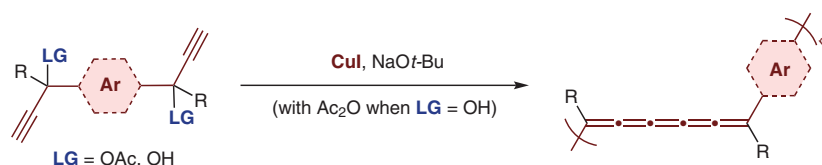
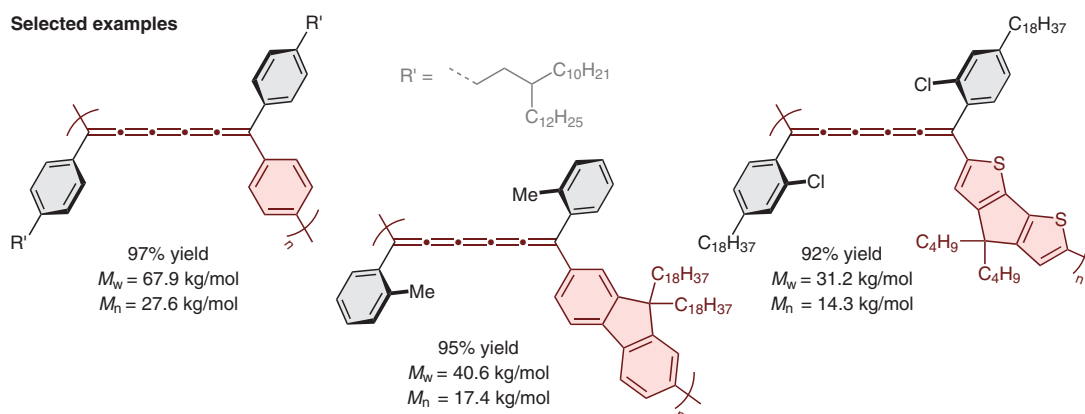


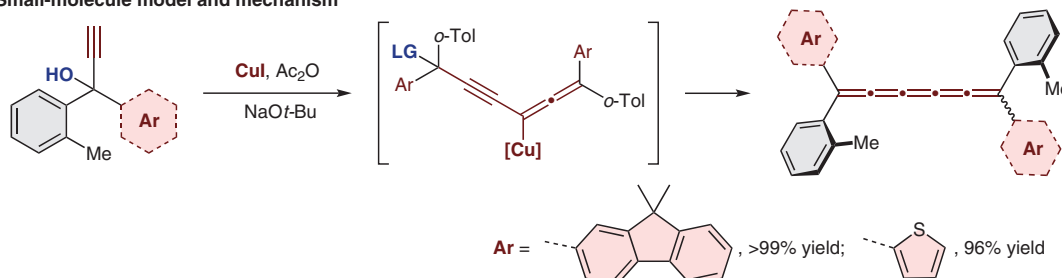
Conjugated [5]Cumulene Polymers from Propargylic Monomers



Selected examples



Small-molecule model and mechanism



Significance: Due to the challenging syntheses and instability of high cumulenes, their functional explorations are limited. Here, a step-growth polymerization method is reported for achieving conjugated high polymers featuring [5]cumulene as a repeat unit.

Comment: To tackle the stability issue, substituents are introduced at the *ortho*-position of the aryl side groups, providing steric protection by adjusting the torsion angles with respect to the main chain. Improved stability, as well as backbone planarity, is observed with the polymers.