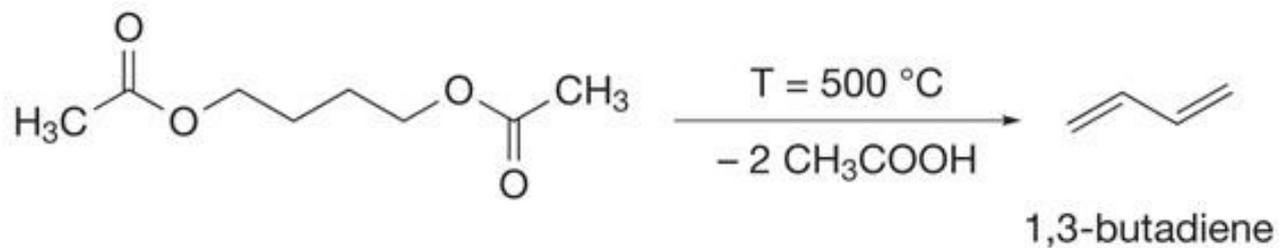
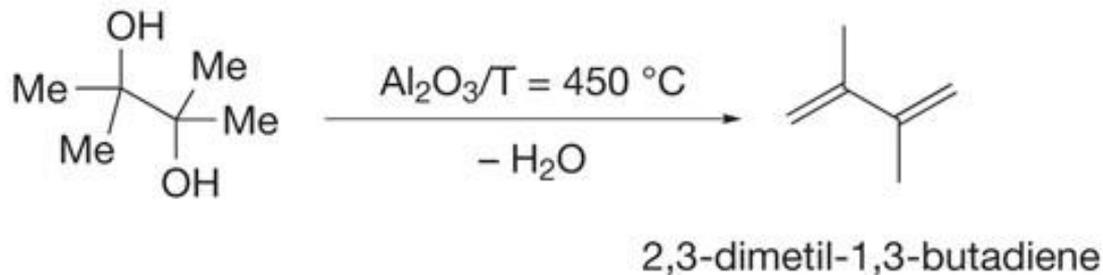


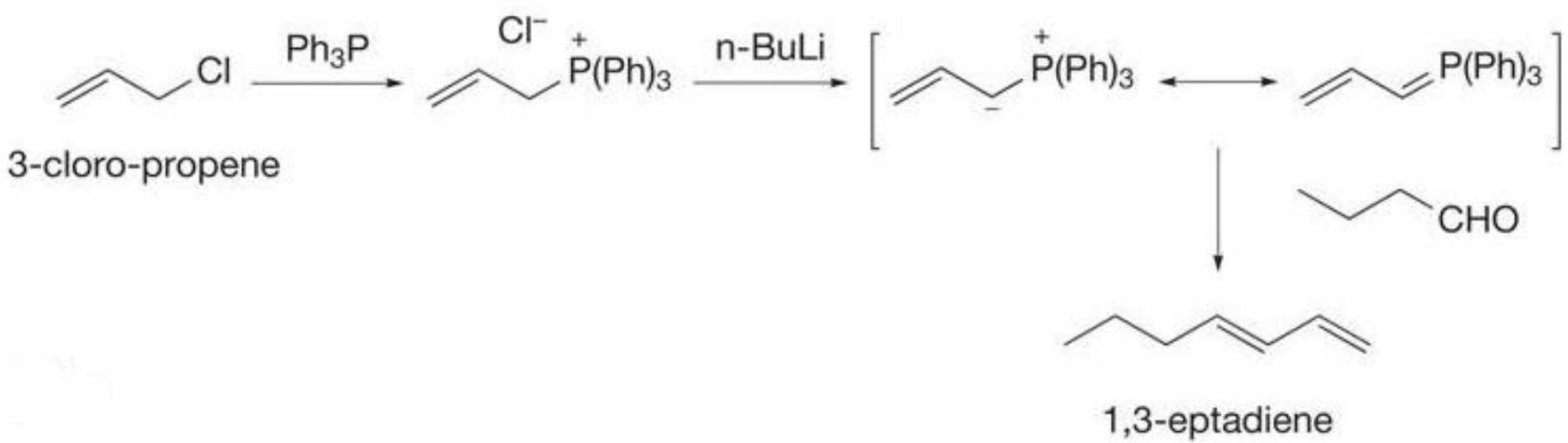
Preparazione industriale dell'1,3-butadiene



Sintesi dieni via eliminazione



Sintesi via Wittig



REATTIVITA'

Reazione dell'1,3-butadiene con un equivalente di acido bromidrico (HBr)

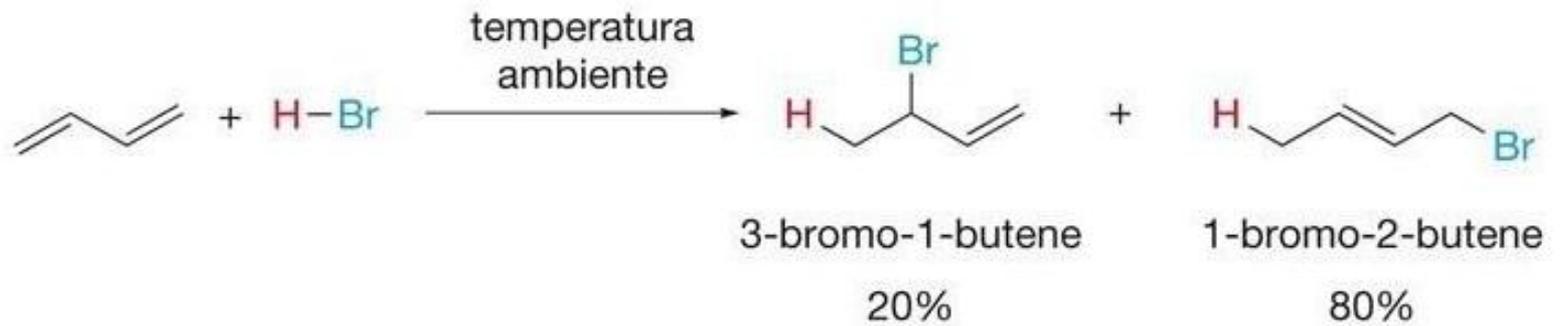
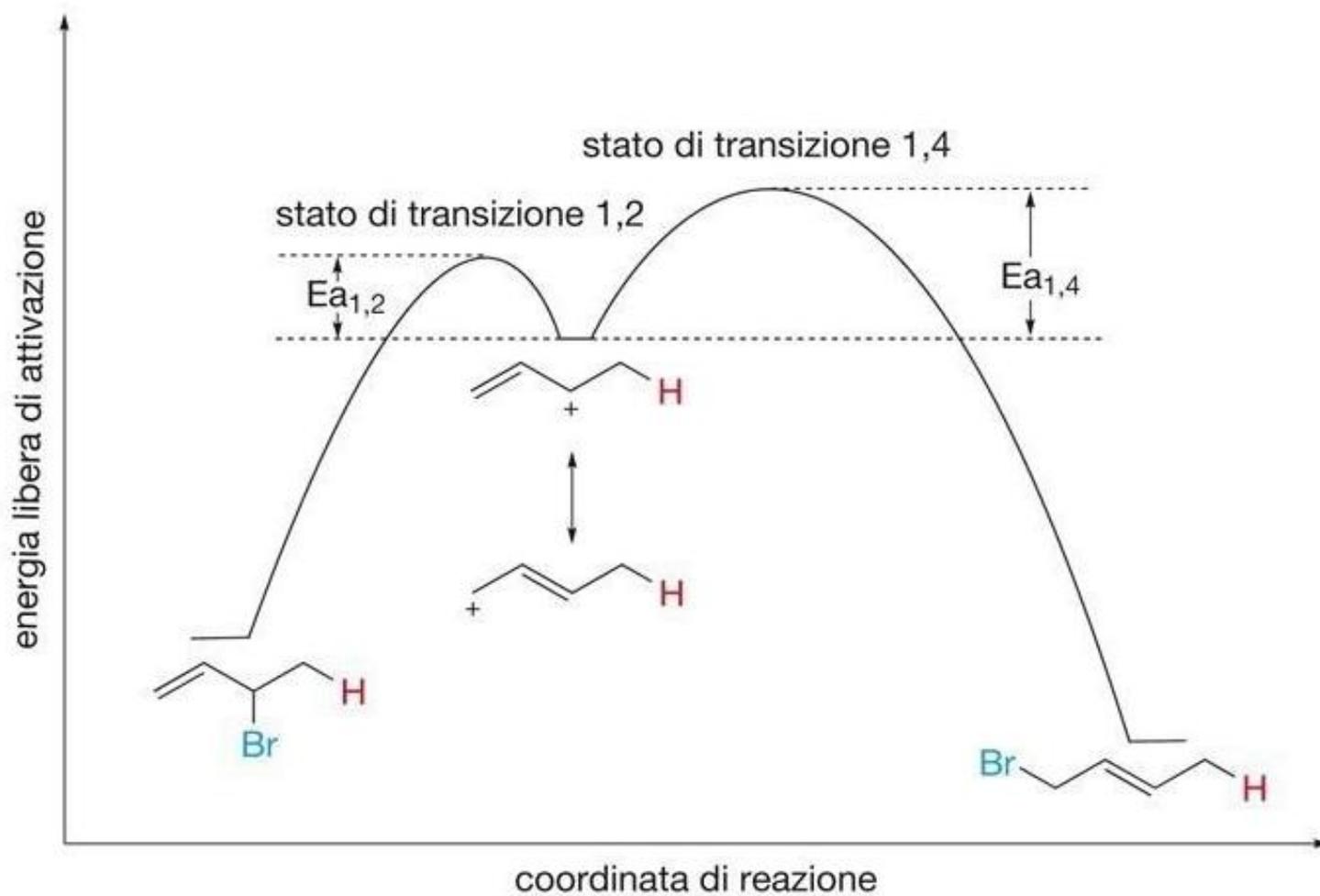
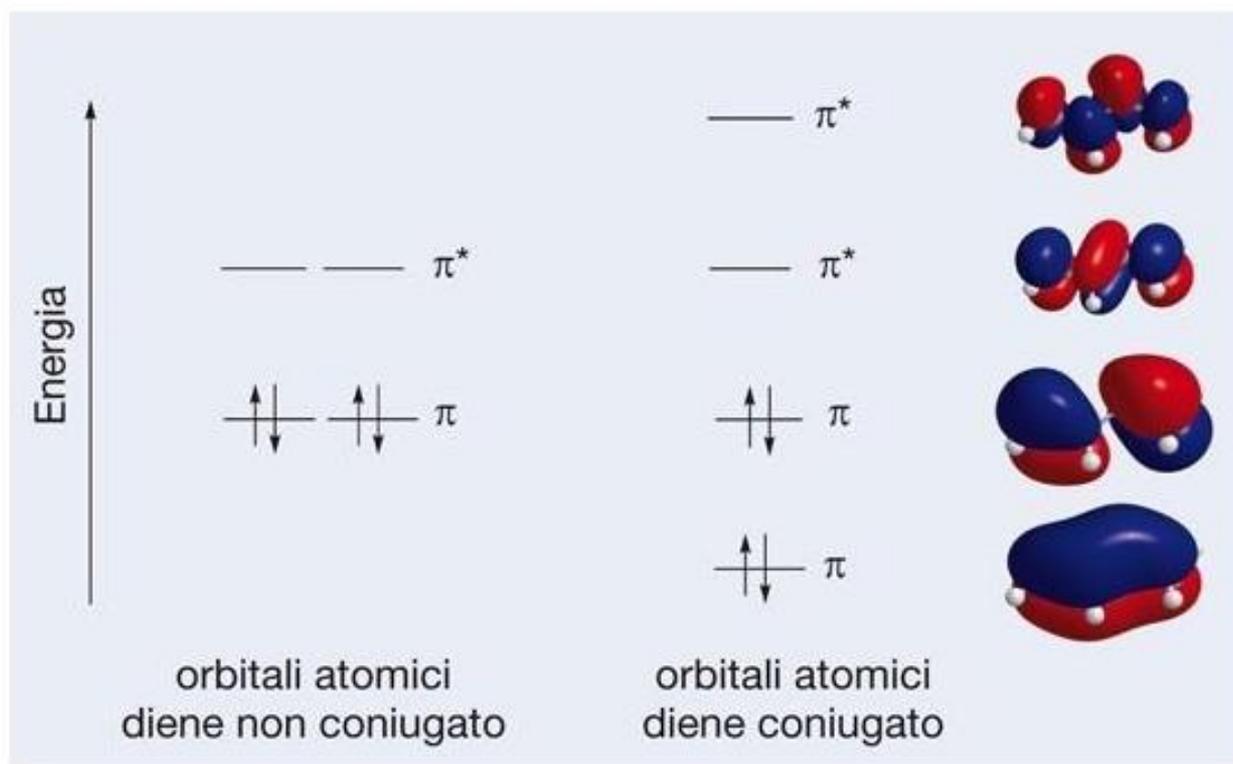


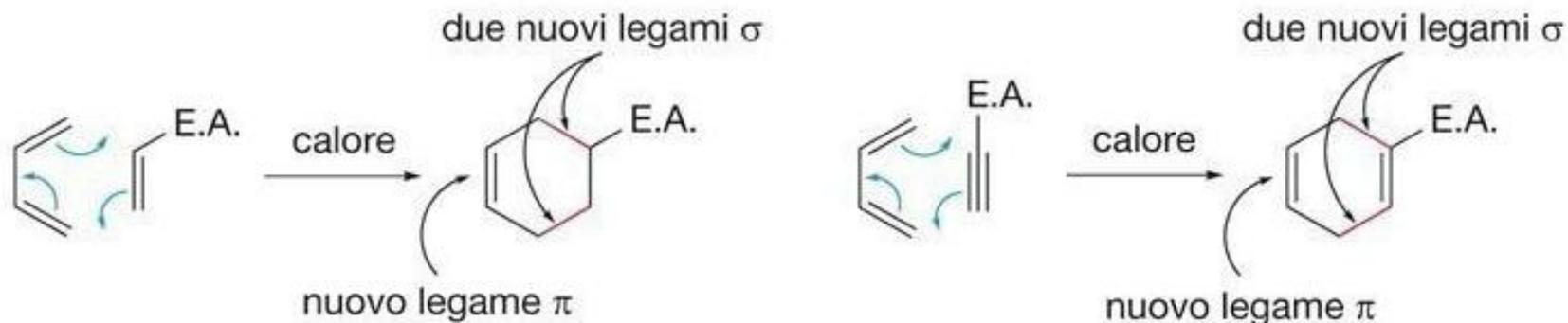
Diagramma di energia relativo al secondo stadio della reazione di addizione di HBr all'1,3-butadiene



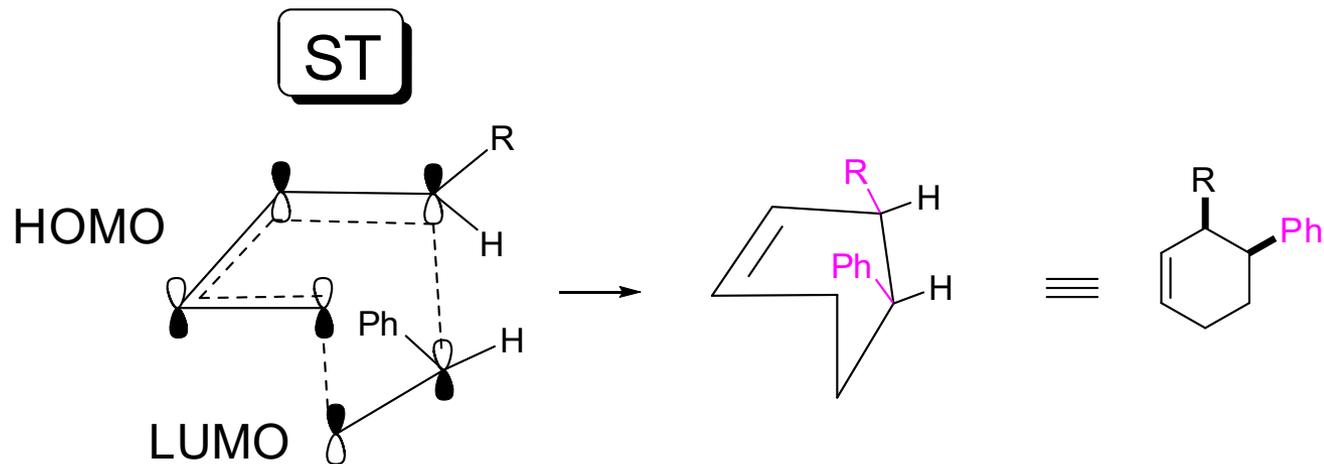
Orbitali del sistema 1,3-butadienico



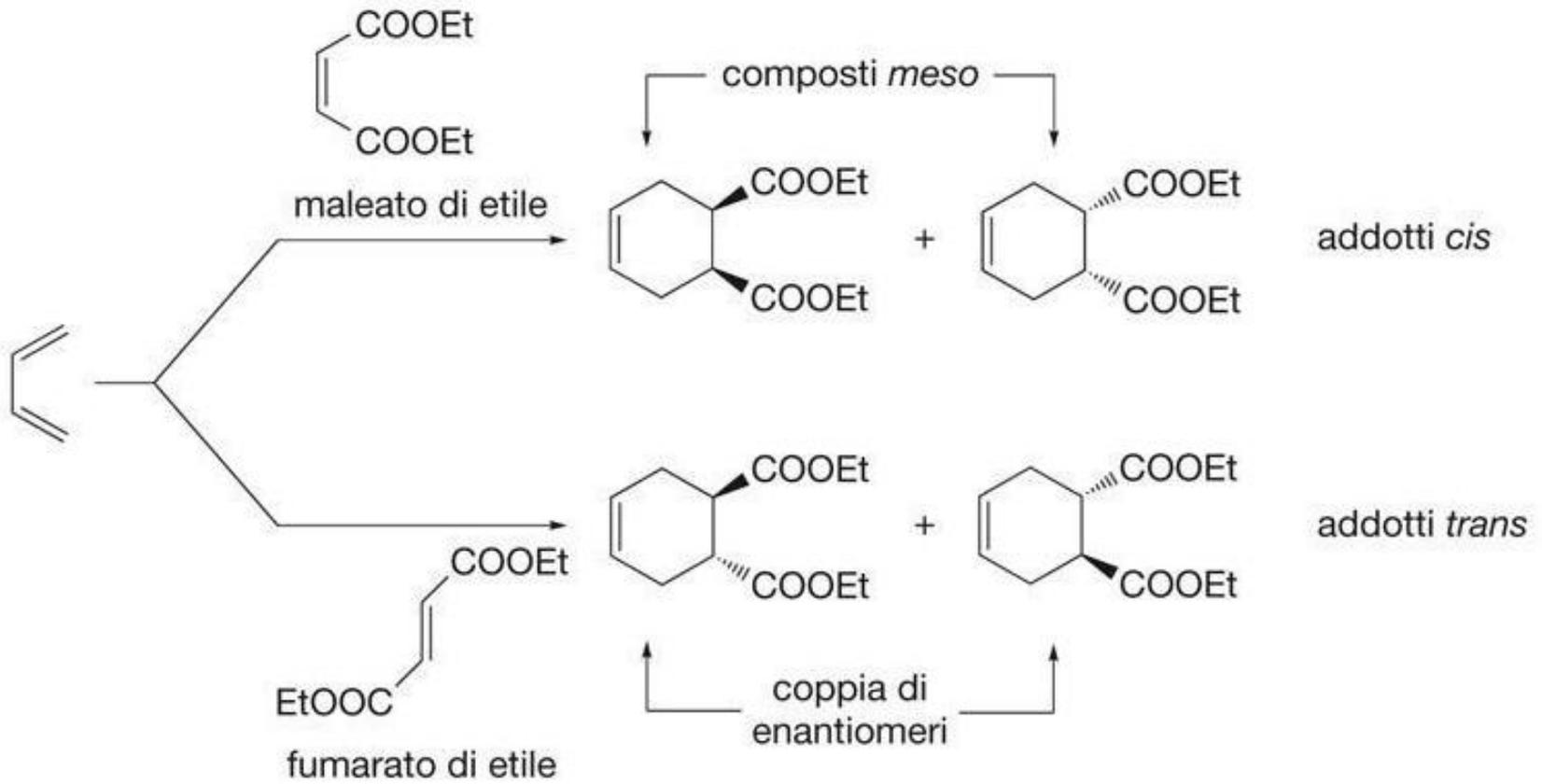
Reazione di Diels-Alder



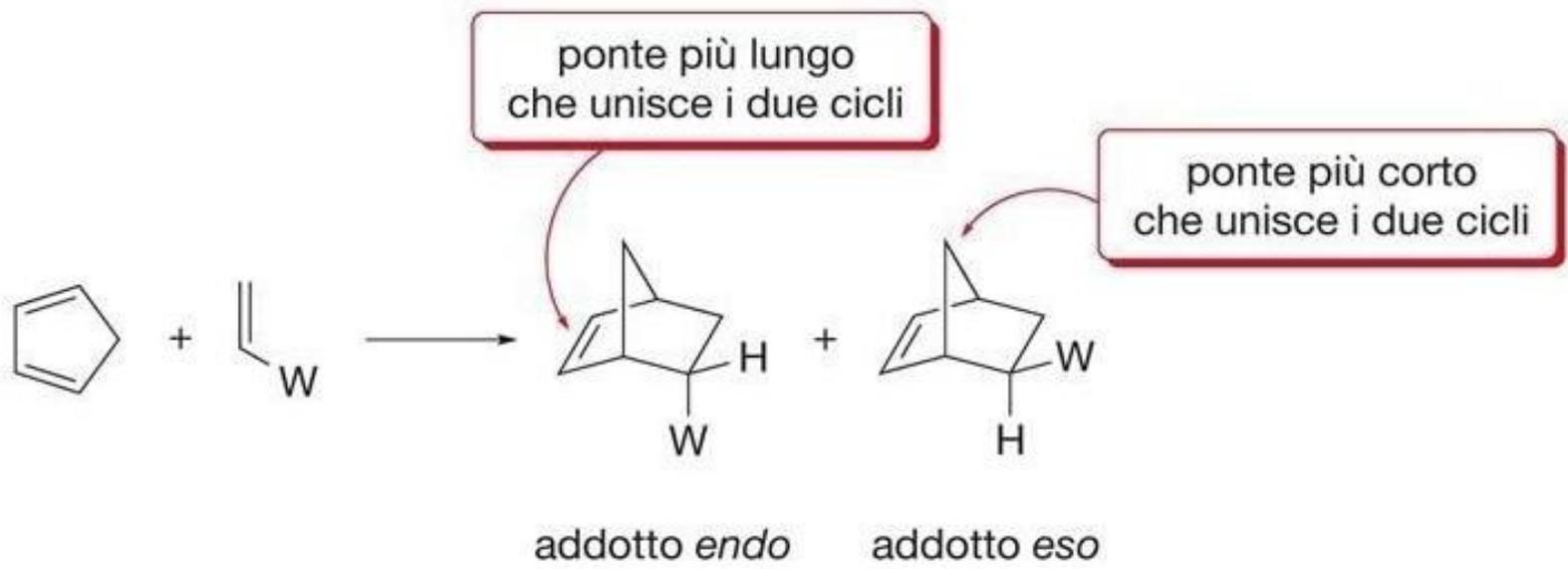
E.A. = gruppo elettronattrattore



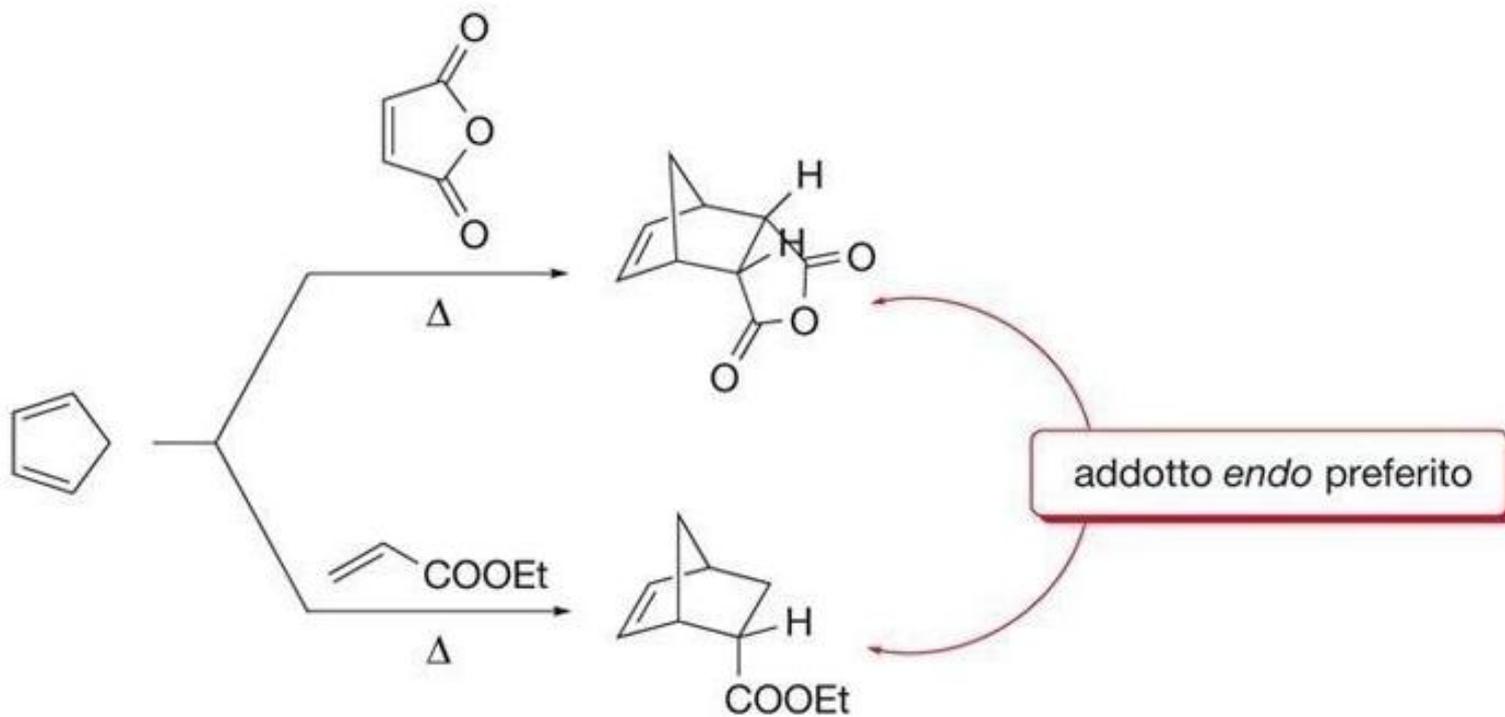
Stereochimica della reazione di Diels-Alder



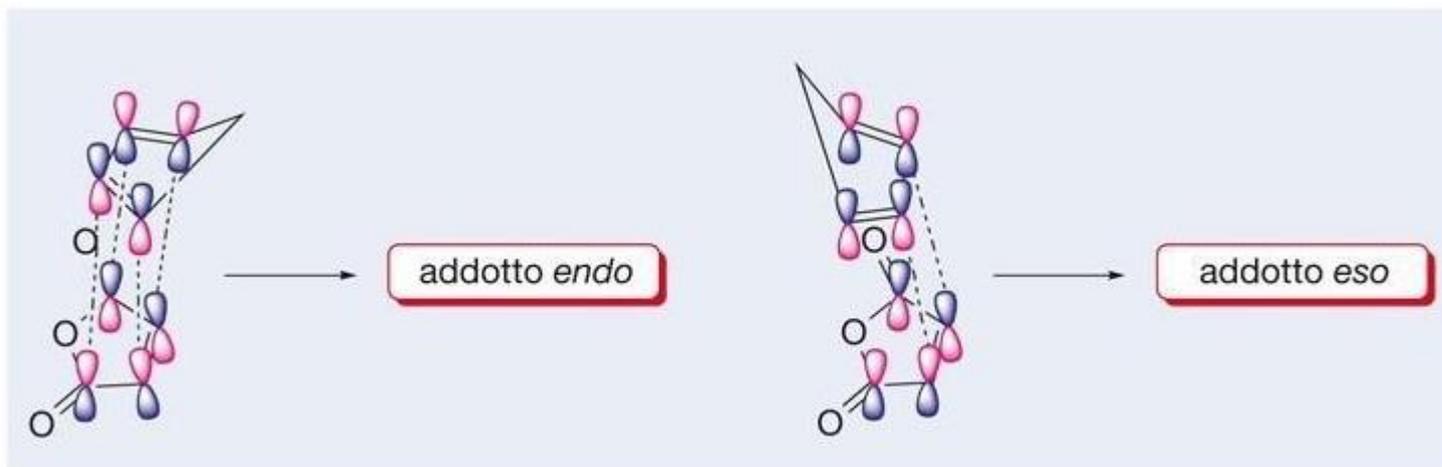
Formazione di sistemi biciclici da dieni ciclici e dienofili sostituiti



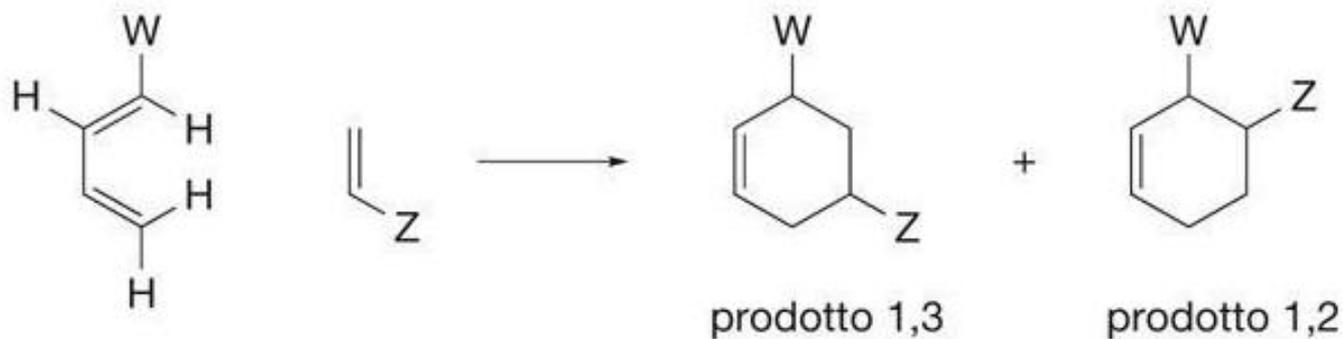
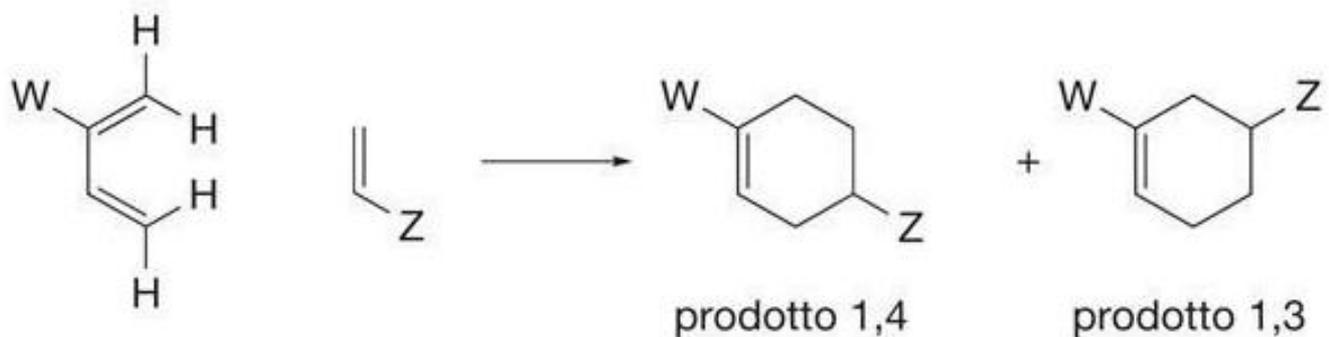
Addotto Endo: il sostituito **W** è in trans rispetto al ponte più corto



Interazione orbitale secondaria: regola dell'endo

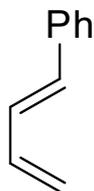


La reazione di Diels-Alder tra dieni e dienofili non simmetrici non porta alla formazione di una miscela di prodotti ma a un prodotto preferenziale

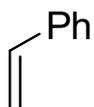


Regioselettività prevista dalla teoria degli orbitali di frontiera (OF)

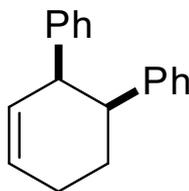
Diene



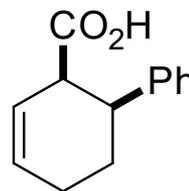
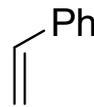
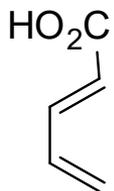
Dienofilo



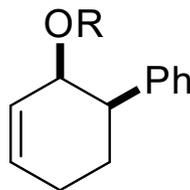
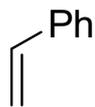
Addotto principale



Ph = gruppo coniugativo



CO₂H = gruppo elettrone attrattore

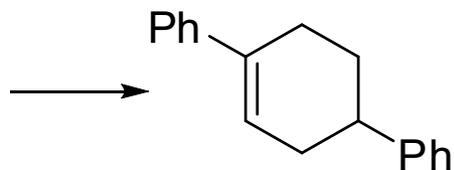
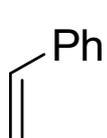
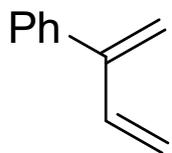


OR = gruppo elettrone donatore

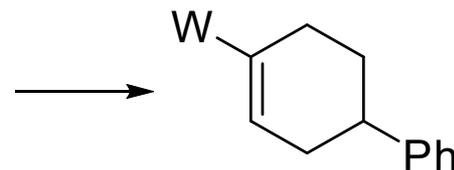
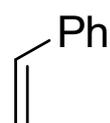
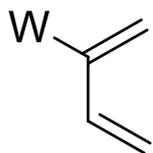
Dieni

Dienofili

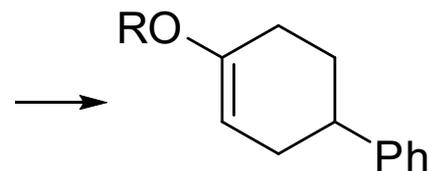
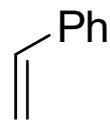
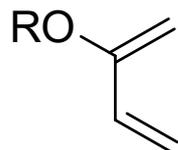
Prodotti prevalenti



Ph = gruppo coniugativo

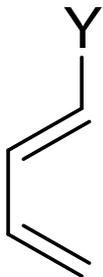


W = gruppo elettrone attrattore



OR = gruppo elettrone donatore

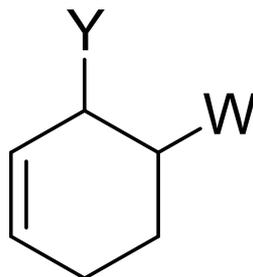
dieni



dienofilo



Composti prevalenti



Y = C, W, D

