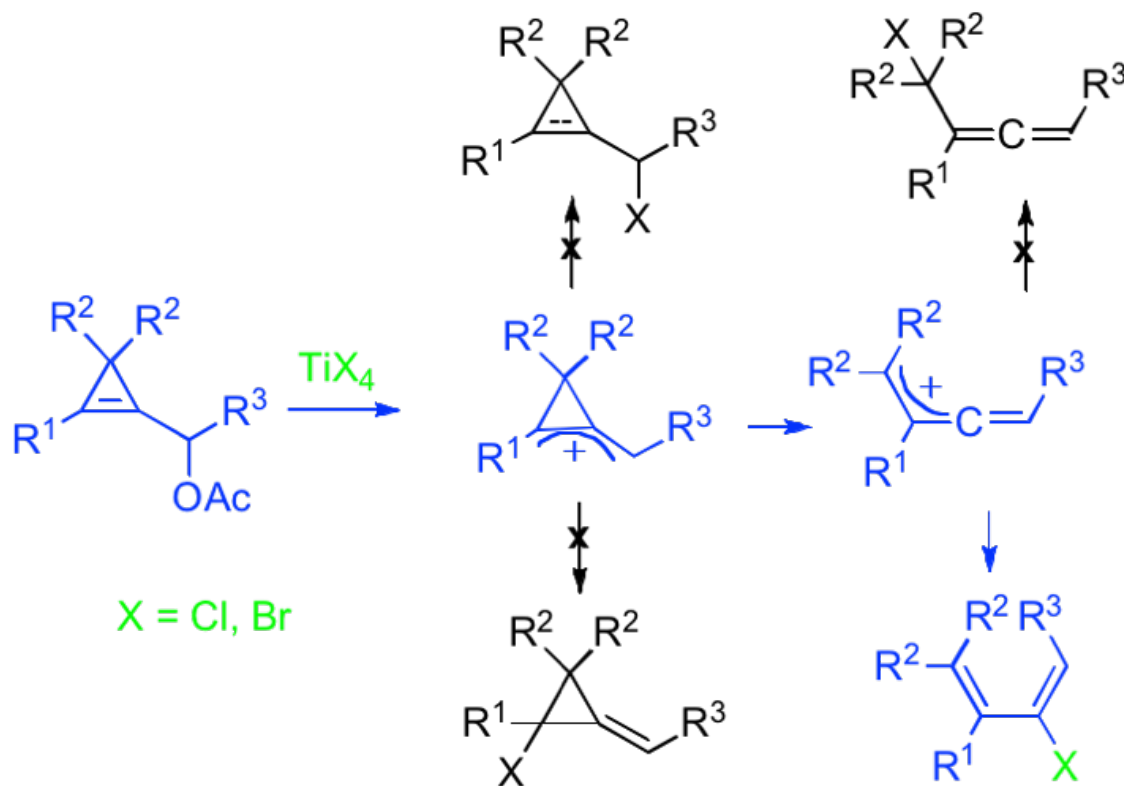


# Cyclopropenes – Strain-driven Lewis-acid Mediated Diene Synthesis

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TiCl<sub>4</sub> and TiBr<sub>4</sub> rapidly transform cyclopropenylmethyl acetates to (E)-halodienes via ring-opening to allyl-vinyl cations. DFT calculations suggest that the regioselectivity of this cationic intermediate by [TiX<sub>4</sub>OAc]<sup>-</sup> is under thermodynamic control, while the stereoselectivity is governed by kinetics.



12 examples - complete regioselectivity and Z-stereoselectivity!



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