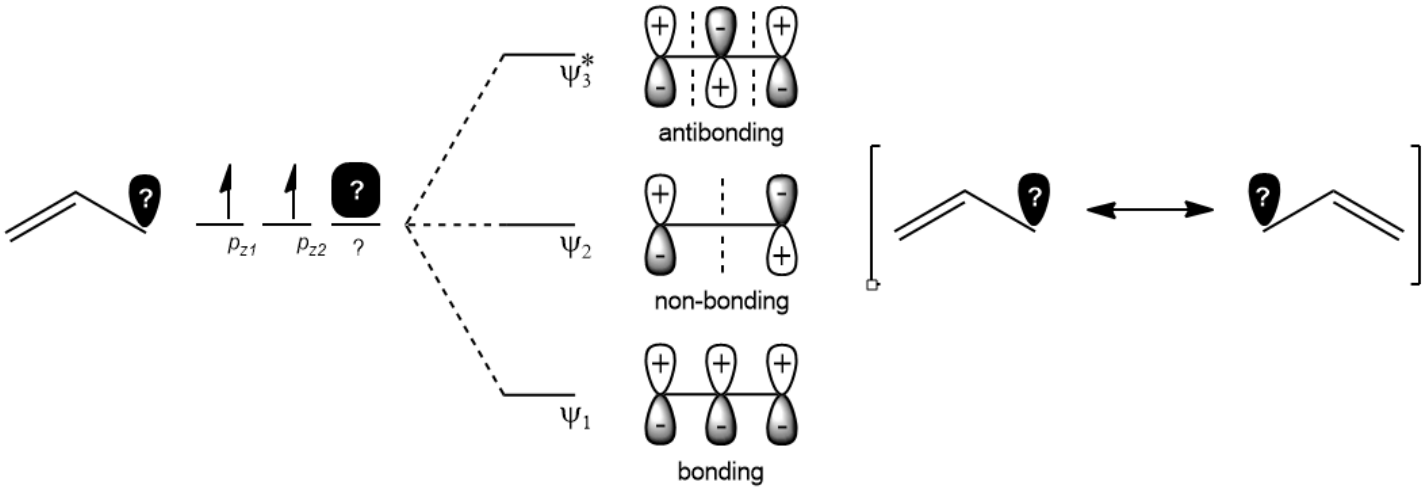
CONCEPT: ORBITAL DIAGRAMS: 3-ATOM ALLYLIC IONS

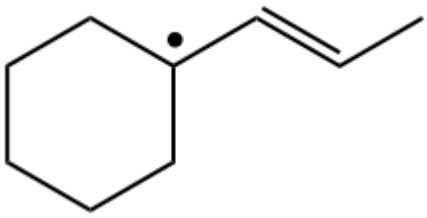
● Allyl positions are famous for their unique ability to *resonate*, reacting in multiple locations.

□ Regardless to the identity of the ion, this reactivity can be explained through allylic molecular orbitals.

EXAMPLE: Simplified LCAO Model of Propenyl Ions



EXAMPLE: Use both resonance theory and MO theory to predict the reactive sites of the following radical.



PRACTICE: Predict the molecular orbitals and identify the HOMO and LUMO orbitals of 1-propenyl cation (allyl cation).