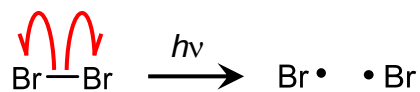
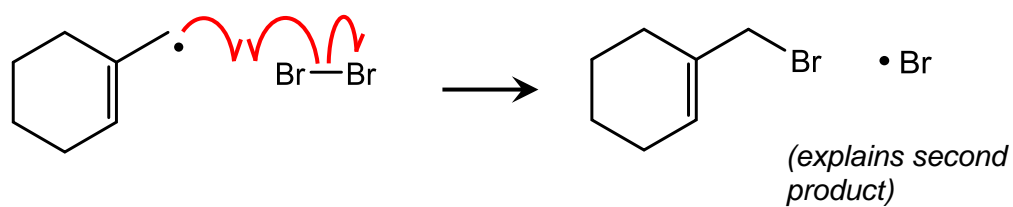
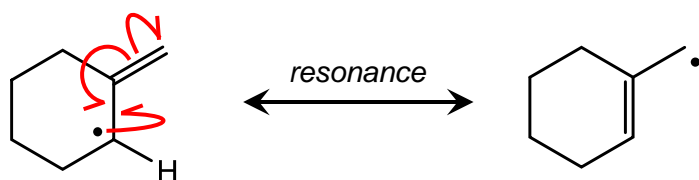
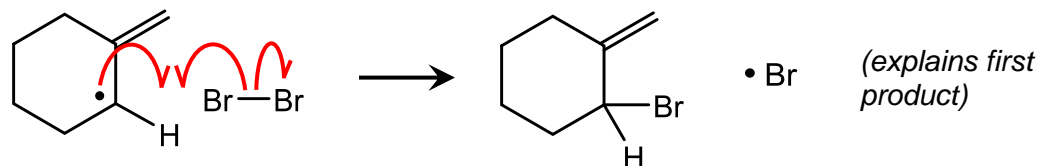
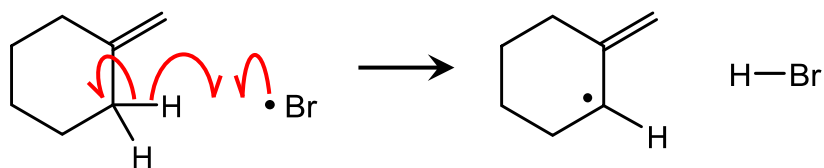


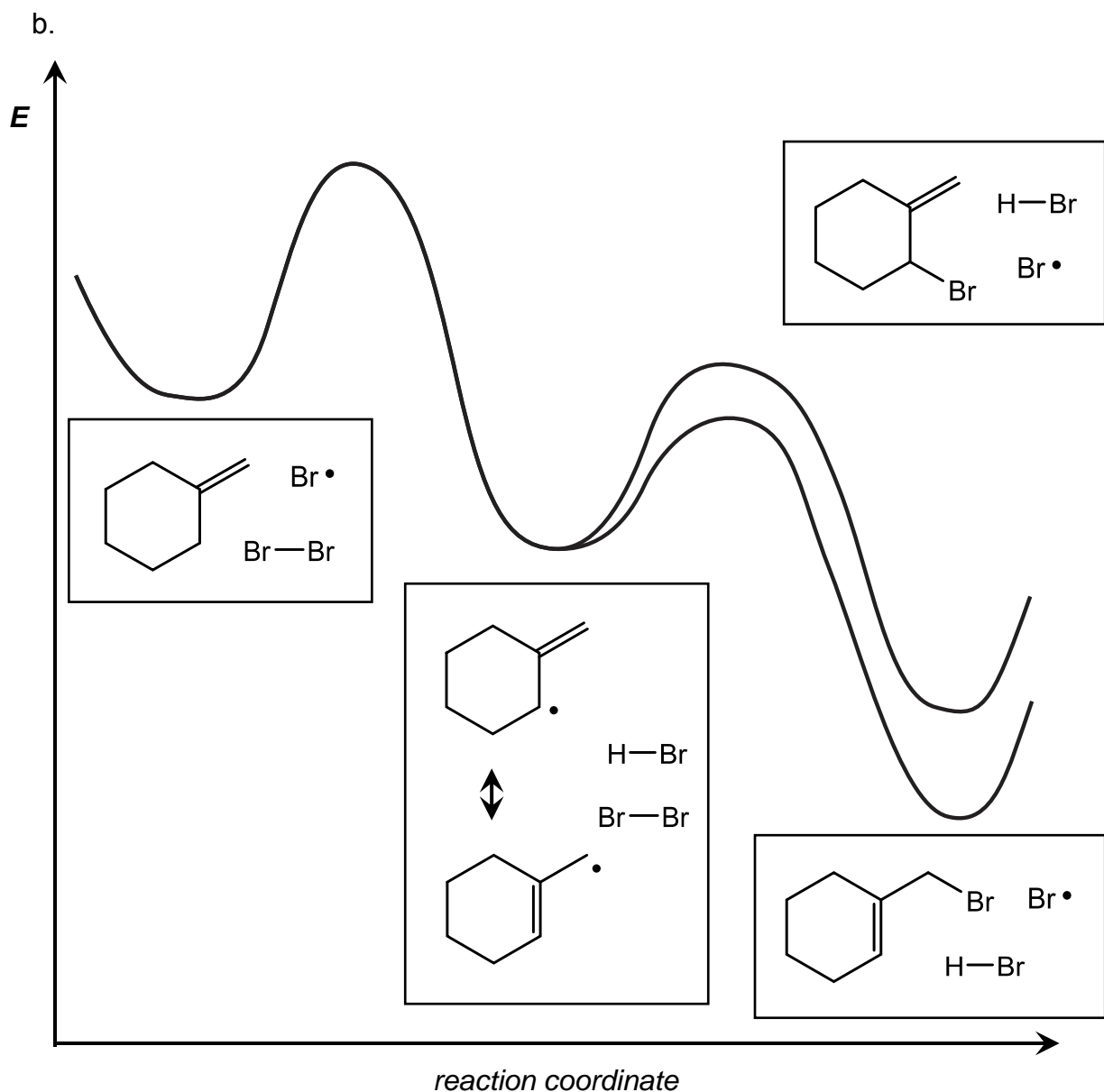
Workshop 21 Solutions
Unpaired Electron Pushing

1. a. Initiation:



Propagation:

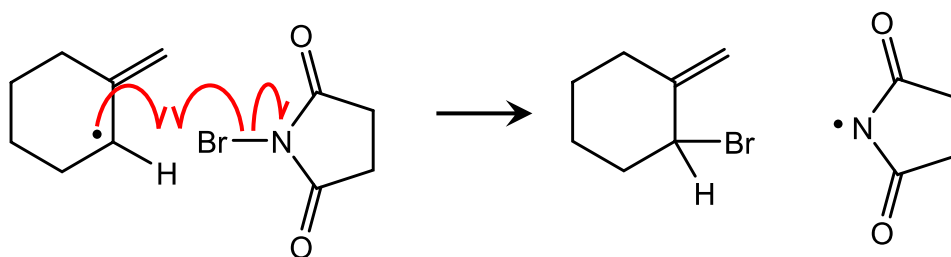
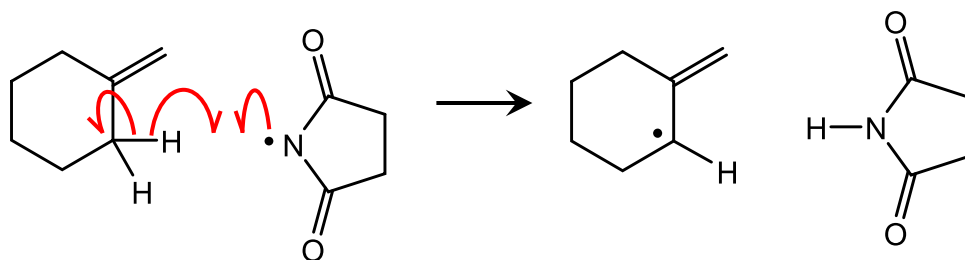
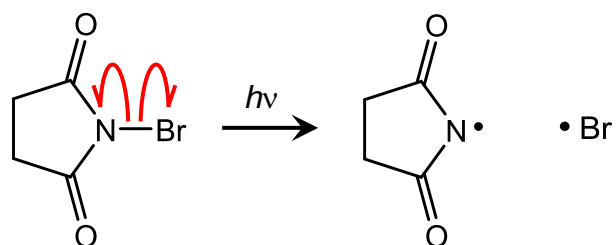




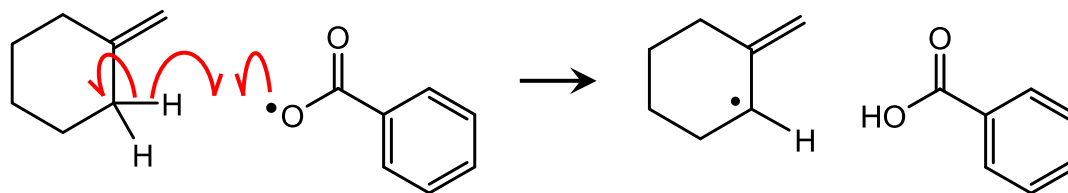
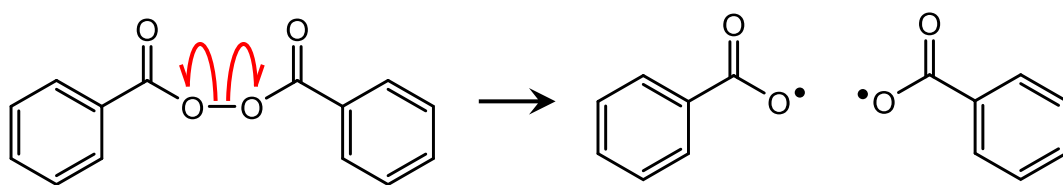
- c. Ordinarily, we would expect the preferred product of a radical halogenation to be the most substituted halide, because that would come from the most substituted, most stable radical. But in this case, the “two” radicals that yield our two products are actually the same radical—they are resonance structures, which are just two ways of drawing the same thing.

So what does that mean for our products? In this case, the product-determining step must not be the first, rate-determining step; it must be the second step, and selectivity must come from the difference in product energies. The more substituted double bond is the more stable product, so we'd expect the second product to be favored here.

2. a.



b.



...and from there, the mechanism is the same as part (a).