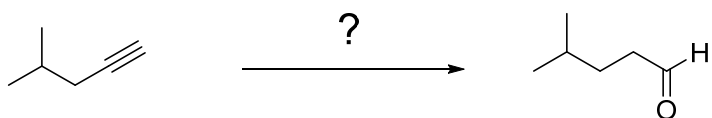
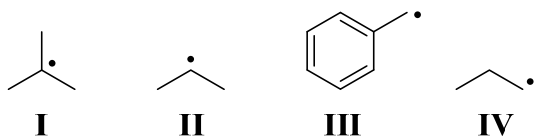


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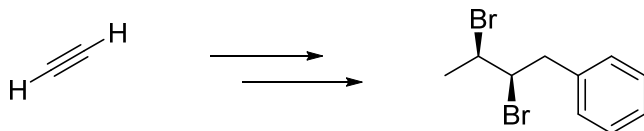
1. Circle the reagents required for the given reaction. (1 point)

a. conc. H_2SO_4 c. 1. 9-BBN
2. NaOH , H_2O_2 b. 1. O_3
2. DMSd. HgSO_4 , H_2SO_4
 H_2O

2. Rank the stability of these radicals from
- least stable to most stable**
- . (1 point)

a. $\text{I} < \text{II} < \text{III} < \text{IV}$ c. $\text{IV} < \text{II} < \text{III} < \text{I}$ b. $\text{IV} < \text{II} < \text{I} < \text{III}$ d. $\text{III} < \text{IV} < \text{II} < \text{I}$

3. Provide a synthesis for the following transformation. (4 points)



4. a. Provide a mechanism for the following reaction and label each step as initiation (I) or propagation (P).
-
- b. Provide one reasonable termination step (T). (4 points)

