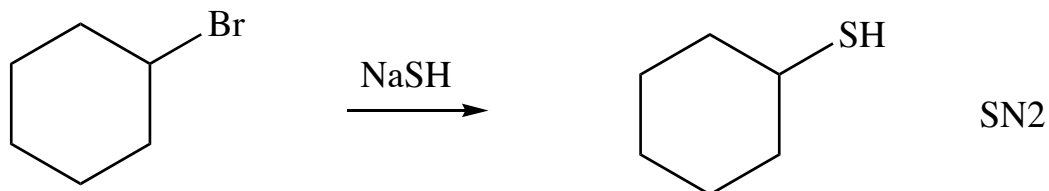
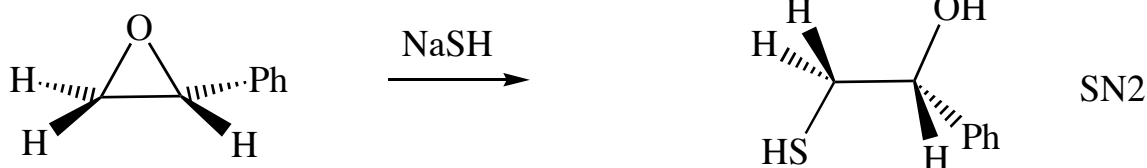
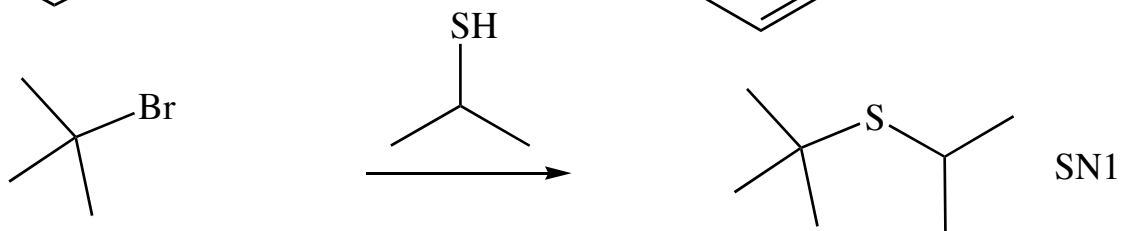
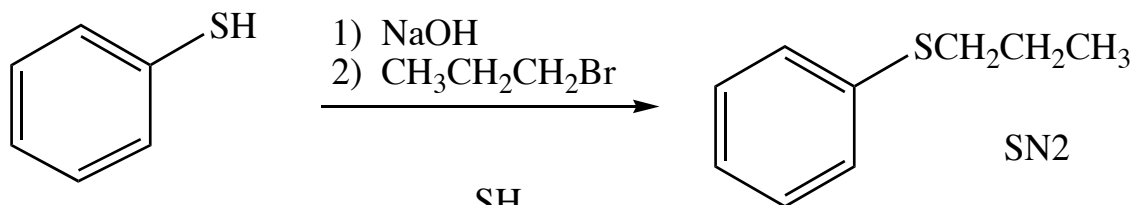


Exercise 65A - Thiols/Sulfides

Question

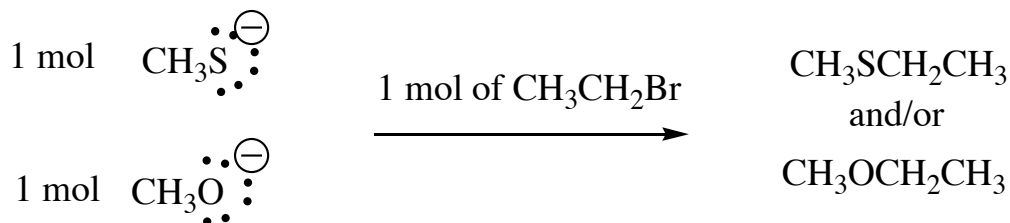
How would you prepare the following sulfides? What mechanism operates?



Question

How could you determine the relative nucleophilicity of a sulfide and an alkoxide quantitatively in a single experiment?

In one pot, mix one molar equivalent of a sulfide nucleophile, one molar equivalent of an equivalent alkoxide nucleophile and one molar equivalent of an alkyl halide...



Because the amount of alkyl halide limits this reaction, the two nucleophiles must compete for the same substrate. If the sulfide is, for example, 10 times more reactive, then the product distribution will be 90% sulfide and 10% ether. Such experiments are known as competition experiments.