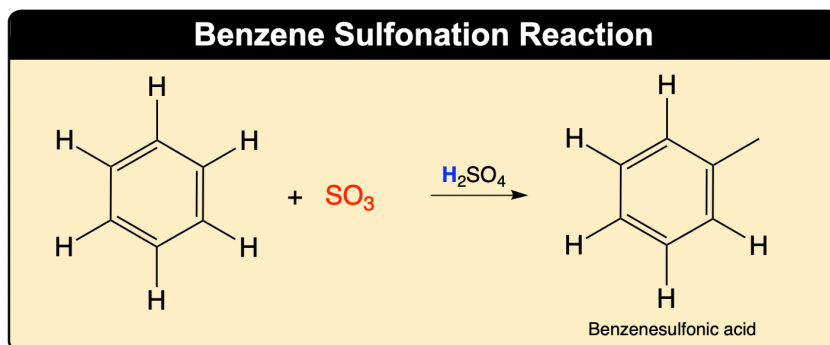


### CONCEPT: BENZENE REACTION: SULFONATION

- Benzene reacts with \_\_\_\_\_ (SO<sub>3</sub>) in the presence of sulfuric acid (H<sub>2</sub>SO<sub>4</sub>).
  - One of the \_\_\_ on benzene ring is substituted with a \_\_\_\_\_ acid (-SO<sub>3</sub>H) group.
  - A \_\_\_\_\_ (H<sub>2</sub>SO<sub>4</sub>) is used to activate the \_\_\_\_\_ atom of the -SO<sub>3</sub>H group.



**EXAMPLE:** Predict the product of 1,4-dibromobenzene undergoing a sulfonation reaction.

**PRACTICE:** Predict all potential products formed from the sulfonation reaction of chlorobenzene.

