

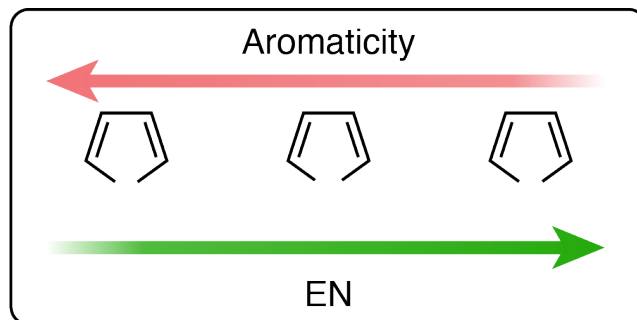
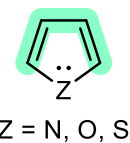


Study Prep

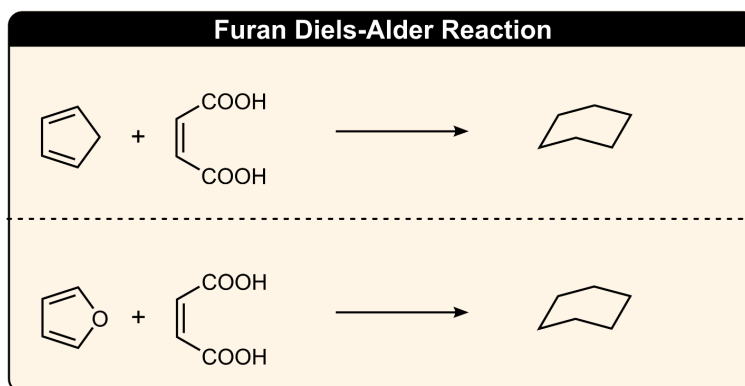
Available on Pearson+

**CONCEPT: ADDITION REACTIONS OF FURAN**

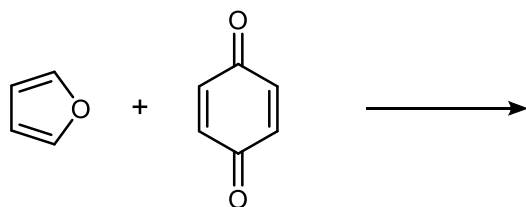
- Pyrrole, furan, and thiophene can be considered as \_\_\_\_\_ bridged by a heteroatom.
- A 5-membered heterocycle's ability to react like a diene depends on how \_\_\_\_\_ it is.
  - Heterocyclic aromatic resonance stabilization \_\_\_ when the heteroatom's EN \_\_\_.

**Diels-Alder Reaction of Furan**

- Being the least aromatic 5-membered heterocycle, furan acts the \_\_\_\_\_ like a diene.
  - Furan can undergo the Diels-Alder reaction like cyclopentadiene.



**EXAMPLE:** Draw the structure of the major product for the following reaction. Include stereochemistry.



**PRACTICE:** Write an appropriate synthetic sequence for the following compound starting from furan.

