

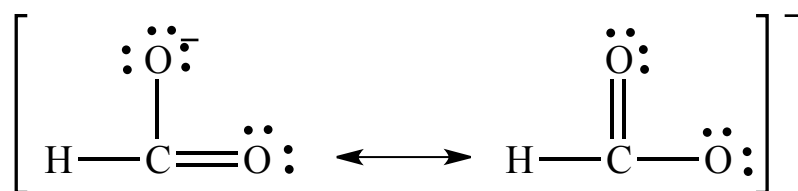
Formal Charges and Resonance Structures

9.50 Is it possible to “trap” a resonance structure of a compound for study? Explain.

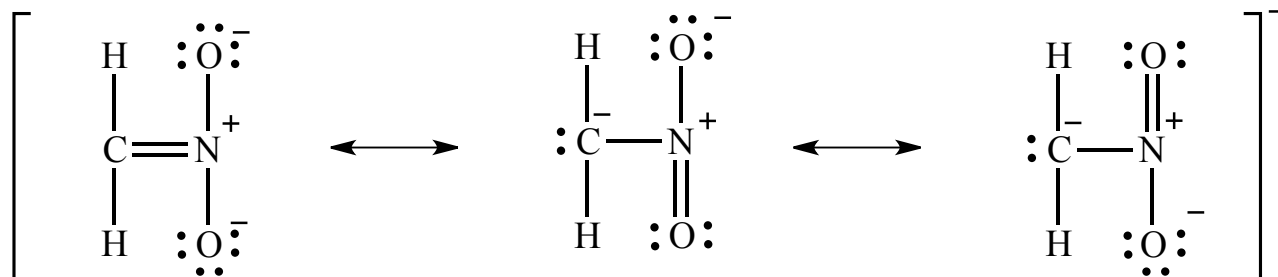
No, none of the resonance structures actually exists—the true structure lies somewhere in-between.

9.51 Write Lewis structures for the following species, including all resonance structures. Also, show any formal charges.

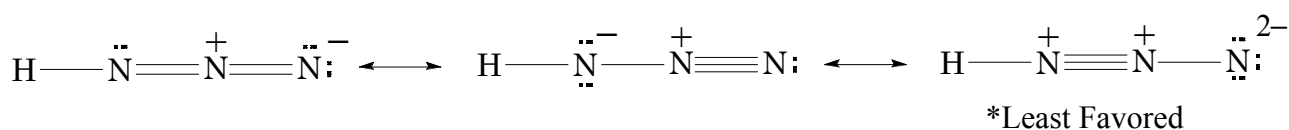
a) HCO_2^-



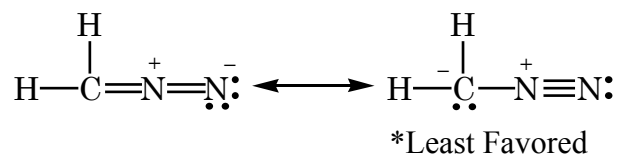
b) CH_2NO_2^-



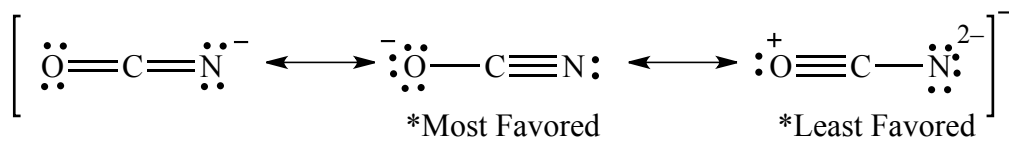
9.53 Write three resonance structures for hydrazoic acid, HN_3 . The atomic arrangement is HN_3 . Show formal charges. Label the least favored resonance structure.



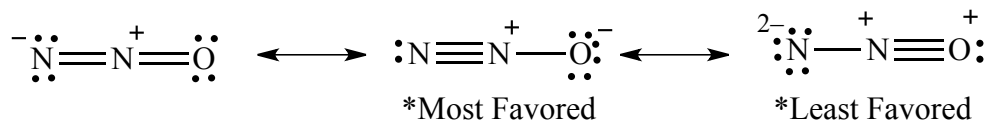
9.54 Draw the two most favored resonance structures for diazomethane, CH_2N_2 . Show formal charges. Label the most favored resonance structure.



- 9.55 Draw three reasonable resonance structures for the OCN^- ion. Show formal charges. Label the most favored and least favored resonance structure.



- 9.56 Draw three resonance structures for the molecule N_2O in which the atoms are arranged in the order NNO . Indicate formal charges. Label the least favored and most favored structures.



Note that OCN^- and N_2O are isoelectronic with CO_2 .