P5401: INFRARED SPECTROSCOPIC OBSERVATION OF THE MCLAFFERTY REARRANGEMENT IN IONIZED 2-PENTANONE

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- The McLfferty rerrangment is a dissociation of enol cation formed through hydrogen atom transfer from a CH bond at a γ position to oxygen atom in ionized ketones, aldehyde, and so on.
- No spectroscopic investigation has been performed for the McLafferty rearrangement, although numerous mass spectrometric studies have been made for it.
- The McLafferty rearrangement of ionized 2-pentanone is investigated with IR spectroscopy
- While the only CH stretch vibrations are observed in the IR spectrum of the neutral, the OH stretches as well as the CH stretches are observed for the cation
- IR spectroscopy demonstrates hydrogen atom transfer occurs in the ionization process of 2-pentanone
- Spectroscopic observation of the enol cation in the McLafferty rearrangement is for the first time.