

The three sugars ribose, deoxyribose, and fructose have been shown to undergo dissociative electron attachment at threshold, that is, to fragment upon capture of a zero-energy electron. This talk focuses on the electron acceptor properties of three fructose isomers in view of a doorway mechanism for this process, that is initial attachment as a vibrational Feshbach resonance. Two key ingredients for a doorway mechanism, a weakly bound state able to support a vibrational Feshbach resonance, and a valence anion more stable than neutral fructose are characterized. Moreover, possible structures for the observed fragment anion (fructose-H<sub>2</sub>O)<sup>-</sup> are suggested.