Ion-Molecule Reactions in Hydrocarbon Oxydations

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CHO^+ was generated by reacting oxygen atoms with acetylene in a cylindrical flow system having a radial electric field. $C_2H_3^+$ was formed by proton transfer to acetylene with an energy independent rate constant. In a tree body reaction, $C_2H_3^+ + C_2H_2$ could form $C_4H_5^+$ with an energy dependent rate constant. Proton transfer reactions to several other molecules such as C_2N_2, $CH_3{-}O{-}CH_3$, C_2H_4O, CH_4 and NH_3 will be reported.

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