THE PREPARATION OF $[m\text{-}CF_3C_6H_4Xe]^+$ AND OTHER MONOSUBSTITUTED PHENYLXENON(II)-CATIONS

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After successful preparation and structural characterization of $[C_6F_5Xe]^+$-salts we report on the synthesis of monosubstituted phenylxenon cations now. For example. $[m\text{-}CF_3C_6H_4Xe]^+$ is a typical species and allows to investigate the influence of ring-bonded hydrogen in the mesomeric active ortho- and para-positions on the stability and reactivity of the arylxenon cation.

The chemistry of the $[C_6F_5Xe]^+$- and the coordinated $[C_6F_5Xe \bullet base]^+$- cation showed that both cations are strong electrophilic reagents. Thus the electrophilic reactivity of $[RXe]^+$ (R = $m\text{-}CF_3C_6H_4$ or $p\text{-}FC_6H_4$) makes the synthesis of hydrogen-containing phenylxenon cations difficult.

Spectroscopic data and reactions of the new compounds are presented.