

A THEORETICAL INVESTIGATION OF THE CLUSTER IONS $\text{Xe} \cdots \text{HCO}^+$, $\text{Xe} \cdots \text{HNN}^+$ AND $\text{Xe} \cdots \text{HNCH}^+$

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The cluster ions formed between a xenon atom and the cations HCO^+ , HNN^+ and HCNH^+ have been studied by coupled cluster calculations in connection with a scalar-relativistic energy consistent pseudopotential description of the Xe^{8+} core. The last complex has two isomers with linear equilibrium structures of which $\text{Xe} \cdots \text{HNCH}^+$ is more strongly bound. $\text{Xe} \cdots \text{HNN}^+$ is most strongly bound with a rather large equilibrium dissociation energy of $D_e = 4829 \text{ cm}^{-1}$. Various spectroscopic properties of interest to future experimental studies by infrared and microwave-spectroscopy are predicted.