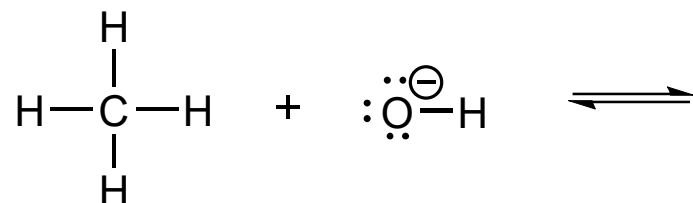


Is hydroxide a strong enough base to deprotonate methane (CH₄)? Explain.



- A) Because hydroxide is more stable than $\text{H}_3\text{C}^{\ominus}$, hydroxide is a suitable base to deprotonate methane.
- B) Because hydroxide is less stable than $\text{H}_3\text{C}^{\ominus}$, hydroxide is a suitable base to deprotonate methane.
- C) Because hydroxide is more stable than $\text{H}_3\text{C}^{\ominus}$, hydroxide is NOT a suitable base to deprotonate methane.
- D) Because hydroxide is less stable than $\text{H}_3\text{C}^{\ominus}$, hydroxide is NOT a suitable base to deprotonate methane.
- E) It's impossible to predict the direction of the equilibrium without pK_a data.