Investigating Proton-Coupled Electron Transfer with Radical Cations Appended with Bases

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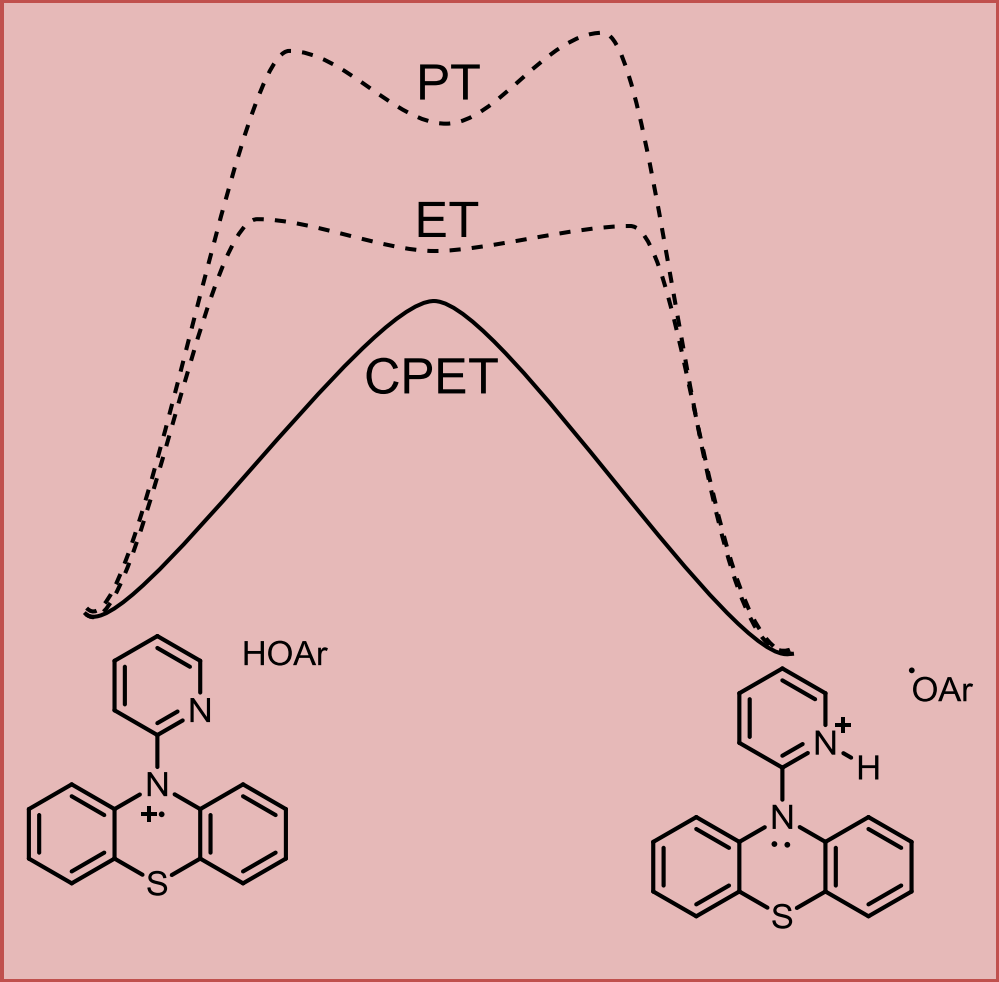

When a base and a radical cation are tethered, they are expected to combine their proton and electron accepting abilities. Four base-appended radical cations are persistent in solution for hours to days. Each compound reacts with hindered phenols to form the corresponding phenoxy radical, respectively. Computational and experimental results indicate a concerted mechanism that is favored over stepwise transfers.