

Measurements and Marcus theory correlations of heterogeneous electron transfer rates of biphenyl and some of its derivatives using Fourier transform faradaic admittance measurements (FT-FAM).

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Streszczenie

Heterogeneous electron transfer rates have been measured for biphenyl and six biphenyl derivatives. Results are reported here. Measurements were performed at both the mercury and platinum electrodes using the solvents acetonitrile and dimethylformamide. One observes facile electron transfer rates under all possible conditions. The rates show remarkably small influence, if any, to variations of steric interaction. Correlation of Marcus theory predictions of k_s agrees with experimental data well at Hg and Pt, but with different assumptions, for the image field effect. Marcus theory-experiment agreement regarding solvent effect predictions is mixed. These observations are discussed and possible interpretations are suggested.

Adres publiczny

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