
Abstract

The kinetics of the azo coupling of eight para-substituted benzenediazonium tetrafluoroborates with indole and its 1-, 2-, and 3-Me derivs. were studied in acetonitrile at 25°C under pseudo-first-order conditions. Hammett reaction consts. (ν) were obtained, and a plot of ν vs. pKa of the indoles yielded ν = 2.97 - 0.15pKa. These results indicate that the azo-coupling reactions follow one general mechanism involving rate-limiting initial electrophilic attack at the 3-position.