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Abstract

The coupling constants for the pyridyl protons of the radical cations of N,N'dimethyl-4,4'-bipyridylium dichloride PQ+ and N,N'-diphenyl-4,4'-bipyridylium dichloride DPQ+ have been unambiguously assigned from an ENDOR study of selectively deuterated compounds. The experimental results confirm the early theoretical assignments for PQ+ made by Johnson and Gutowsky; however subsequent assignments for DPQ+ based on this work have now been revised. The revision of the assignments and the difference between the two compounds are discussed using INDO molecular orbital calculations. © 1983.