

Stereochemistry of organophosphorus compounds - Communication 8. Configuration and conformational mobility of trans-2,3-diphenyl- -4-dimethoxyphosphonoisoxazolidine ring

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Abstract

1. The 1,3-bipolar cycloaddition of dimethyl vinylphosphonate to C,N-diphenylnitrone gave trans-2,3-diphenyl-4-dimethoxyphosphonoisoxazolidine, the structure and configurations of which were proved via the ^1H and ^{31}P NMR, ^1H - $\{^{31}\text{P}\}$ NMR, and IR spectra. 2. From the stereospecificity of the vicinal spin-spin coupling constants $^3\text{J}_{\text{PCCH}}$ and $^3\text{J}_{\text{HCCH}}$ and the temperature dependence of the NMR spectra it follows that the isoxazolidine ring is found in the pseudorotation state. © 1975 Plenum Publishing Corporation.

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