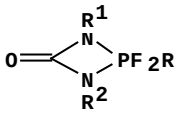
Preparative and NMR studies of phosphorus-fluorine compounds undergoing intramolecular exchange. Part 2. Unsymmetrical fluorinated phosphadiazetidinones.
Schlak, O.; Schmutzler, R.; Harris, R. K.; McVicker, E. M.; Wazeer, M. I. M.. Tech. Univ., Braunschweig, Fed. Rep. Ger. Phosphorus and Sulfur and the Related Elements (1981), 10(1), 87-97.

Abstract

Fluorophosphadiazetidinones I (R = Me, Et, Ph), unsym. substituted on N were prepd. from the reaction of tetrafluorophosphoranes with the silyl urea (Me3Si)MeNCONEt(SiMe3). The compds. undergo partial equilibration to the sym. species II and III. Low temp. 31P and 19F NMR spectra indicate changes which are rationalized in terms of variations in the population of energetically different conformers and in the exchange rates between conformers. The conformational differences involved are those arising from pseudorotation at trigonal-bipyramidal P. Comparable NMR data are also given for some related compds.



I, R^1=Me, R^2=Et
II, R^1=R^2=Me
III, R^1=R^2=Et