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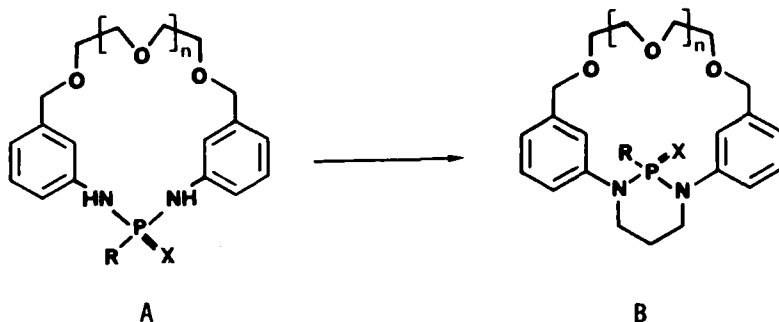
RIGIDIFIED MACROCYCLIC PHOSPHORAMIDES A NEW FAMILY OF PREORGANIZED LIGANDS

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Macrocyclic molecules capable of selective recognition of ionic or neutral guests are of considerable current interest. The design and synthesis of host molecules that contain phosphorus have been developed recently. Typically, the model compound **A** ⁽¹⁾ is modified to the more rigid molecule **B** which can exist as two exo/endo isomers. **B** represents a new family of preorganized ligands that can involve the phosphorus group during complexation of various guests. The exo/endo isomerism was investigated by NMR studies. The complexing properties of **B** were studied by NMR and extraction method with alkaline and ammonium cations. The complexation constants mainly depend on the molecular geometry and the size of the cavity. The highest K_a constants are obtained with the endo isomer where the P=O bond is directed toward the center of the macrocycle. Complex formation and detailed stereochemical data for **A** and **B** will be presented.



(1) J.P. Dutasta and P. Simon Tetrahedron Lett. 1987, 28, 3577-3580.