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Phosphorus Crown-Ethers with Nitrogen-Containing Heterocycles

Alexandra A. Chaikovskaya^a; Tamara N. Kudrya^a; Tat'jana E. Terekovskaya^a; Andrew A. Tolmachev^a; Andrew M. Pinchuk^a

^a Institute of Organic Chemistry of the Ukrainian National Academy of Sciences, KIEV-94, UKRAINE

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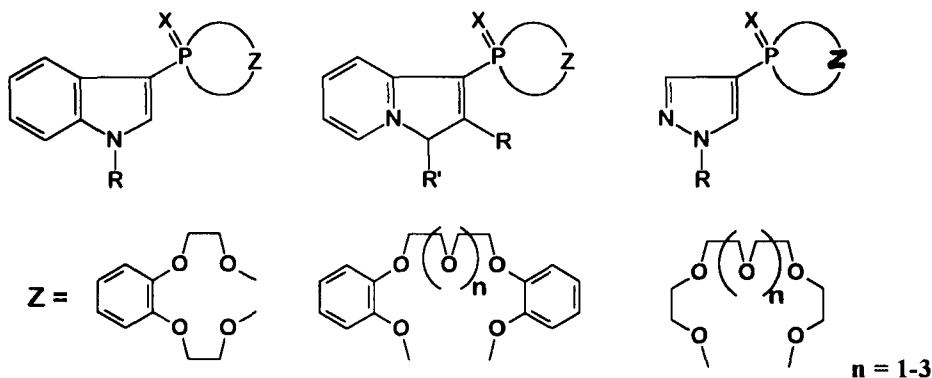
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PHOSPHORUS CROWN-ETHERS WITH NITROGEN-CONTAINING HETEROCYCLES

ALEXANDRA A. CHAIKOVSKAYA, TAMARA N. KUDRYA,
 TAT'JANA E. TEREKOVSKAYA, ANDREW A. TOLMACHEV,
 ALEXANDER M. PINCHUK

Institute of Organic Chemistry of the Ukrainian National Academy of Sciences;
 Murmanskaya Str., 5, KIEV-94, 253660, UKRAINE.

Phosphorus-containing crown-ethers functionalized by heterocycle fragments have essential advantages over the usual ones. The introduction of structural units of indoles, pyrroles and indolizines to phosphorus atom of the macrocyclic chain is capable to change lipophilic, complexing, biological and other properties of the initial crown-ethers. For synthesis of such compounds we have used dihalidophosphines obtained by direct substitution of the electron-rich aromatic compounds with phosphorus (III) halides. As a result, series of highly efficient macrocyclic compounds of a novel type have been obtained.



Details of the synthesis and the relation between a structure of the compounds obtained and their physiological activity are discussed.