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# Phosphorus, Sulfur, and Silicon and the Related Elements

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## ON PHOSPHORYLATION OF DIHYDRIC PHENOLS WITH AMINES OF PHOSPHORIC AND PHENYLPHOSPHONIC ACIDS

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With the aim to create macrocyclic phosphorus-containing heterocycles (new phosphorus crown-ethers) and corresponding polyesters the interaction between dihydric phenols and complete anides of phosphoric and phenylphosphonic acids was studied. It was shown that, according to reaction conditions and reagents ratio, the resulting products can have a linear structure, with oligo- (A) or polymeric (B) molecules, and a macrocyclic structure (C) alike: phospho(III)arylene crown-ethers obtained for example by the consecutive assembling of planned macrocyclic systems or by the direct interaction.

The individuality and structure of the products obtained were proved by means of <sup>1</sup>H and <sup>31</sup>P NMR spectroscopy, mass spectrometry and X-ray analysis. Some peculiarities of phosphorylation of dihydric phenols were revealed when obtaining the polymeric compounds. The first syntheses are performed to create inclusion compounds of the "host-guest" type based on macrocyclic arylenephosphonites with transition metals salts (CuBr, HgCl<sub>2</sub>). Argumentation in favor of the latter is evidenced by NMR and mass-spectroscopy data.