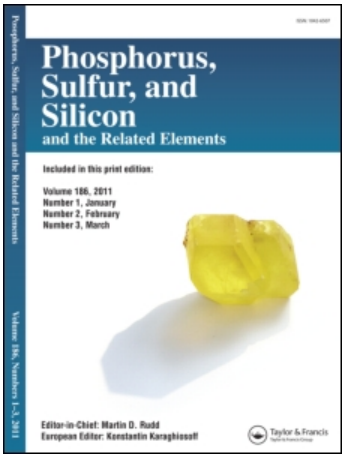

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The Synthesis and Utilization of Azacrown Ethers with Phosphorus Function in the Side Chain

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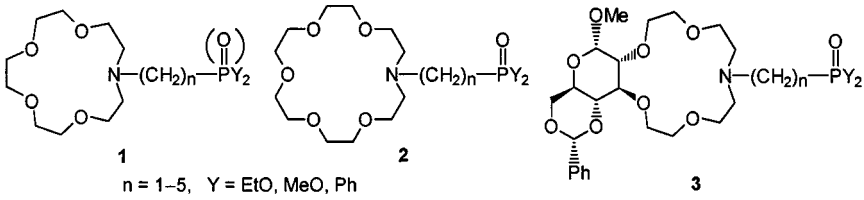
Novel azacrown ethers (**1–3**) with phosphonoalkyl-, phosphinoxidoalkyl-, and phosphinoalkyl side chains were synthesized to study their cation binding ability. In most of the cases, the complex forming ability of lariat ethers **1** and **2** was decreased, at the same time, the selectivity was significantly increased. The D-glucose-based lariat ethers (**3**) were utilized in enantioselective Michael additions.[1] Several representatives of the armed azacrown ethers (**3**) used as phase transfer catalysts induced a record degree in the enantioselectivity.[2,3]



1 **2** **3**

SCHEME 1

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