BORON CONTAINING PORPHYRAZINS AS POTENTIAL BNCT AGENTS

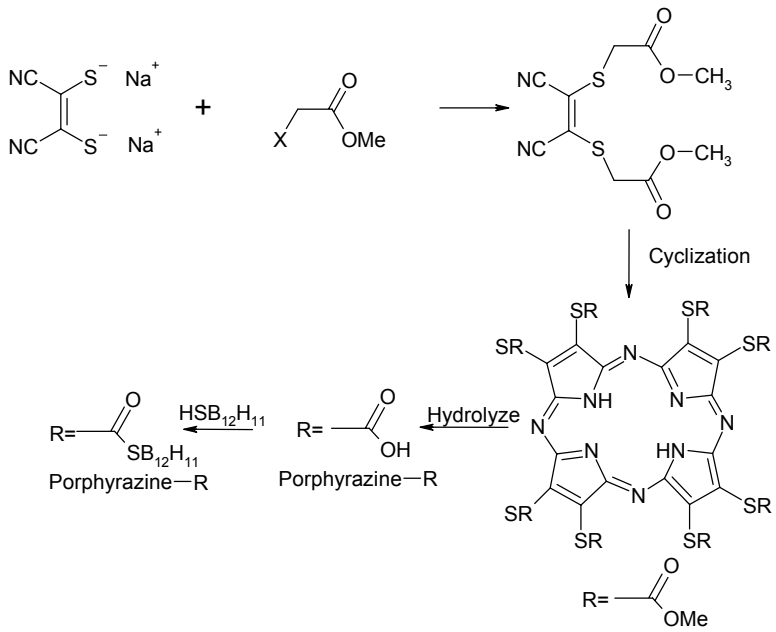
Detlef Gabel and Michal Ratajski
Department of Chemistry, University Bremen
P.O. Box 330440, D-28334, Germany, Bremen (michal@chemie.uni-bremen.de)

Introduction

A wide range of compounds contained the B_{12} boron cluster and especialy $B_{12}H_{11}SH^{2-}$ (BSH) have been examined as potential BNCT agents, but only few of them have suitable properties to bo used in real BNCT therapy. This paper describs attempts of synthesis of tetraazaporphyrin derivatives containing the B_{12} cluster in its structure.

Results, discussion and plans

We are examined two synthetic ways. In the first of them we used as a starting material 1,2-dicyanoethylene-1,2-dithiolate which can easily react with halogen carboxylic acid esters. This reaction allows to attach the ester to nitrile. Such compounds are ready to cyclization which leads to porphyrazine derivatives, which could be hydrolized and BSH (cluster) can be attached to the acid groups.



The second synthetic way uses as a starting material BSH which is acetylated with halogenn acid chloride. The product of this reaction can be attached to 1,2-dicyanoethylene-1,2-dithiolate which can be cyclized to the porphirazine.