Functionalization of metallacarboranes containing cobalt ion *via* alkylation method

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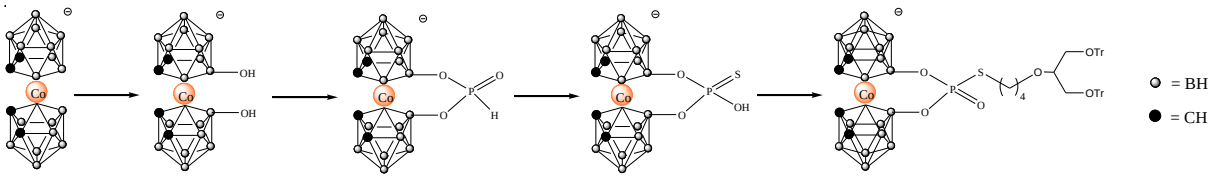
The chemistry of boron clusters provides unavailable so far possibilities and tools to design new, biologically active compounds. The uniqueness such as 3D aromaticity and high lipophilicity in combination with the fact that boron clusters are human made, unknown to nature, create an inspiring mix for medicinal chemistry. [1] Cobalt-bis(1,2-dicarbollide)ate the most stable and commonly used metallacarborane has found applications in various fields from extraction agents for nuclear wastes, HIV protease inhibitors to conducting polymers. Because of that the incorporation of carborane residue to organic molecules became the modern trend in designing compounds with new properties. [2] 8-Dihydroxy-bis-(1,2-dicarbollido)-3-cobalt(1-)ate has been reported to serve as a building block for its alkoxy derivates and further converions. [3]



In this communication we present a simple, two-step route which includes: 1) synthesis of cobalt bis dicarbollide cyclic phosphorothioate ester; 2) its alkylation method and incorporation of a glycerol derivate structure.

Acknowledgement: This work was supported in part by the National Science Center, Poland, grant 2015/16/W/ST5/00413. A contribution from the Statutory Fund of IMB PAS is also gratefully.

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