

Organophosphorus derivatives for "click-chemistry"

In this diploma thesis two new macrocyclic ligands were synthesized. They have DO3A moiety where metal (lanthanide) ion can be coordinated and terminal acetylenic or azide group connected through the phosphinic acid. Both terminal acetylenic and azide group should serve for connecting to another molecules or partitions by mean of „click chemistry“ i.e. [1,3] copper^I catalyzed dipolar cycloaddition between azide and acetylene.

In this thesis two ligands, its complexes with some lanthanides as well as its precursors were prepared and characterized. Gd³⁺ complexes will be further used and studied for potential MRI contrast agents applications.