Synthesis of new tetrazole-containing multipodal ligands based on 2-aminobenzonitrile

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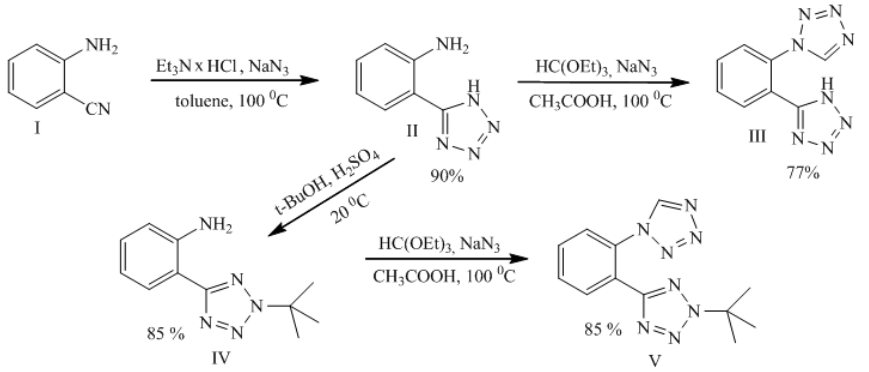
Due to the presence in the hetero ring of four nitrogen atoms capable of forming coordination bonds, tetrazole derivatives are promising objects of research in coordination chemistry [1]. It is known that a convenient method for the preparation of C-substituted tetrazoles is the reaction of 3 + 2-cycloaddition of an azide ion to alkyl or aryl cyanides [2]. 1-Substituted tetrazoles can be obtained in good yield by the heterocyclization reaction of primary amines with triethylorthoformate and sodium azide [3,4]. We have shown the possibility of realizing these approaches to obtain new tetrazole-containing multipodal ligands combining in their structure two tetrazole rings, one of which is N-substituted and the other C-substituted. 2-aminobenzonitrile was used as the initial substrate.



The synthesized multipodal ligands II-V interact with transition metal salts to form coordination compounds.

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References

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