

Abstract

Title of diploma thesis: Synthesis of unsymmetrical derivatives of azaphthalocyanines V.

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The aim of diploma thesis was synthesis of unsymmetrical derivatives of azaphthalocyanines (Aza-Pc) with carboxy or hydroxy group, and the preparation of suitable precursors of Aza-Pc. Required zinc and magnesium complexes were synthesized using statistical condensation of two different precursors. The desired complex was isolated from the mixture, purified and characterized. The preparation of the precursor 6-(3-*tert*-butylsulfanyl-5,6-dicyanopyrazine-2-ylamino)hexanoic acid was successful. The cyclization of two precursors yielded the following Aza-Pc: 3-carboxy[2',3'-b]quinoxalino-11,12,18,19,25,26-hexakis(*tert*-butylsulfanyl)tripyrzino[g,l,q]porphyrzinato zinc (II); 3-carboxy[2',3'-b]quinoxalino-11,12,18,19,25,26-hexakis(*tert*-butylsulfanyl)tripyrzino[g,l,q]porphyrzinato magnesium (II). The modification of the preparation of precursor 5,6-dioxo-1,4,5,6-tetrahydropyrazine-2,3-dicarbonitrile by decreasing the reaction temperature has shown to be unsuitable