ABSTRACT

SYNTHESIS AND CHARACTERISATION OF LONG ALKYL SUBSTITUED BORON-HYDRAZONE COMPLEXES

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Pyrimidine derivatives are an important class of compounds owing to their wide applications in medical and academia. Among them, barbituric derivatives have gained increasing attention because recent electrochemical properties and biological activity studies point to possible applications, especially for material sciences and medical sciences. Surprisingly, there are several study about barbituric acid derivatives in literatures, only few examples deal with liquid crystal properties.

In this study, 1,3-dimethyl-5-(3,4,5-tris(alkoxy)benzoyl) barbituric acid derivatives, their Schiff base with phenyl hydrazines as well as their boron complexes are synthesized. Because of the oxygen and moisture sensitivity of compounds, some experiments were carried out under dry argon using standard Schlenk techniques. Structural characterizations of new compounds were made with ^{1}H, ^{13}C and ^{11}B NMR, FT-IR and MS spectroscopy. Moreover, liquid crystal properties were examined by polarized optical microscope.