**Synthesis and photophysical properties of substituted aryl bis(imino)acenaphthene zinc complexes**

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Chemistry of substituted aryl bis(imino)acenaphthene (BIAN) zinc complexes is actively expanding during two last decades because of wide application of such compounds in various fields of industry and catalysis such as OLED and photovoltaic devices, polymerization catalysts and transformation of CO2 into cyclic carbonates [1-3]. Due to simplicity of synthetic procedures of substituted Zn/BIAN complexes and its high tolerance to different functional groups their photophysical and catalytic properties could be tuned easily [1]. Here we present the synthesis of Zn/BIAN complexes with different substituents with 40-60% yields (up to 90% in some cases, figure 1).



Fig. 1. General procedure for synthesis aryl bis(imino)acenaphthene (BIAN) zinc complexes.

Besides new class of substituted Zn/BIAN complexes was based on containing two free amino-groups anilines was produced. Besides, two different pathways for these reactions for are possible. What is more important, the structure of major product could be controlled by changing the ratio of amine:acenapthequinone.

These substances demonstrate promising class of novel photoluminescent materials, which properties could be quickly modulated by different solvents addition (DMSO, DCM, water). Besides, the colors of isolated Zn/BIAN complexes in solid state under UV irradiation (385 nm) and in unexcited state were extremely different.

**References**

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