

Abstract

The main aim of the bachelor thesis was to investigate the reactivity of tribenzocyclyne, a triangular molecule, undergoing reactions with antiaromatic biphenylenes and their heteroanalogues. Those reactions consist of C—C activations of strained bond mediated by the complexes of the group 9 elements, followed by migratory insertion of present alkyne which leads to the formation of a substituted aromatic ring.

Presented method facilitated the setting of a experiment as well as cutting down on reaction steps.

These investigations will subsequently serve for further progress in the chemistry of cyclic hexa-*ortho*-phenylenes.

Key words: *catalysis, cycloaddition, tribenzocyclyne, the C—C bond cleavage*