**Well-defined Copper(II) Catalysts for One-pot Synthesis of 1,2,3-Triazole from Click Reaction of Aryl BoronicAcids, Sodium Azide and Terminal Alkynes**

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**Abstract:**

The ‘Click’ chemistry is a powerful tool in drug discovery and these reactions that regiospecific, atom economy and gives high product yield.11,3,-Dipolar cycloaddition reaction of azides and alkynes by copper(I) catalyst (Click reaction) gained popularity in recent years in the field of medicinal chemistry, biological and biomedical research.2 In comparison with copper(I) based catalysts, well-defined copper(II) catalysts having suitable ligands are less studied. In this context, we have synthesized two new copper(II) complexes having 2,6-*bis*(arylimino)pyridine ligand moiety.3The copper(II) complexes were characterized by CHNS, IR and UV-Vis spectroscopic techniques. One of the copper(II) complex was characterized by X-ray crystallography. The copper(II) complexes show efficient catalytic activity for one-pot synthesis of 1,4-substituted 1,2,3-triazoles from click reaction of aryl boronic acids, sodium azides and terminal alkynes. The reactions are carried out by using 1 mol% catalyst loading in aqueous medium. Here in, the synthesis, characterization and catalytic application of new copper(II) complexes will be discussed.



 

**References:**

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Thrust area – Organometallics and Homogenous catalysis

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