

**Title: Bibliographic study of synthesis, characterization and catalytic reactivity in NADES of trinuclear Palladium NHC complexes**

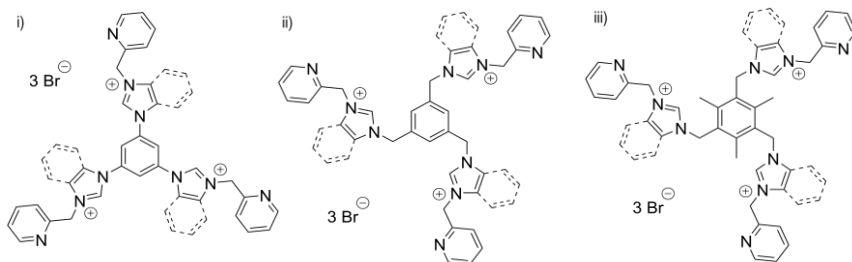
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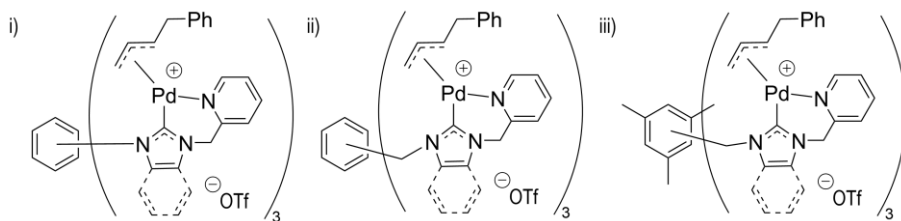
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The aim of this work is the bibliographic research of N-Heterocyclic Carbene (NHC) palladium complexes using star-shaped NHC based precursors. N-Heterocyclic Carbene transition-metal complexes represent an important class of catalysts or pre-catalysts used in a broad range of organic chemistry synthesis. The studied NHC ligands in this work are:



The silver and palladium NHC complexes are another section to study in this work. The palladium complexes are:



And study their catalytic activity in Suzuki-Miyaura cross coupling reactions in Natural Deep Eutectic Solvents (NADES) is another goal to gain.

**Keywords:** Carbenes, Benzimidazole, Star-shaped ligands, Palladium, Silver, Cross Coupling reactions.