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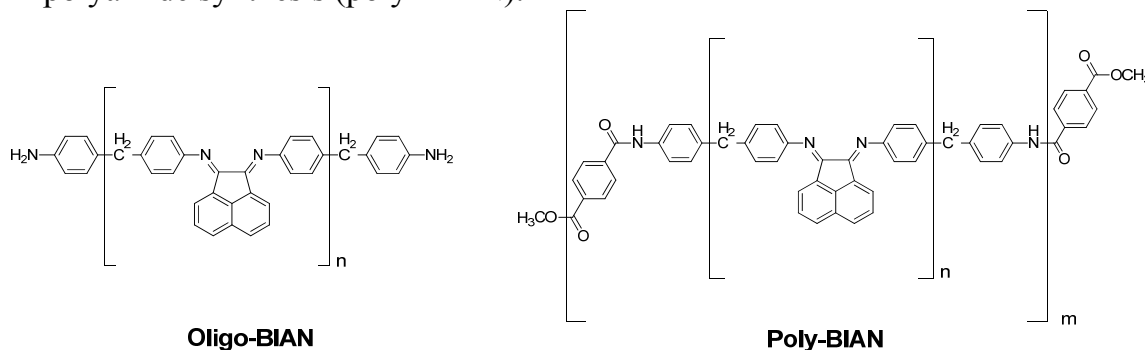
Ruthenium complexes with polymeric α -diimine containing poly[arylimino-acenaphthene] fragments

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α -diimine/Ru, Pd and Ni complexes are very active homogeneous catalysts for several reactions. In particular bis(arylimino)acenaphthene (Ar-BIAN) compounds have been widely studied in polymerizations and reactions involving the use of carbon monoxide. We developed a method for the synthesis of oligomeric Ar-BIAN (oligo-BIAN) from acenaphthenequinone and 4,4'-methylenedianiline and for their use as building blocks in polyamide synthesis (poly-BIAN).



Such polymeric Schiff bases could be useful both for developing a heterogenized catalyst and for developing multi-nuclear organometallic species that are known to be good catalysts in olefins polymerization reactions.

The investigation of the reaction between $[\text{Ru}(\text{CO})_3\text{Cl}_2(\text{THF})]$ and the synthesized macromolecular Schiff bases showed different coordination modes of the poly-BIAN with respect to the oligo-BIAN and the non-polymeric tolyl BIAN, with the oxygen atom of the terephthaloyl connecting unit becoming the actual binding site in the former case.