MeN4OMe Supported Pd Complexes: Electronic Effects

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Pd coupling reactions are among the most widely used chemical transformations in the synthesis of pharmaceuticals and bioactive compounds. Development of novel Pd catalysts can lead to new and more economical methodologies for obtaining a wide range of complex organic molecules with biomedical applications. We recently reported unprecedented mononuclear organometallic Pd\textsuperscript{III} complexes with a tetradentate ligand \(N,N^{\prime}\)-di-tert-butyl-2,11-diaza[3,3](2,6)pyridinophane (tBuN4). With a smaller N-substituent, MeN4 was found to support high-valent Pd\textsuperscript{III} and Pd\textsuperscript{IV} complexes that have recently been proposed as important intermediates for a variety of Pd-mediated catalytic reactions. A further modified version of the MeN4 ligand has been synthesized by attaching a methoxy group at the 4-carbon positions of the two pyridine ring regions. Pd\textsuperscript{III} complexes were prepared with this new ligand (MeN4OMe) in order to investigate electronic effects on similar Pd\textsuperscript{III} complexes.