Synthesis of Polycyclic Pyridine Derivatives Mannich Bases and Iminium Salts as Building Blocks for the Construction of Novel Ligands

The design of oligopyridines and related compounds has recently been the subject of intensive investigation. Ligands bearing 2,2'-bipyridine, 2,2':6',2''-terpyridine, or 1,10-phenanthroline subunits are extremely versatile building blocks for the construction of metallo-supramolecular systems. Our studies in the field of ternary iminium salts have led to the development of one pot reactions yielding a wide range of functionalized pyridines, bipyridines, and terpyridines (25, 33, 34, 72).



Several novel terpyridine platinum(II) complexes **90** were prepared. Interest has been focused on these compounds since they possess cytotoxity against a number of human ovarian tumor cell lines.



Numerous ditopic ligands were synthesized employing the Suzuki cross-coupling reaction. These systems were utilized for the preparation of bi- and polynuclear ruthenium and platinium complexes with interesting photochemical properties (e.g. **93a**).