

X-ray Diffraction Study of Novel Luminescent Iridium

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Much interest in the luminescent properties of iridium complexes has recently been generated. Bis-cyclometalated compounds have shown potential as efficient phosphors in organic light emitting diodes (OLEDs) [1], whilst terpyridine derivatives are being investigated as ligands for iridium complexes that can act as luminescent sensors for biologically important ions and molecules [2]. Iridium complexes have also shown highly efficient electrochemiluminescence [3]. In this poster we present the crystal structures of seven new luminescent iridium complexes. The compounds all have two bidentate phenyl-benzothiazole derivative ligands. The distorted octahedral coordination is completed by an acac ligand in six of the compounds, and by a 2-pyridinecarboxylic acid ligand in the other compound. The compounds display a range of Z' values, and differ considerably in their supramolecular packing, bearing in mind the similarities of their structures.

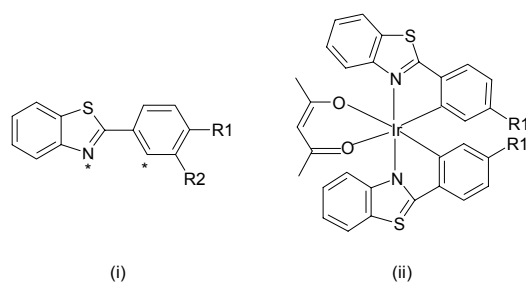


Figure 1:(i) phenyl-benzothiazole ligand (asterisks illustrating points of binding to metal) and (ii) generic iridium complex structure (R₂ is omitted for clarity)

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