

Synthesis and Photophysical Studies of Platinum(II) Terpyridines
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Square planar platinum(II) complexes have been the subject of intense study for several years due to their many unique properties and potential applications. Platinum(II) complexes of tridentate ligands have been extensively studied, with those utilizing modified 2,2':6',2''-terpyridine (trpy) ligands being of particular interest to the McMillin group. The photophysical properties of these compounds can be quite sensitive to the nature of the co-ligand and trpy framework. With this in mind, we developed a series of modified trpy ligands and their respective Pt(II) complexes. This series utilizes a dimethylamino (dma-T), methylamino (ma-T), or amino (a-T) group at the 4' position of the trpy to enhance emission and excited state lifetime over the parent compound. Each system has distinct spectroscopic and photophysical properties due to the mixing of states with metal-to-ligand charge-transfer (MLCT) and intraligand charge-transfer (ILCT) character.