

## Tunning the Luminescence Properties of Cyclometallated Platinum(II) Complexes based on Phenyldiazine N^C Ligands

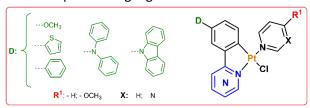
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Organic light-emitting diodes (OLEDs) have attracted much attention in the past few decades and are considered as remarkably attractive candidates for flat panel display technologies and solid-state lighting [1]. Phosphorescent heavy-metal complexes, such as platinum(II) complexes, with long-lived excited state lifetime are able to efficiently harvest both singlet and triplet electro-generated excitons, thus opening the possibility to achieve theoretically 100% internal quantum efficiency in such devices [2].

Cyclometallated platinum(II) complexes based on diazines ligands display strong phosphorescence and electroluminescence (EL) and they could be utilized as light emitting materials in OLEDs [3]. It is easy to alter electronic structures and photophysical properties of platinum complexes by modification of the coordinated ligands [4,5].

In a preliminary communication we have demonstrated that some Pt(II) complexes with phenylpyrimidine N^C ligands can exhibit interesting emission properties in solution and solid state when judiciously substituted [6]. In this presentation, we will describe the synthesis and photophysical properties of a new series of Pt(II) complexes with phenyl(benzo)diazine ligand. The influence of various structural modification on photophysical properties had been thoroughly studied and structure properties relationships were highlighted.





**Figure 1.** Chemical structures and picture (taken under UV) of the investigated cyclometallated platinum(II) complexes.

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## References:

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