

Abstract

This project, we successfully synthesized 2 types of charged iridium complexes, specifically, oligomer and polymer. In the synthesis method, we started with synthesized C^N ligands, N^N ligands and chloro-bridged iridium(III) dimer, respectively. All the synthesized compounds were characterized by ¹H NMR, ¹³C NMR, infrared (IR) and mass spectroscopy techniques. The 8 charged oligomer iridium complexes coded by **4-11** and 2 monomeric iridium complexes (**13** and **14**) were created in this research.

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Keyword: organic light-emitting diode (OLED), iridium complex, polymer light-emitting diode solid-state light-emitting electrochemical cells (LECs)