# **Supporting Information**

The Synthesis and Properties of Iridium(III)-cored Dendrimers with Carbazole Peripherally Functionalized  $\beta$ -Diketonato Dendrons

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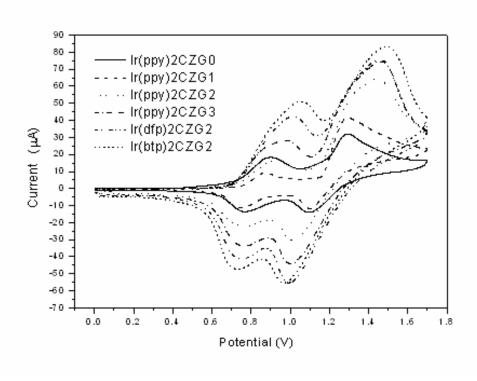
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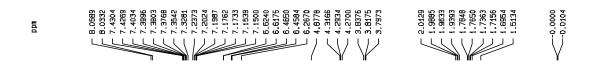
#### A. Figure S1. Cyclic voltammograms of dendrimers (9-14):

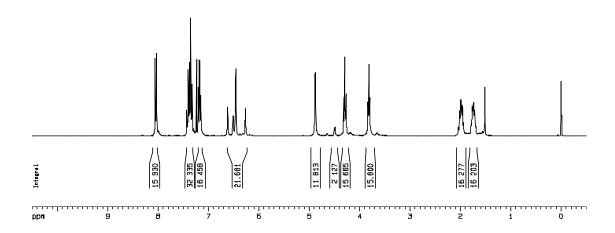


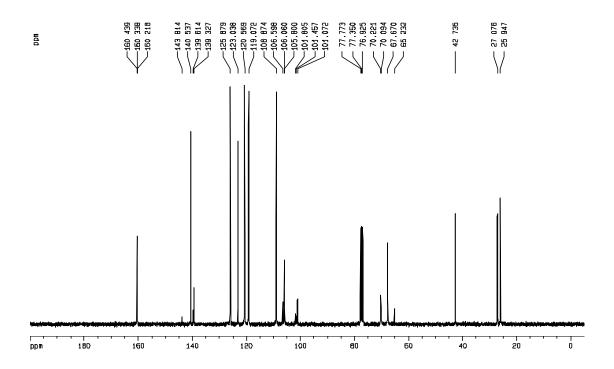
Electrochemistry was performed using a CHI 2.05. All measurements were made at room temperature with samples dissolved in dichloromethane, and the concentration of the iridium(III) complex was about  $1\times10^{-3}$  M. Tetra-*n*-butylammonium tetrafluoroborate was used as the supporting electrolyte, and its concentration was 0.1 M. Scan rate: 100 mV/s.

B. <sup>1</sup>H NMR and <sup>13</sup>C NMR spectra and mass spectra of the dendritic ligands and their dendritic iridium(III) complexes:

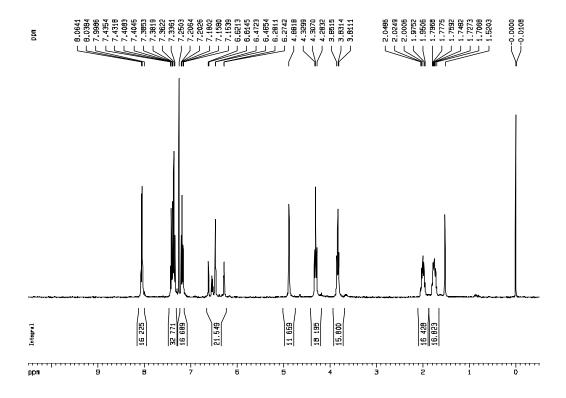
#### CZG<sub>3</sub>OH

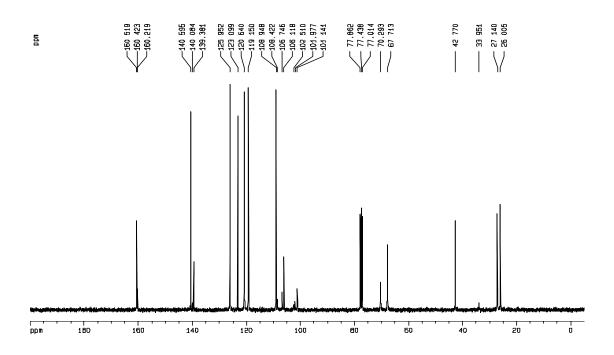




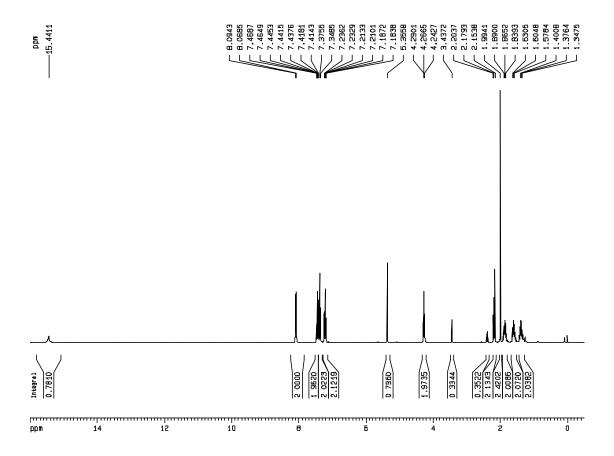


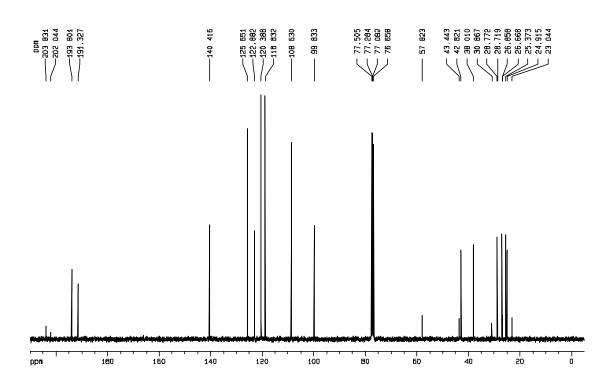
#### $CZG_3Br(4)$

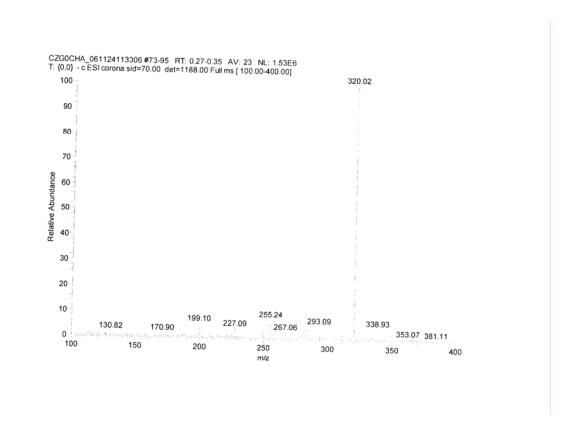


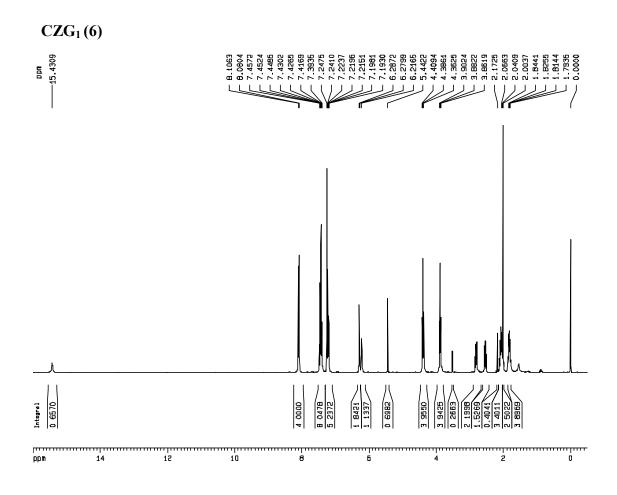


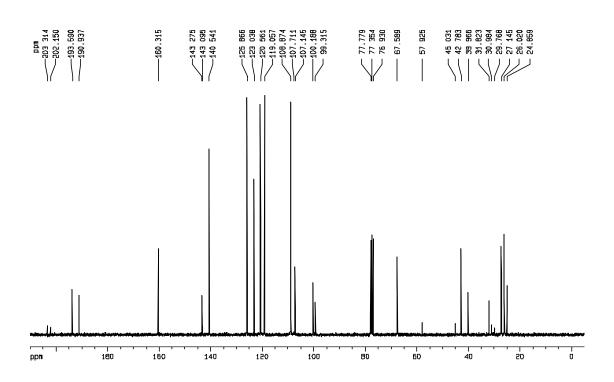
## $CZG_0(5)$

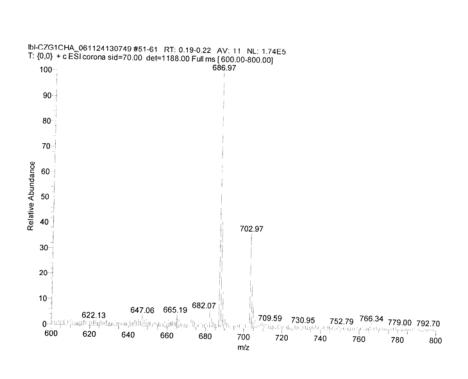




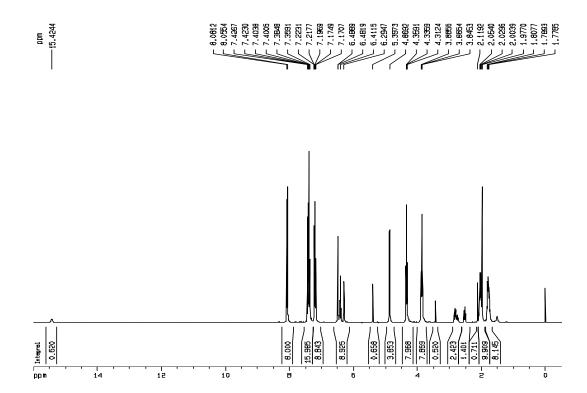


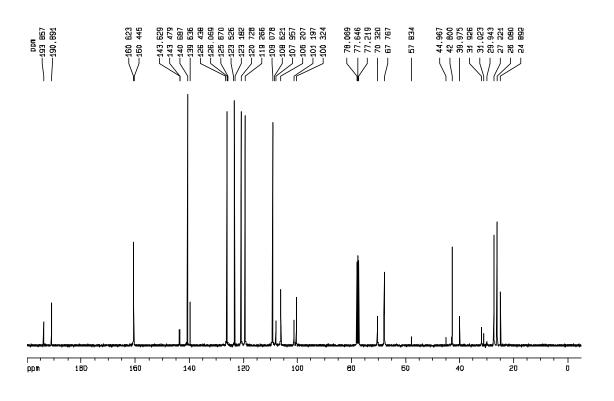


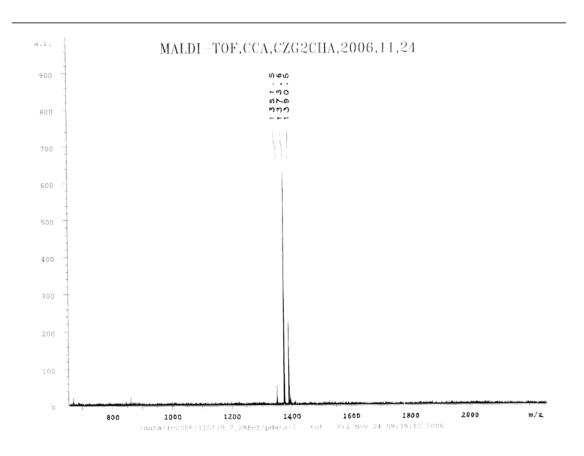


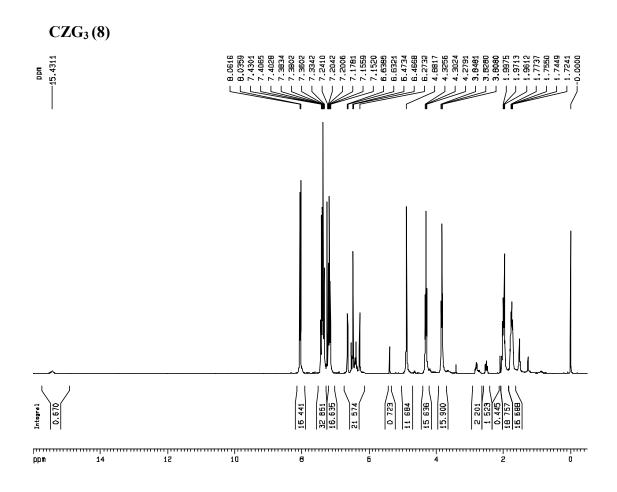


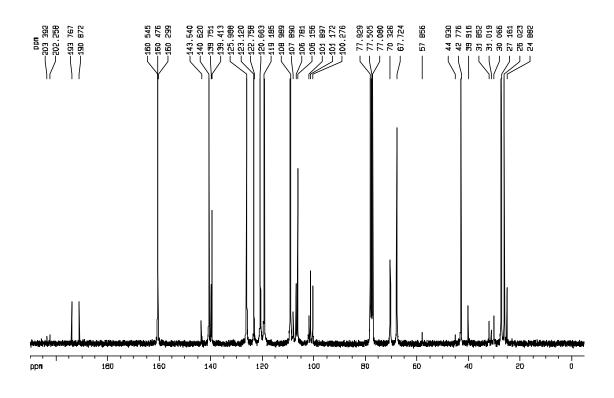
## $CZG_2(7)$

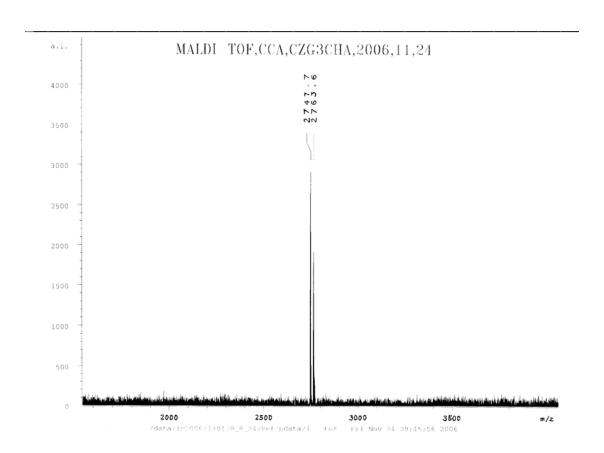




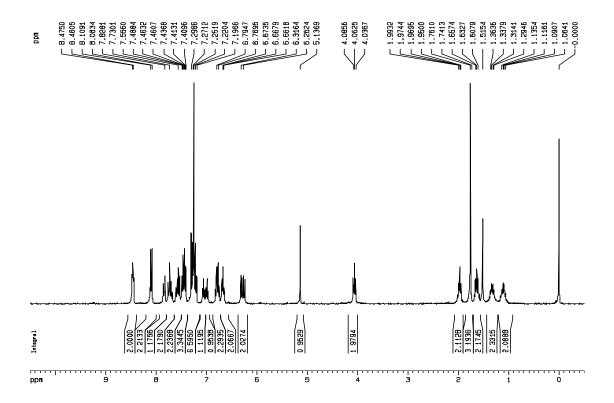


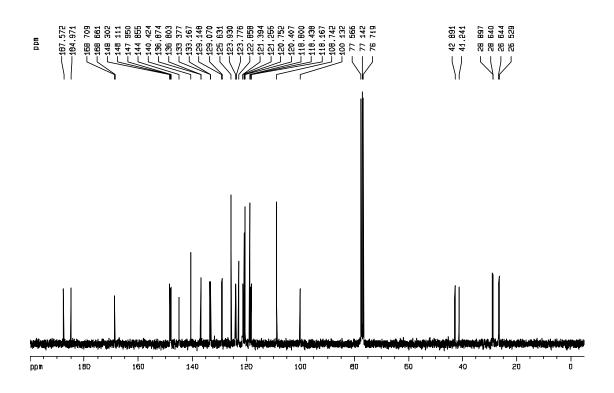


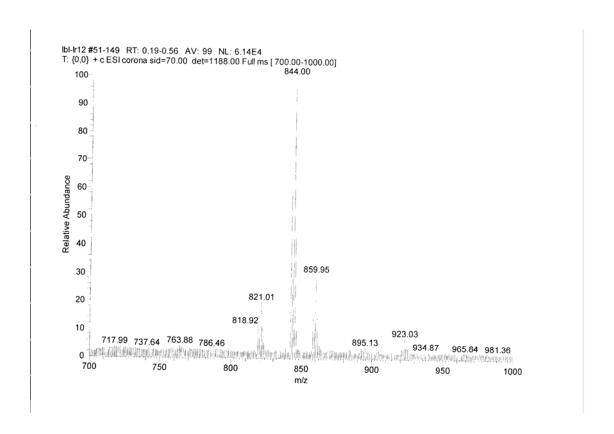




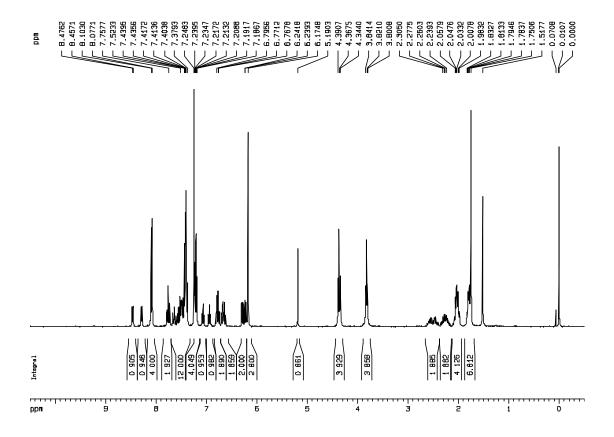
#### $Ir(ppy)_2CZG_0(9)$

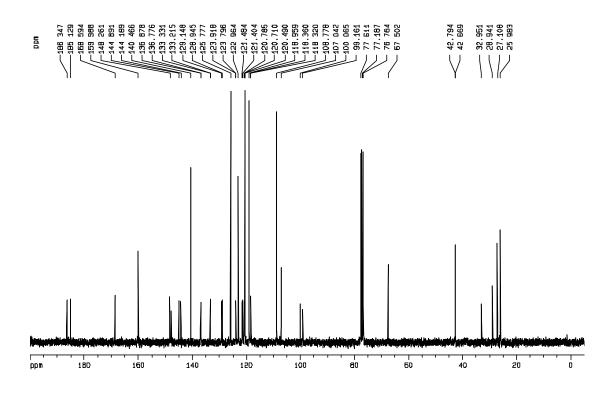


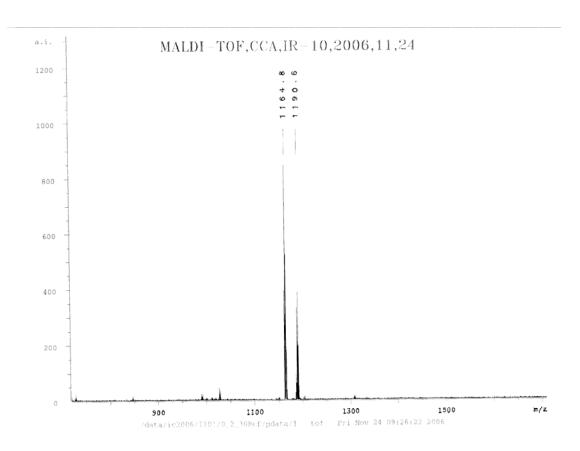




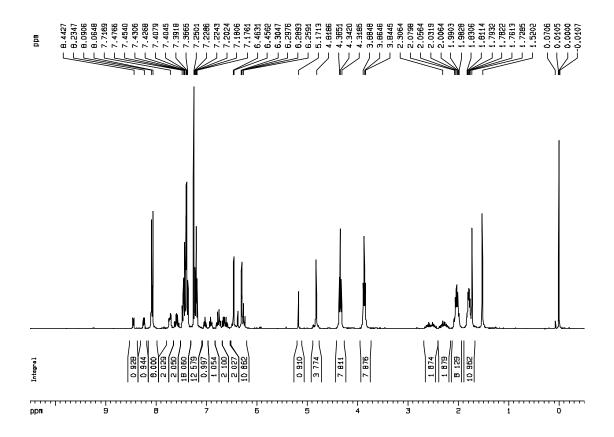
### $Ir(ppy)_2CZG_1(10)$

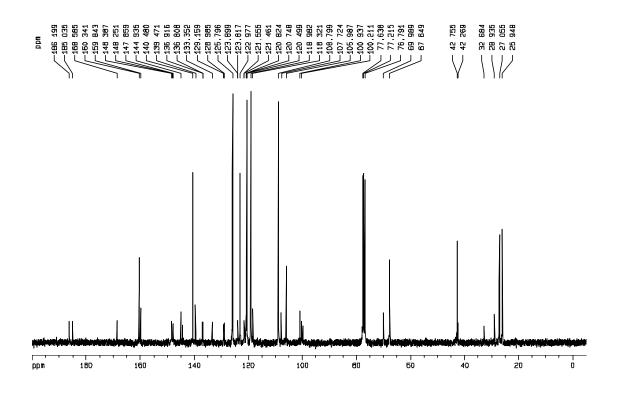


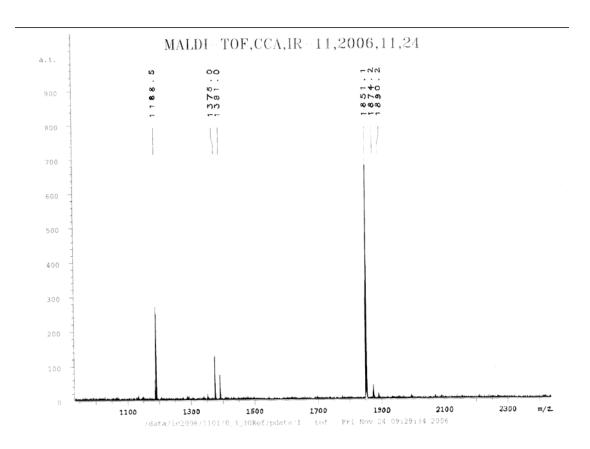




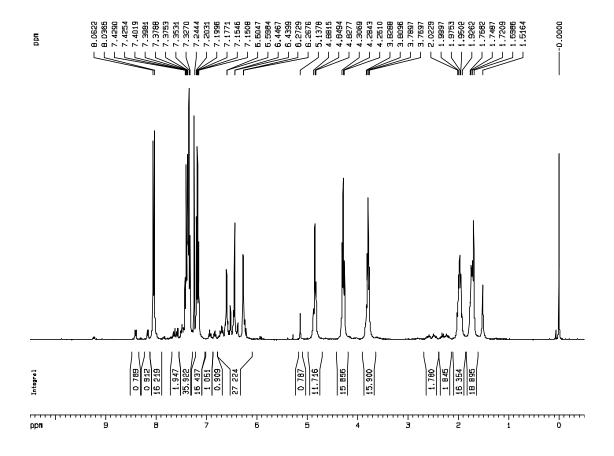
#### $Ir(ppy)_2CZG_2(11)$

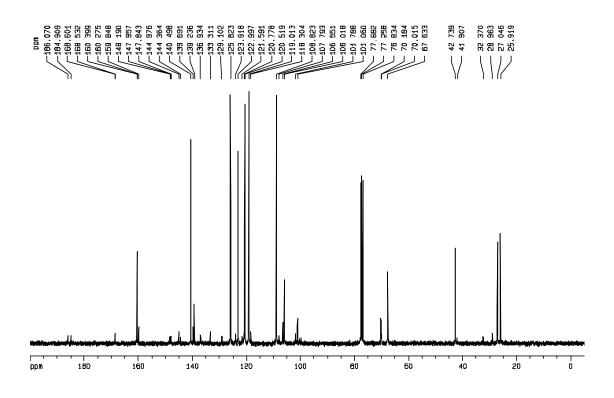


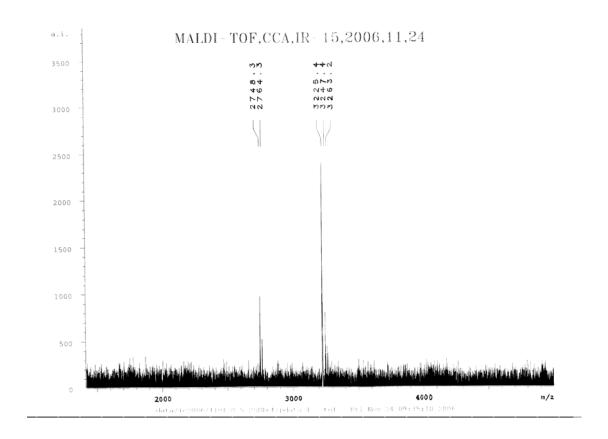




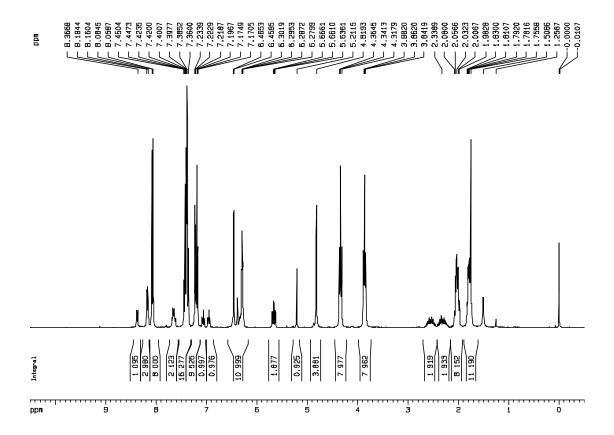
### $Ir(ppy)_2CZG_3(12)$

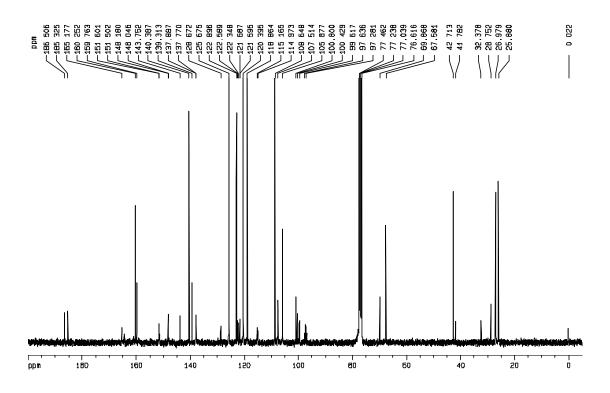


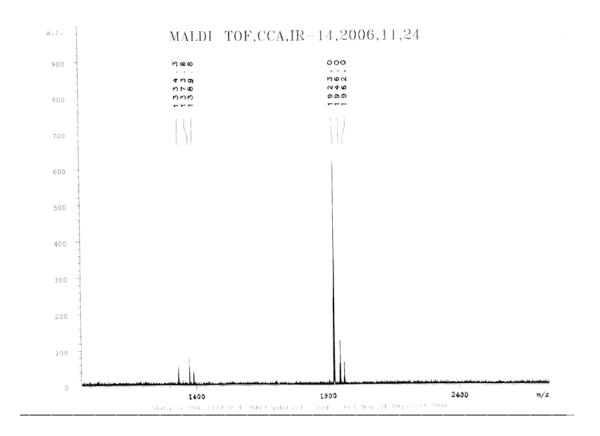




### $Ir(dfp)_2CZG_2(13)$







#### $Ir(btp)_2CZG_2(14)$

