

Efficient red phosphorescent Ir(III) complexes based on rigid ligands with high external quantum efficiency and low efficiency roll-off

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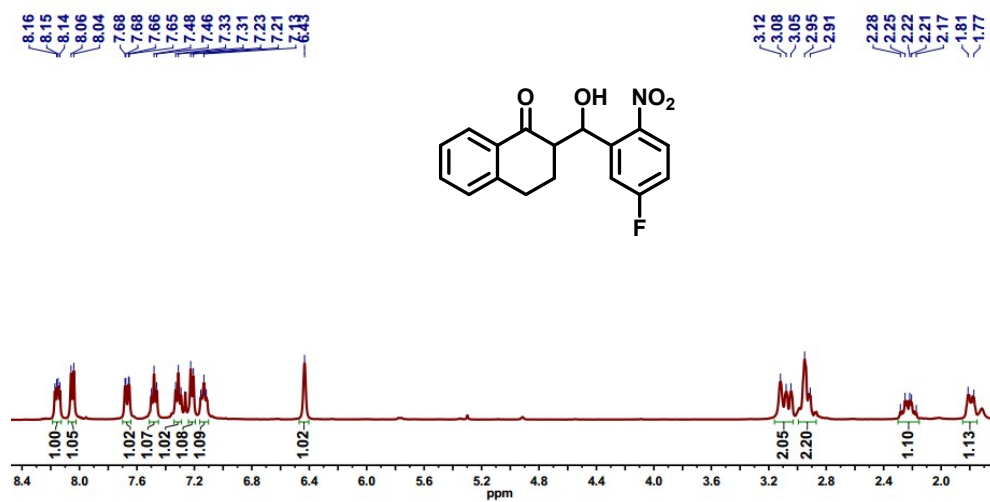


Figure S1. <sup>1</sup>H MMR of compound 2.

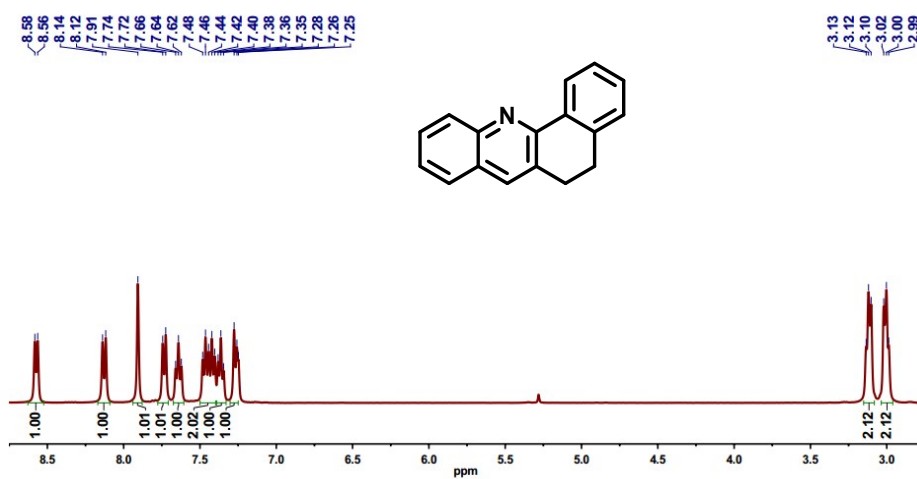


Figure S2. <sup>1</sup>H MMR of compound 3.

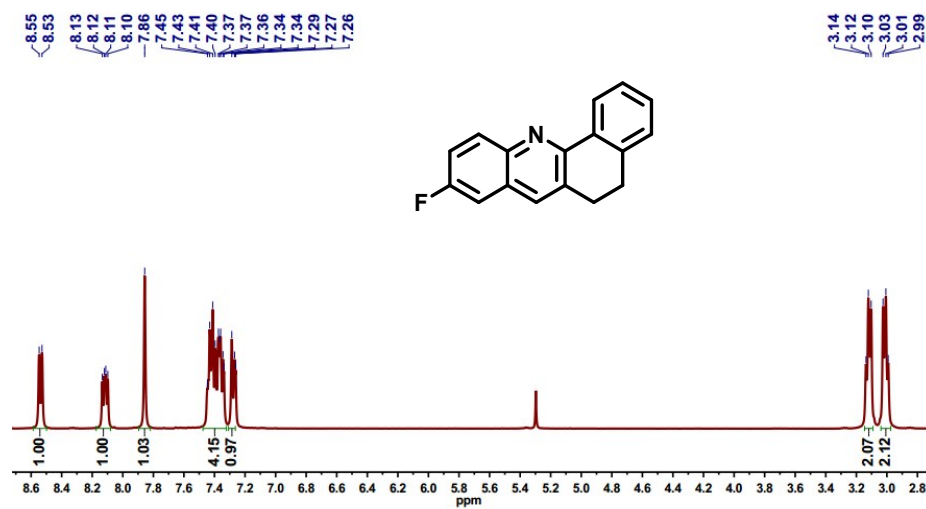


Figure S3. <sup>1</sup>H MMR of compound 4.

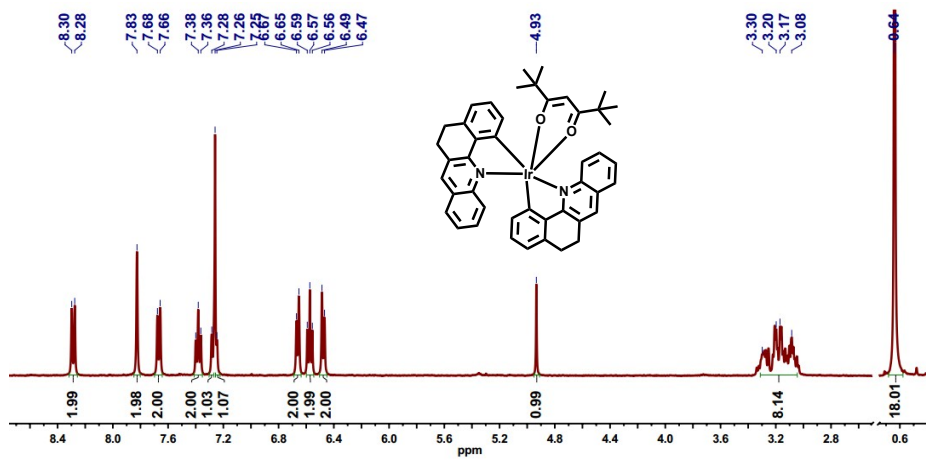


Figure S4. <sup>1</sup>H MMR of Ir-DHBA.

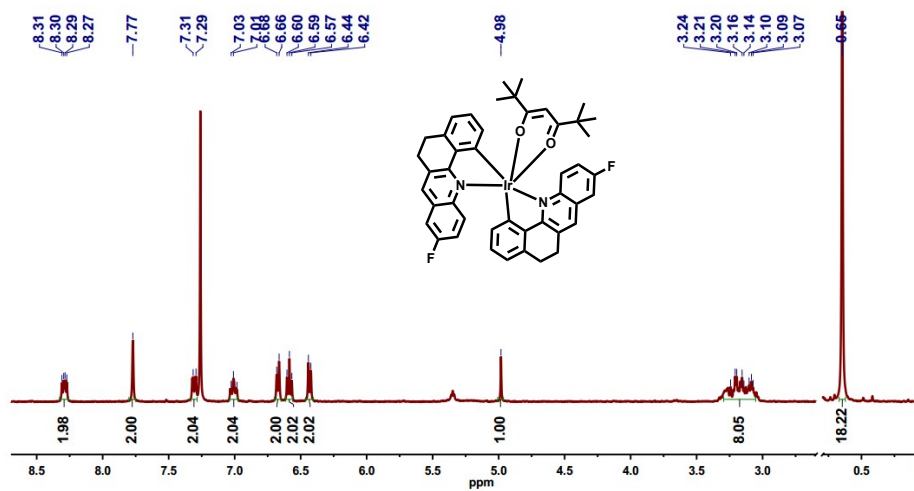


Figure S5.  $^1\text{H}$  MMR of Ir-F-DHBA.

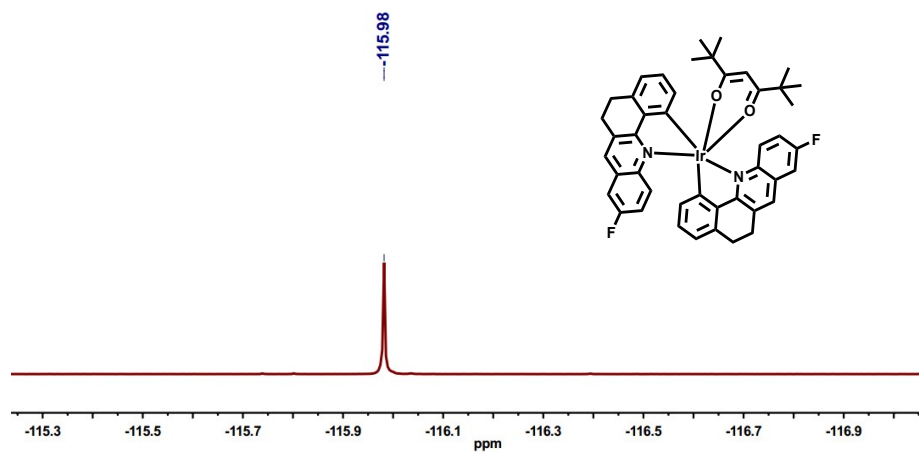


Figure S6.  $^{19}\text{F}$  MMR of Ir-F-DHBA.

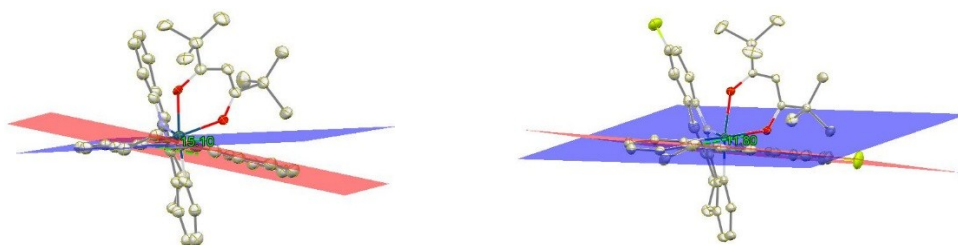


Figure S7. The slightly puckered arrangement of ligands in Ir(III) complexes.