

Supplementary Information (ESI)

Preparation of phosphorescent crystalline tris(1-phenylisoquinoline) iridium nanobelts *via* a recrystallization method

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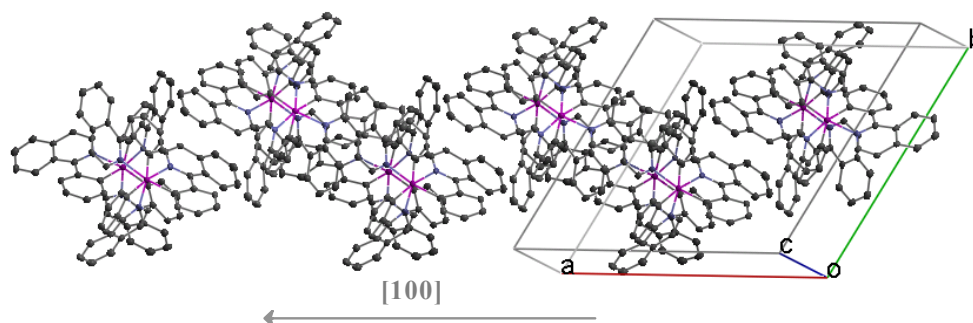


Figure S-1. Packing mode of Ir(piq)₃ molecules along (1 0 0) face in crystal cell of the single crystals and the nanobelts.

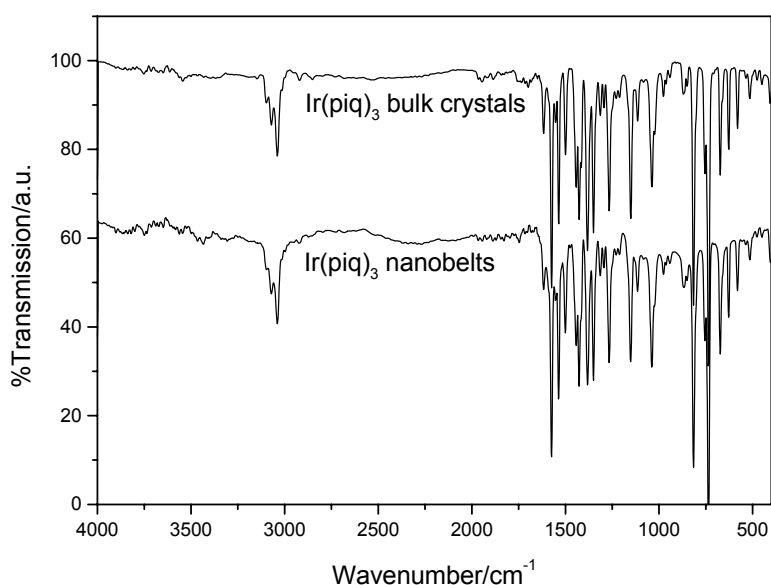


Figure S-2. FT-IR spectra of the as-prepared Ir(piq)₃ nanobelts and Ir(piq)₃ bulk crystals, indicating that no chemical modification of Ir(piq)₃ molecules occurred in the as-obtained nanobelts during the recrystallization process in hot solvent.

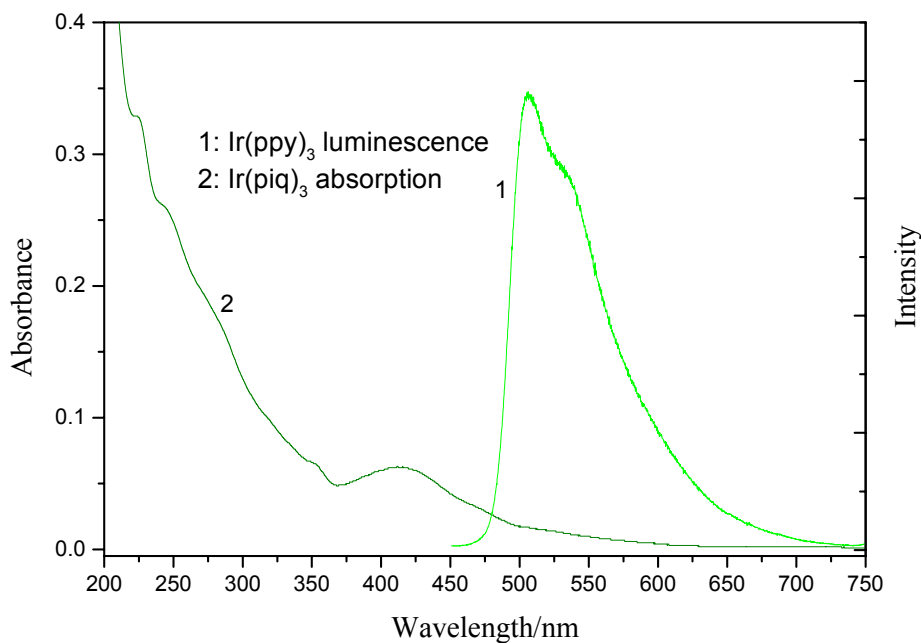
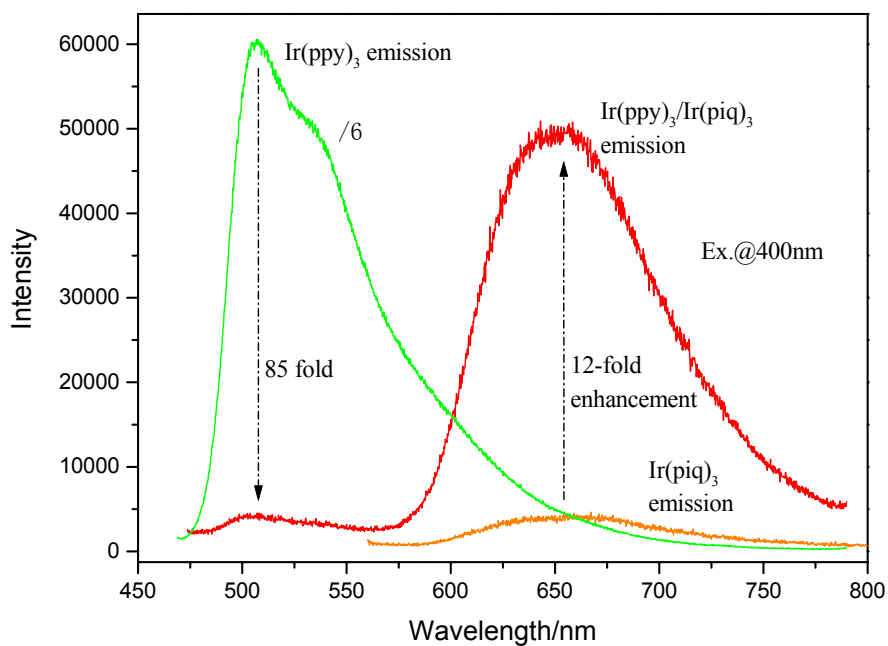
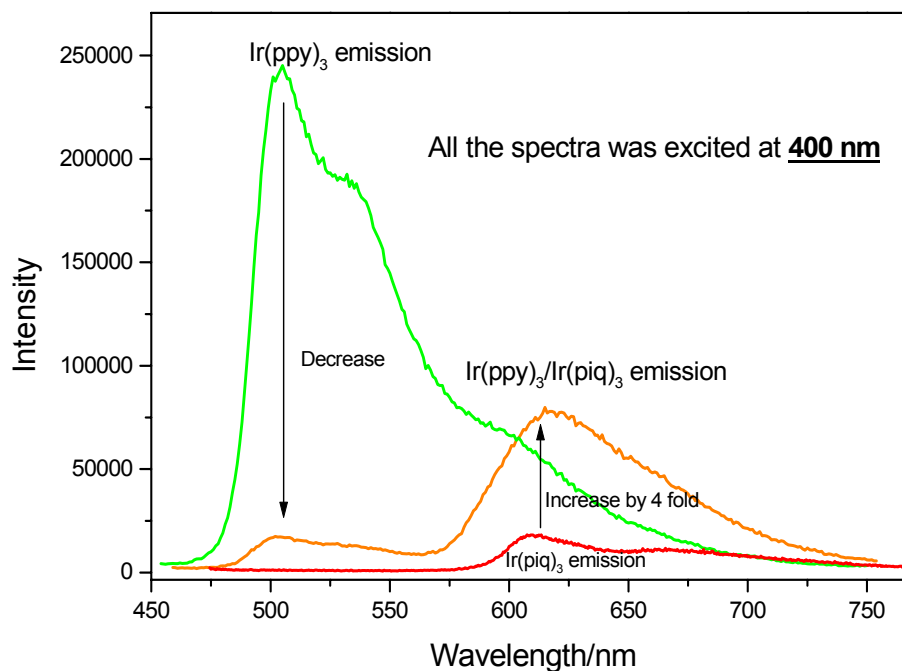


Figure S-3a. The existence of spectral overlap between the optical absorption of Ir(piq)₃ and photoluminescence of Ir(ppy)₃, indicating the possibility of occurrence of resonance energy transfer from Ir(ppy)₃ to Ir(piq)₃.



(1) Ir(ppy)₃, Ir(piq)₃ and their doping system are all solubilized by polyvinyl alcohol (PVA) in water.



(2) Ir(ppy)₃, Ir(pi q)₃ and their doping system are all solubilized by cetyltrimethylammonium bromide (CTAB) in water.

Figure S-3b. Enhanced photoluminescence of Ir(pi q)₃ by the resonance energy transfer from the energy donor Ir(ppy)₃ in the doping system of Ir(ppy)₃/Ir(pi q)₃ solubilized by (1) PVA and (2) CTAB.

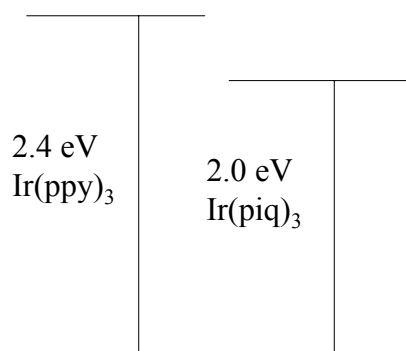


Figure S-4. A triplet energy level diagram has been depicted according to Ref. 19.