

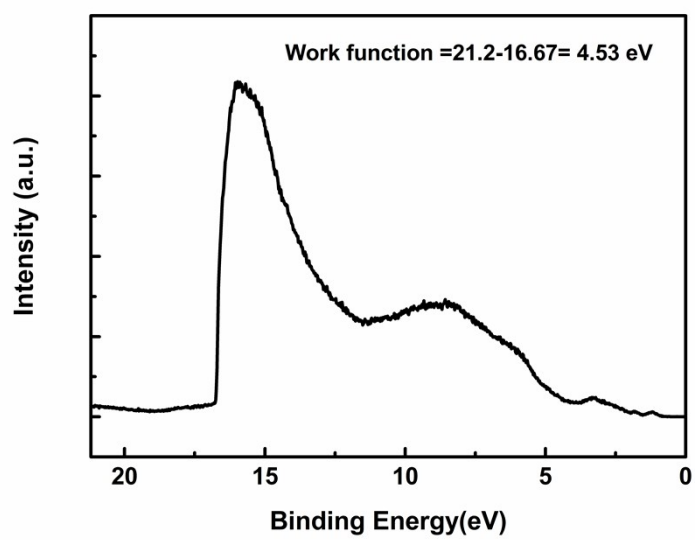
Supporting Information

Solution-Processable Iridium Phosphors for Efficient Red and White Organic Light-Emitting Diodes with Low Roll-Off

Ya-Li Deng, Lin-Song Cui, Yuan Liu, Zhao-Kui Wang,* Zuo-Quan Jiang, and Liang-Sheng
Liao*

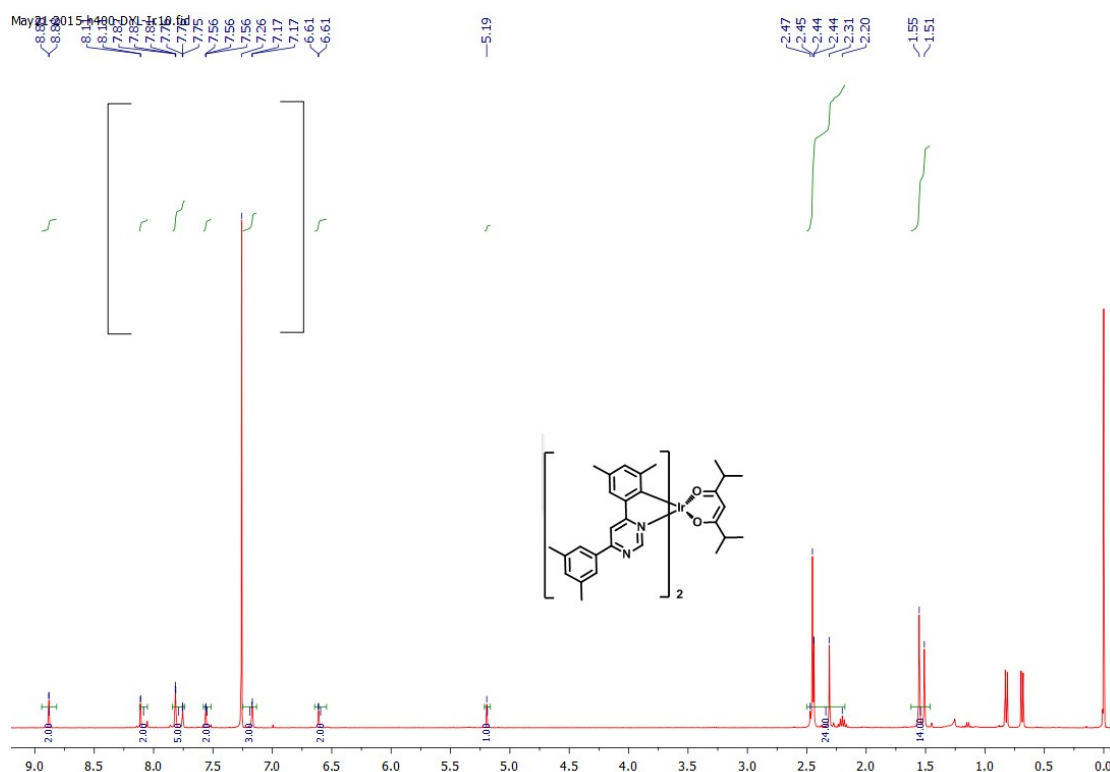
Jiangsu Key Laboratory for Carbon-Based Functional Materials & Devices, Institute of Functional
Nano & Soft Materials (FUNSOM), and Collaborative Innovation Center of Suzhou Nano Science
and Technology, Soochow University, Suzhou, Jiangsu 215123, China

Address all correspondence to the authors. Email: lsiao@suda.edu.cn; zkwang@suda.edu.cn

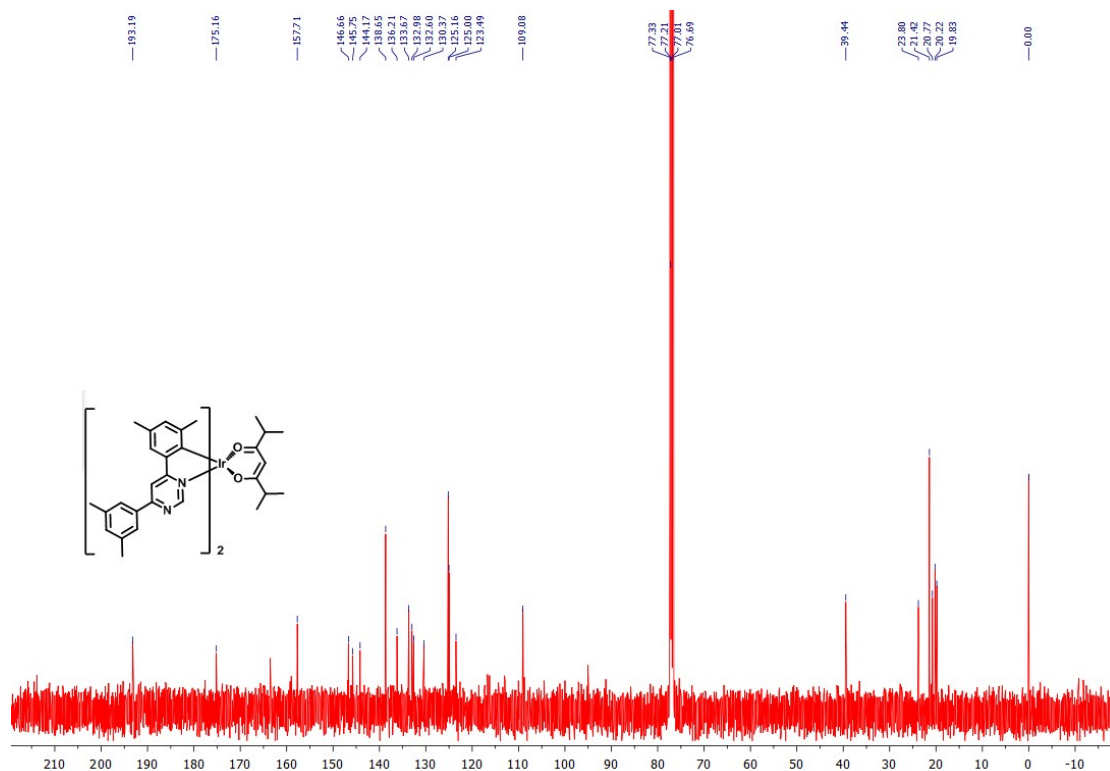


S1. UPS spectrum of Ir(dmppm)₂(dmd)

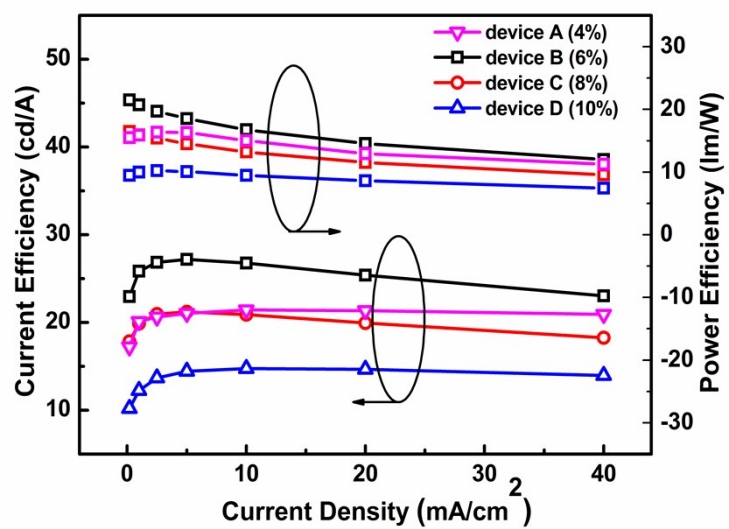
^1H NMR (400 MHz, CDCl_3) δ (ppm): 8.88 (s, 2H) 8.10 (s, 2H) 7.83-7.73 (m, 5H, $J=8.0$ Hz,) 7.56 (s, 2H) 6.66 (s, 3H) 5.19 (s, H) 2.48-2.16 (m, 24H) 1.61-1.46 (m, 14H). ^{13}C NMR (100 MHz, CDCl_3) δ (ppm): 193.2, 175.2, 157.7, 146.6, 145.7, 144.4, 138.6, 136.2, 133.6, 132.6, 130.4, 125.2, 125.00, 109.08, 39.44, 23.80, 21.42, 20.77, 20.22, 19.83. MS (MALDI-TOF): m/z 922.54 $[\text{M}^+]$. Anal. calcd for $\text{C}_{37}\text{H}_{29}\text{IrN}_4\text{O}_2$ (%): C 63.82, H 5.79, N 6.08; found: C 63.74, H 5.82, N 6.05.



S2. ^1H NMR of $\text{Ir}(\text{dmppm})_2(\text{dmd})$.



S3. ^{13}C NMR of $\text{Ir}(\text{dmppm})_2(\text{dmd})$.



S4. LE and PE characteristics of the red device based on $\text{Ir}(\text{dmppm})_2(\text{dmd})$ with different doping ratios,
device structure: ITO/PEDOT:PSS (40 nm)/TCTA: x wt% $\text{Ir}(\text{dmppm})_2(\text{dmd})$ (45 nm)/TPBI (40
nm)/LiQ(2nm)/Al (120 nm).