

Supplementary data

Highly Efficient White-Electrophosphorescent Devices Based on Polyfluorene Copolymers Containing Charge-Transporting Pendent Units

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PF-TPA-OXD: ^1H NMR (300 MHz, CDCl_3): δ 8.11-7.93 (10H, m), 7.84-7.51 (30H, m), 7.16-6.89 (24H, m), 2.54(8H, m), 2.04(8H, m), 1.57(8H, m), 1.40-1.24 (26H, m), 1.19-1.02 (40H, m), 0.89 (12H, t, $J = 7.5$ Hz), 0.75-0.69 (20H, m). ^{13}C NMR (75 MHz, CDCl_3): δ 164.8, 164.1, 155.4, 152.9, 151.9, 151.8, 150.9, 149.3, 146.8, 145.4, 141.9, 141.1, 140.4, 140.3, 139.8, 139.1, 138.9, 138.6, 137.6, 129.1, 129.0, 128.9, 127.7, 127.4, 127.3, 126.8, 126.3, 126.1, 124.7, 123.0, 121.9, 121.4, 121.1, 120.9, 120.4, 120.1, 65.9, 64.8, 55.4, 40.4, 35.2, 35.1, 33.7, 31.8, 31.2, 30.0, 29.2, 23.9, 22.6, 22.4, 14.1, 14.0. Anal. Calcd. for $\text{C}_{172}\text{H}_{186}\text{N}_6\text{O}_2$: C, 87.19; N, 3.55; H, 7.91. Found: C, 86.27; N, 3.11; H, 7.73.

Os(fpzz): MS (FAB, ^{192}Os), observed m/z [assignment]: 892 [M^+], 754 [$\text{M}^+ - \text{PPhMe}_2$], 616 [$\text{M}^+ - 2\text{PPhMe}_2$]. ^1H NMR (400 MHz, d_6 -acetone): δ 10.31 (dd, 2H, $J_{\text{HH}} = 6.6, 0.8$ Hz, H_{py}), 7.56 ~ 7.48 (m, 4H, H_{py}), 7.05 (ddd, 2H, $J_{\text{HH}} = 6.8, 6.6, 0.8$ Hz, H_{py}), 6.94 ~ 6.87 (m, 8H, $\text{H}_{\text{Ph}}, \text{H}_{\text{pz}}$), 6.42 ~ 6.38 (m, 4H, H_{Ph}), 0.80 (t, 6H, $J_{\text{HP}} = 3.6$ Hz, Me), 0.60 (t, 6H, $J_{\text{HP}} = 3.6$ Hz, Me). ^{19}F NMR (470 MHz, d_6 -acetone): δ -59.5 (s). ^{31}P NMR (202 MHz, d_6 -acetone): δ -19.6 (s). Anal. Calcd. For $\text{C}_{34}\text{H}_{32}\text{F}_6\text{N}_6\text{P}_2\text{Os}$: C, 45.84; N, 9.43; H, 3.62. Found: C, 46.00; N, 9.32; H, 3.81.