

Supporting Information

Figure S1. The ¹H NMR spectrum and structure of CM2 (DMSO, 500 MHz,).



Figure S2. The FT-IR spectrum of CM2.

The CM2 characterization: ¹H NMR (DMSO, 500 MHz, δ, ppm): 8.74 (s, 4H), 8.26 (d, J = 100.4 Hz, 16H), 7.62 (d, J = 34.0 Hz, 16H), 3.90 (s, 172H), 3.20 (s, 10H). FT-IR (KBr, cm⁻¹): 3645-3068 (s, -OH), 2958 (s, -CH₃), 2881 (s, -CH₂-), 1728(vs, -C=O), 1488, 1454 (m, benzene), 1404 (m, -CH₂), 902, 848 (w, epoxy), 1153, 1068 (vs, -C-O), 945 (w, γ CH₂).



Figure S3. The ¹H NMR spectrum and structure of CM3 (DMSO, 500 MHz,).



Figure S4. The FT-IR spectrum of CM3.

The CM3 characterization: ¹H NMR (DMSO, 500 MHz, δ, ppm): 8.73 (s, 6H), 8.51 – 8.04 (m, 24H), 7.62 (d, J = 35.1 Hz, 24H), 3.90 (s, 168H), 3.20 (s, 10H). FT-IR (KBr, cm⁻¹): 3645-3068 (s, -OH), 2958 (s, -CH₃), 2881 (s, -CH₂-), 1728(vs, -C=O), 1488, 1454 (m, benzene), 1404 (m, -CH₂), 902, 848 (w, epoxy), 1153, 1068 (vs, -C-O), 945 (w, γ CH₂).



Figure S5. The ¹H NMR spectrum and structure of CM4 (DMSO, 500 MHz,).



Figure S6. The FT-IR spectrum of CM4.

The CM4 characterization: ¹H NMR (DMSO, 500 MHz, δ, ppm): 8.73 (s, 8H), 8.51 – 8.04 (m, 32H), 7.62 (d, J = 35.6 Hz, 33H), 3.90 (s, 164H), 3.20 (s, 10H). FT-IR (KBr, cm⁻¹): 3645-3068 (s, -OH), 2958 (s, -CH₃), 2881 (s, -CH₂-), 1728(vs, -C=O), 1488, 1454 (m, benzene), 1404 (m, -CH₂), 902, 848 (w, epoxy), 1153, 1068 (vs, -C-O), 945 (w, γ CH₂).