

Supporting information for

**Low-Voltage-Driven and Highly-Diffractive Holographic Polymer Dispersed
Liquid Crystals with Spherical Morphology**

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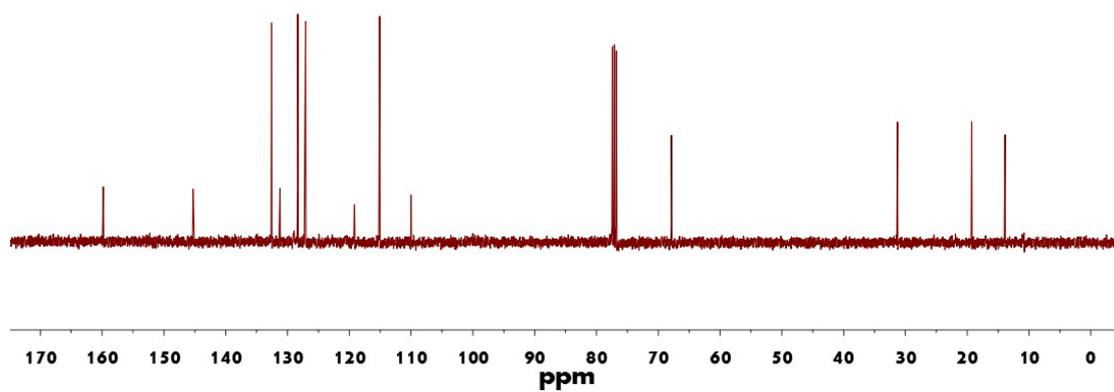
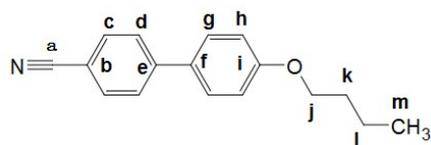


Figure S1. ¹³C NMR spectrum of the as-synthesized 4OCB. (400 MHz, CDCl₃) ¹³C-NMR δ[ppm]: 159.86 (i), 145.26 (e), 132.52 (c), 131.20 (f), 128.28 (g), 127.03 (d), 119.07 (a), 115.10 (h), 110.03 (b), 67.80 (j), 31.28 (k), 19.26 (l), 13.85 (m).

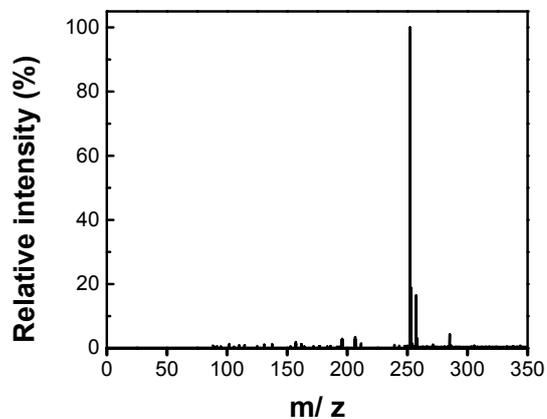


Figure S2. Mass spectrum of the as-synthesized 4OCB. Calculated $[C_{17}H_{18}NO]^+$ (MH^+): m/z 252.1344; found: 252.1378.

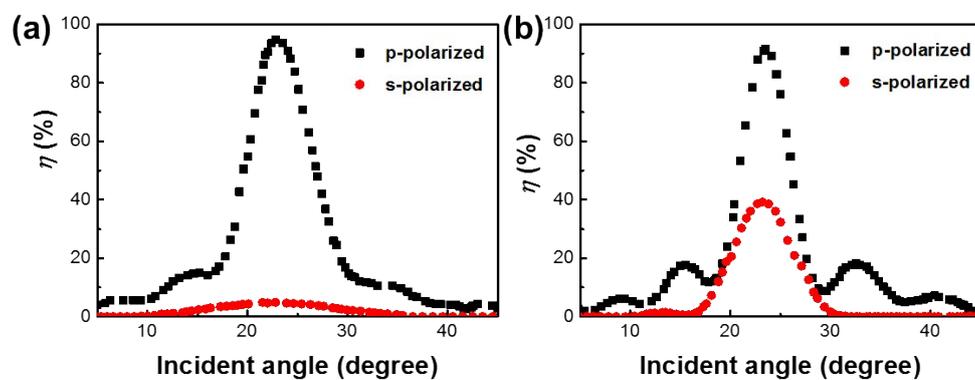


Figure S3. Representing polarization dependent diffraction efficiency, η , for the HPDLC gratings (a) without 4OCB, and (b) with 5 wt% 4OCB.

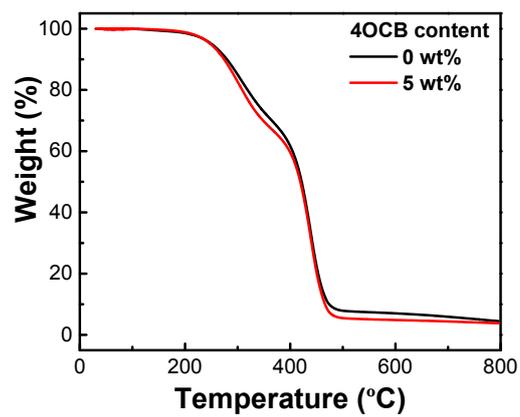


Figure S4. TGA curves of the HPDLC gratings without and with 5 wt% 4OCB. No weight loss is noted up to 104 °C, and only 1 wt% weight loss occurred up to 180 °C.