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*Electronic Supplementary Information*

# Well-Structured Holographic Polymer Dispersed Liquid Crystals by Employing Acrylamide and Doping ZnS Nanoparticles

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**Figure S1.** Illustration of compatibility when separately adding 10 wt% ZnS nanoparticles into the LCs P0616A (left) and hybrid monomers consisting of DMAA and 6361-100 with a 2:1 weight ratio (right). The picture was taken after the samples were treated by 30 min of ultrasonication and 10 min standing at 343 K. The white precipitate at the bottom of the left vial demonstrated the incompatibility of LCs P0616A with ZnS nanoparticles, while the homogeneous and transparent liquid in the right vial verified a good compatibility between the synthesized ZnS nanoparticles and monomer mixtures containing DMAA.

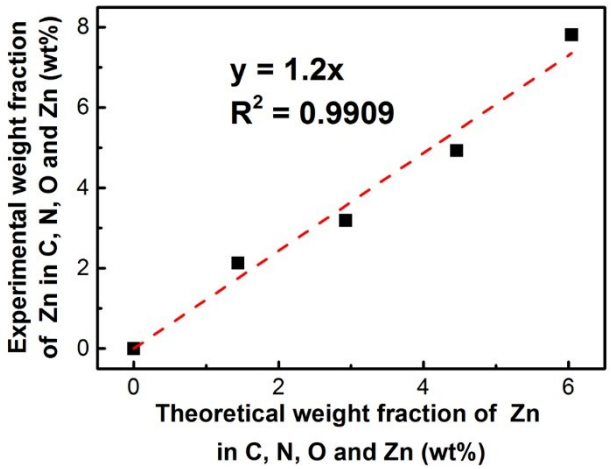


**Figure S2.** Weight fraction of the Zn element in C, N, O and Zn measured by EDAX experiments after the removal of LCs from HPDLCs gratings *versus* the theoretical value.