**Supplementary Information**

**A superstable homogeneous Lipiodol-hydrophilic chemodrugs formulation for treatment of hepatocellular carcinoma**

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**Figure S1.** Verification of the N1S1 orthotopic models via MRI, embolization of SHIFT&DOX and CT monitored embolic evaluation.

**Figure S2.** The colour photo of drugs release for freeDOX, nanoDOX within 7 days.

**Figure S3.** The typical fluorescence microscope images of pure water-soluble freeDOX and nanoDOX injection in the decellularized liver venous.
Figure S4. Representative SFM images with reverse phase (Adobe Photoshop CC 2019) of DOX released from SHIFT&DOX and TIFT&DOX of newly injected as well as samples stored for 6 h, 12 h, and 24 h.

Figure S5. The biochemical analysis results of SD rat acute toxicity test on 3 days at the double doses (2 mg).
Figure S6. The biochemical analysis results of SD rat acute toxicity test on 7 days at the double doses (2 mg).

Figure S7. The biochemical analysis results of SD rat acute toxicity test on 3 days at the quadruple doses (4 mg).
**Figure S8.** The biochemical analysis results of SD rat acute toxicity test on 7 days at the quadruple doses (4 mg).

**Figure S9.** The H&E tissue staining of heart, liver, spleen, lung and kidney of SD rat acute toxicity test on 7 days after TACE.
Figure S10. The H&E tissue staining of heart, liver, spleen, lung and kidney of the rabbit model on 10 days after TACE.

Figure S11. The blood cells and biochemical analysis results on 3 days after TACE.
Figure S12. The blood cells and biochemical analysis results on 7 days after TACE.

Figure S13. The blood cells and biochemical analysis results on 10 days after TACE.