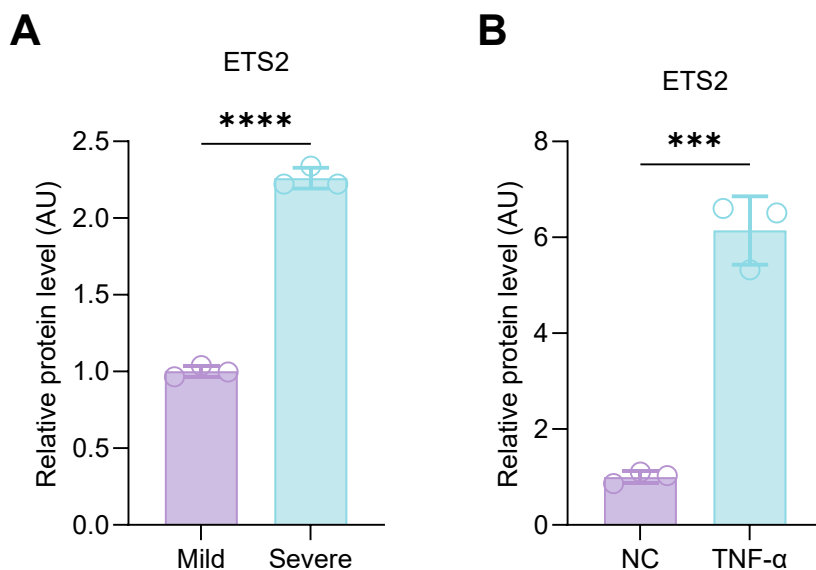
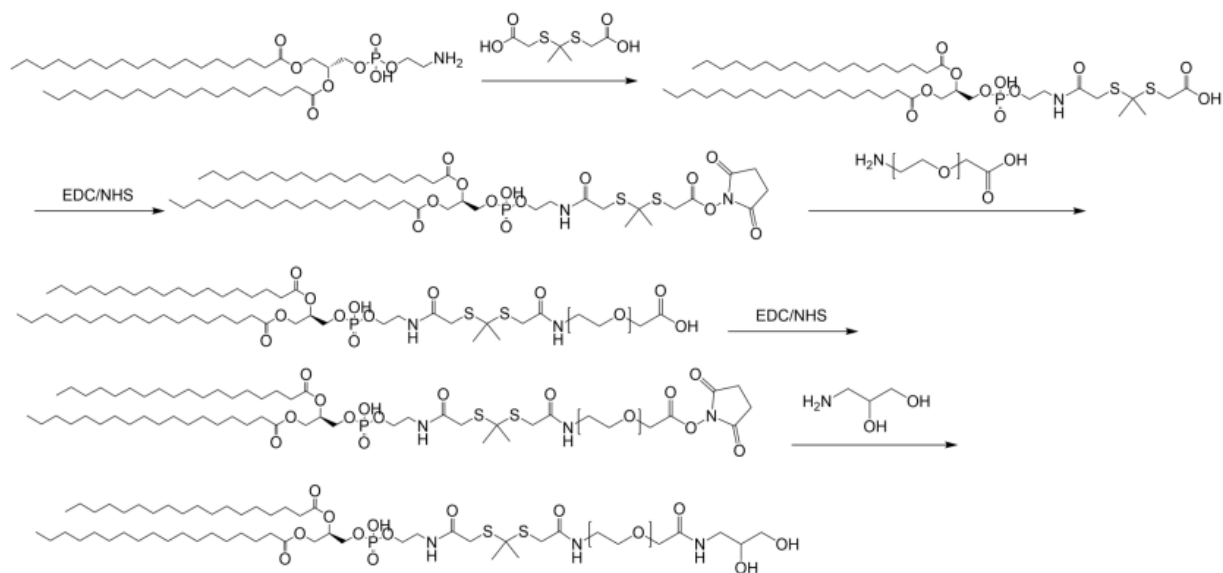
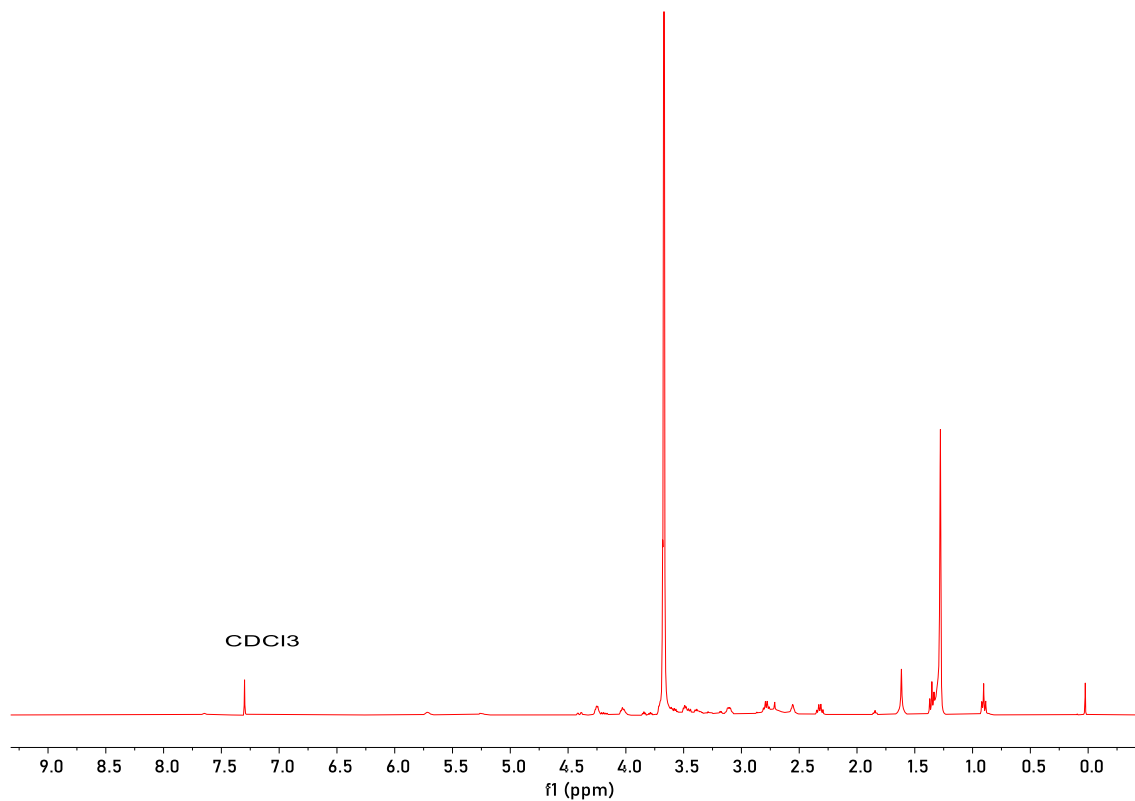




Supplementary Fig. 1. A Quantification of Western blot of ETS2 expression in clinical NP samples (n = 3). **B** Quantification of Western blot of ETS2 expression in NPCs treated with TNF- α for 24 h (n = 3).

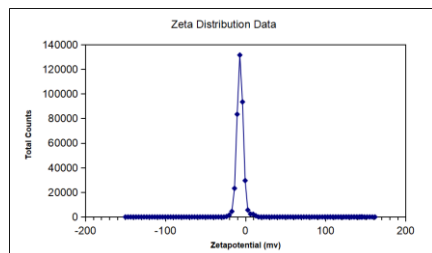
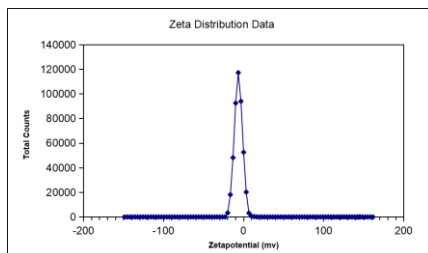
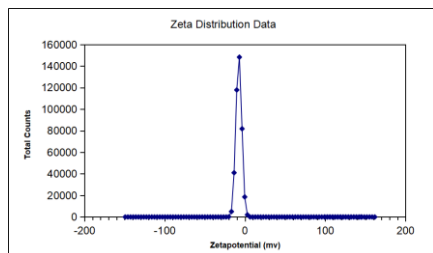


Supplementary Fig. 2. Roadmap for the synthesis of DSPE-TK-PEG2000 with an o-diol structure at the end

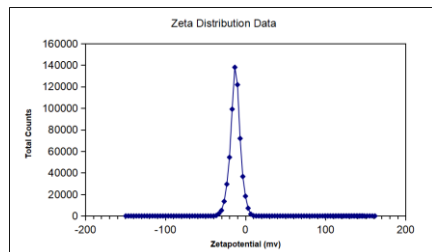
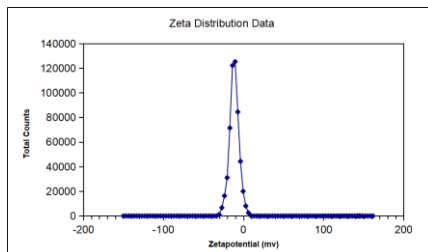
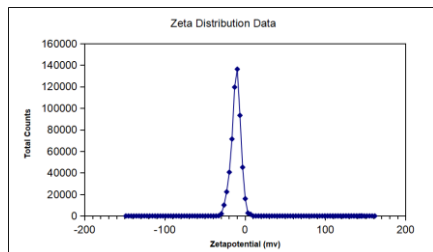


Supplementary Fig. 3. HPLC detection of DSPE-TK-PEG2000 with an o-diol structure at the end

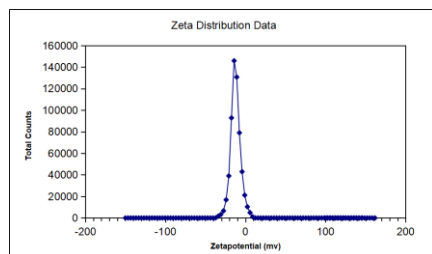
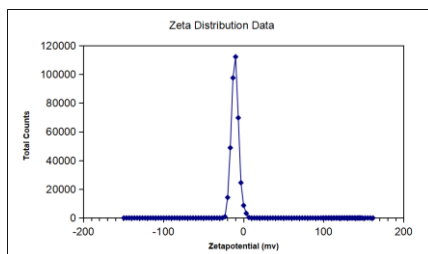
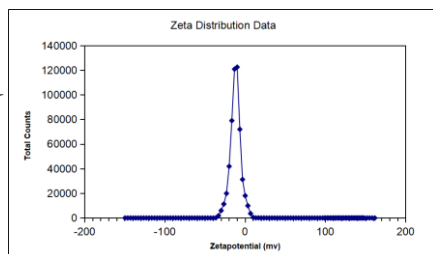
L



LT

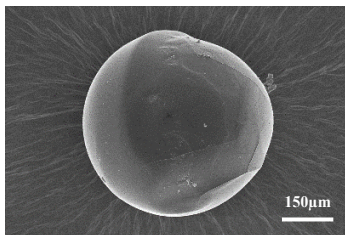


LTM

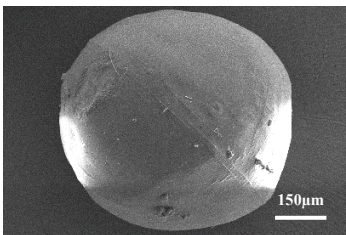


Supplementary Fig. 4. Plot of zeta potential of L, LT and LTM

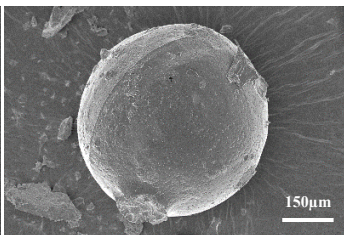
-20°C



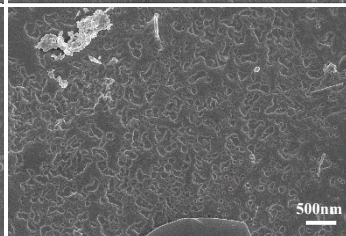
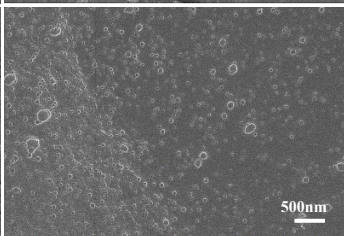
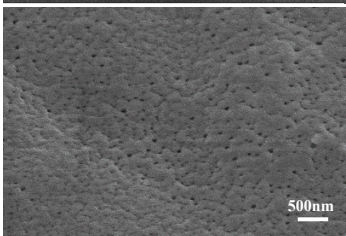
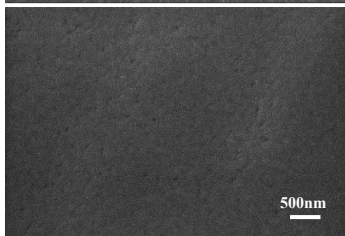
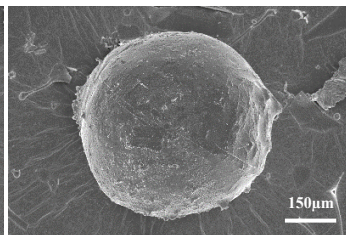
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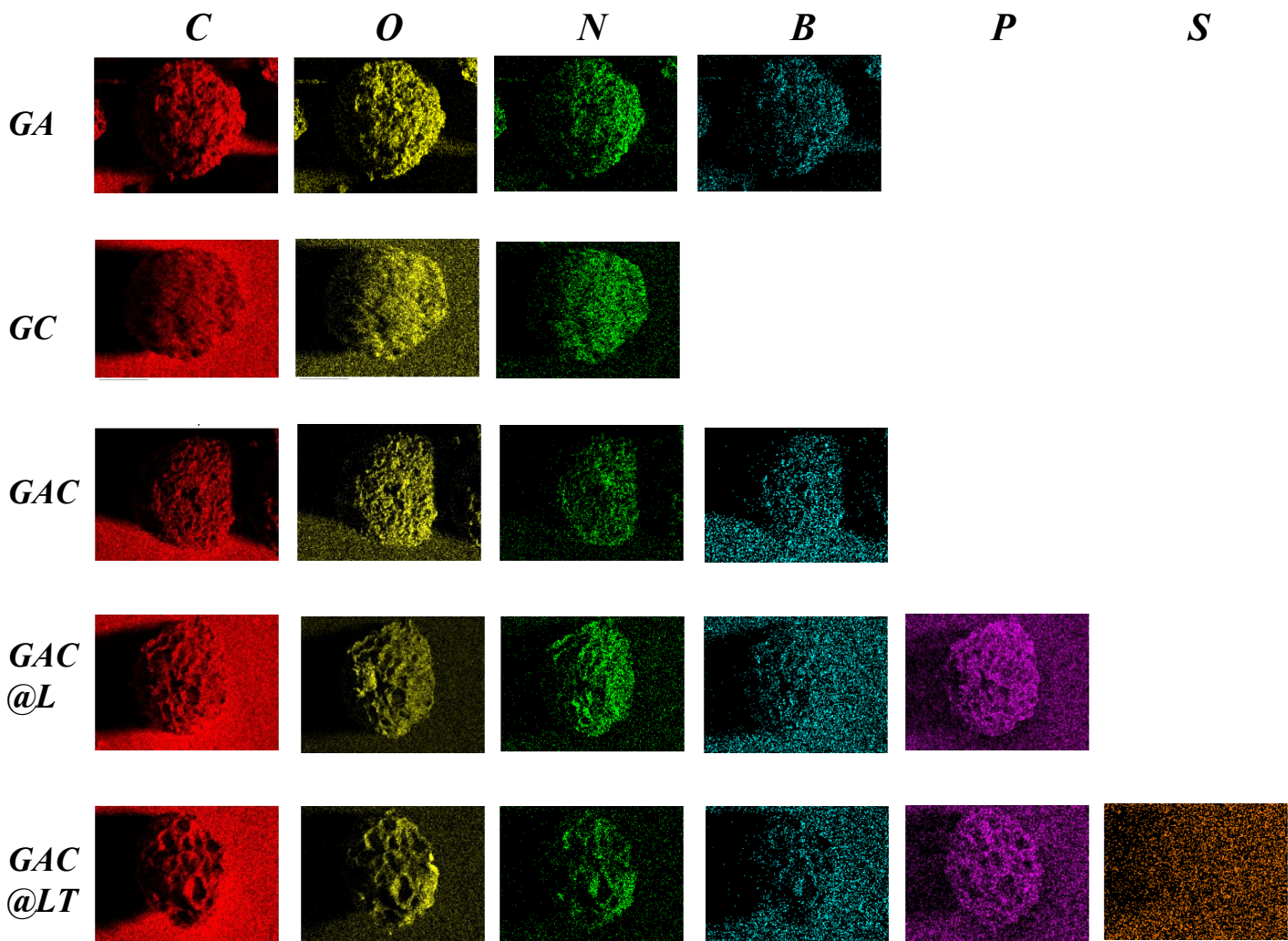
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-80°C

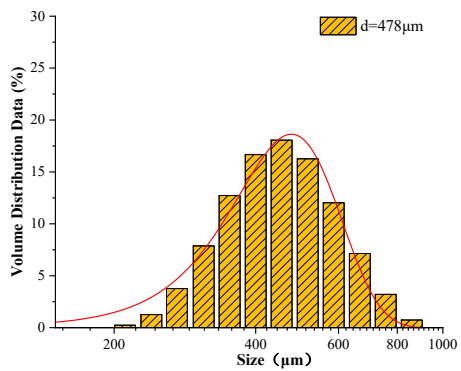


Supplementary Fig. 5. SEM images of GelMA under different processing conditions

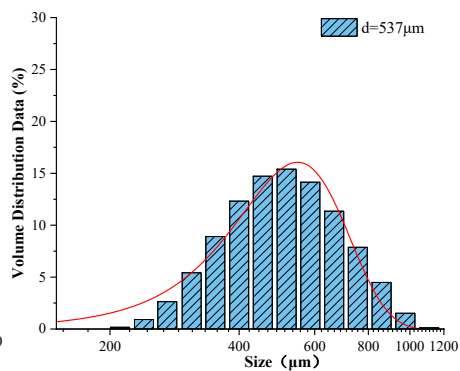


Supplementary Fig. 6. EDS scan images of each experimental group

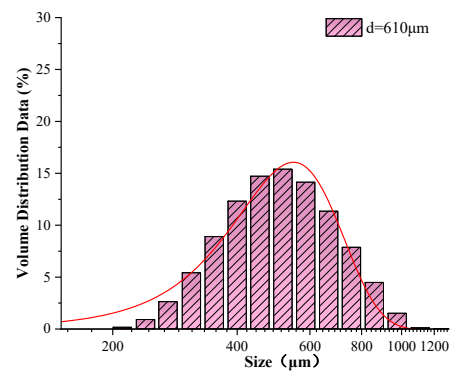
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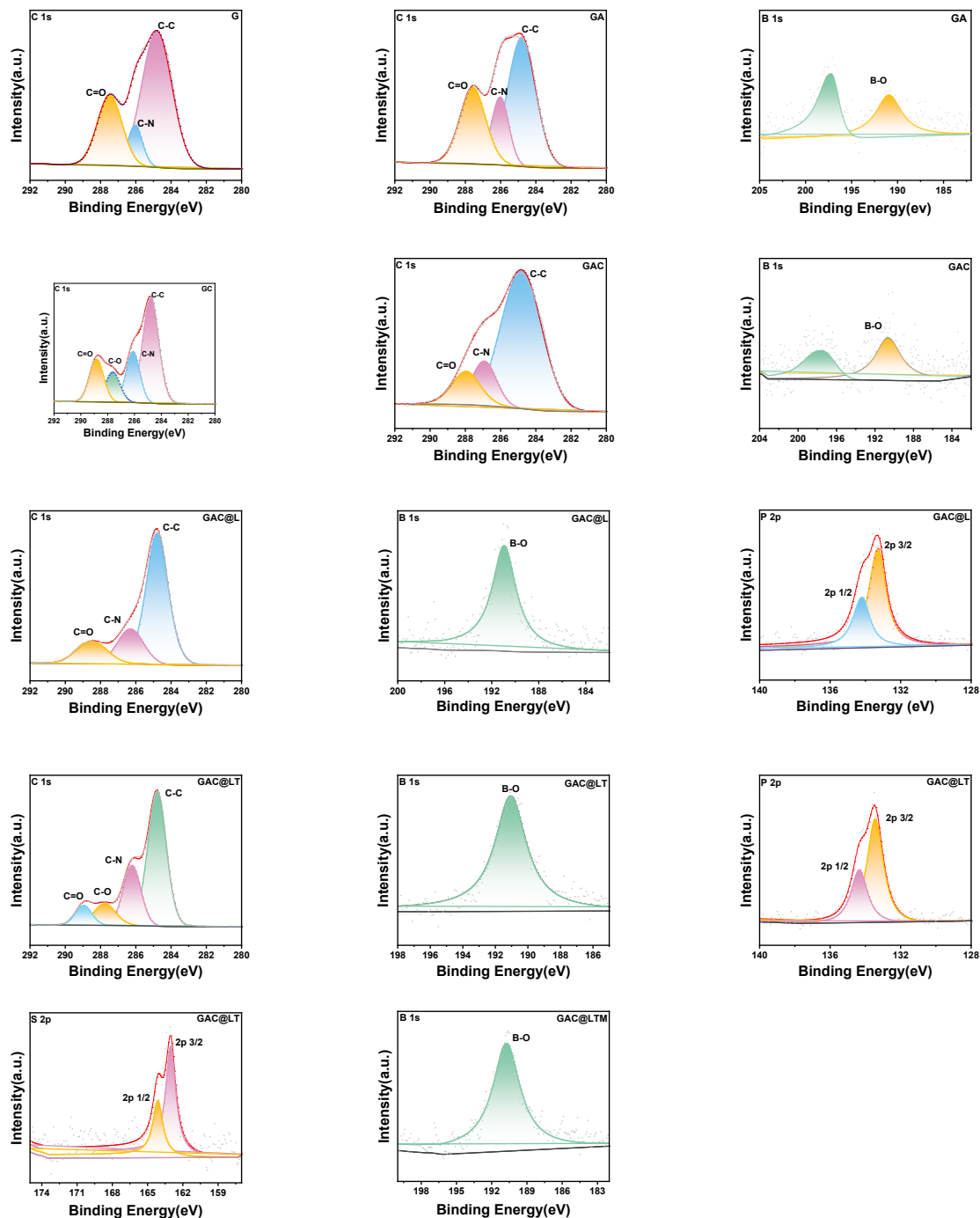
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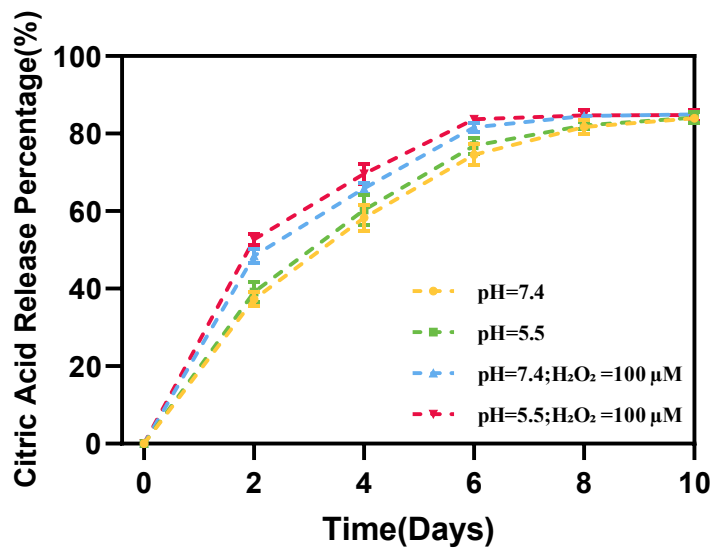
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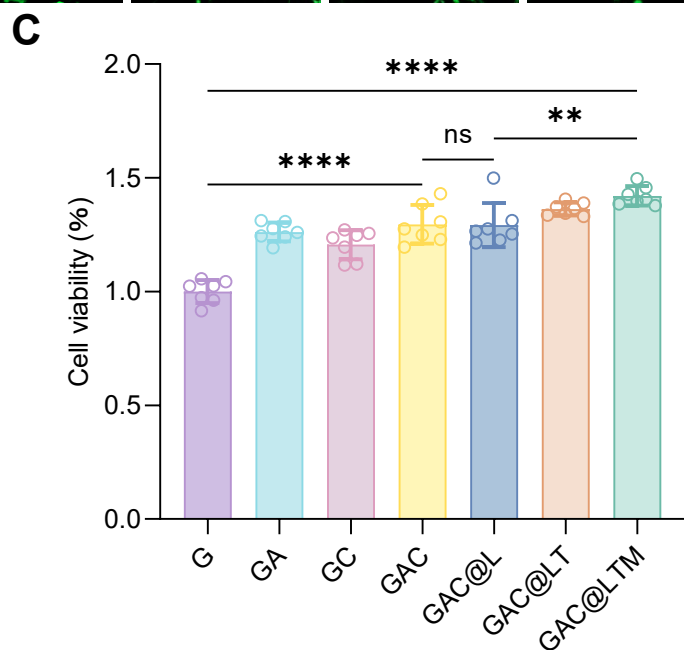
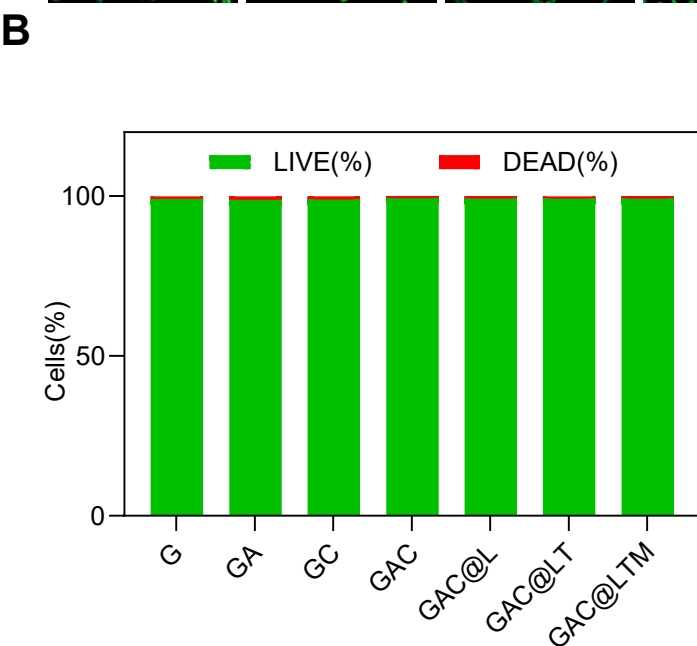
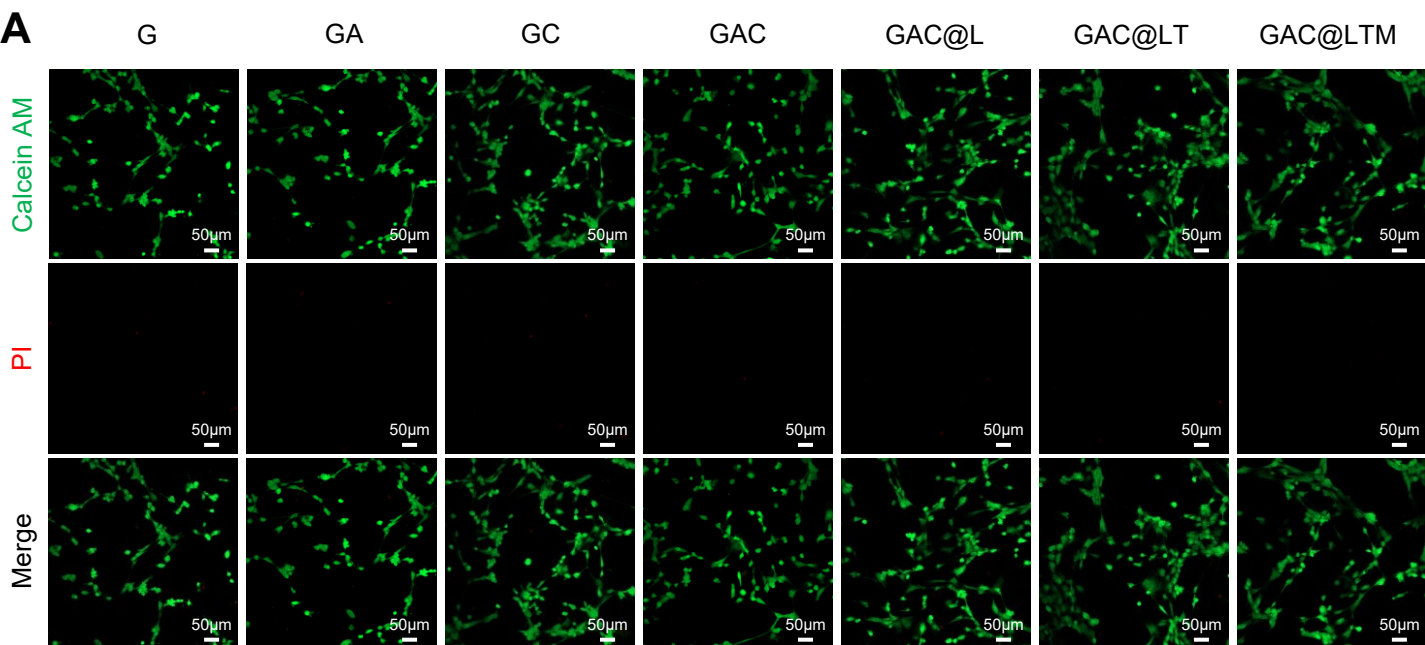
Supplementary Fig. 7. Particle size analysis



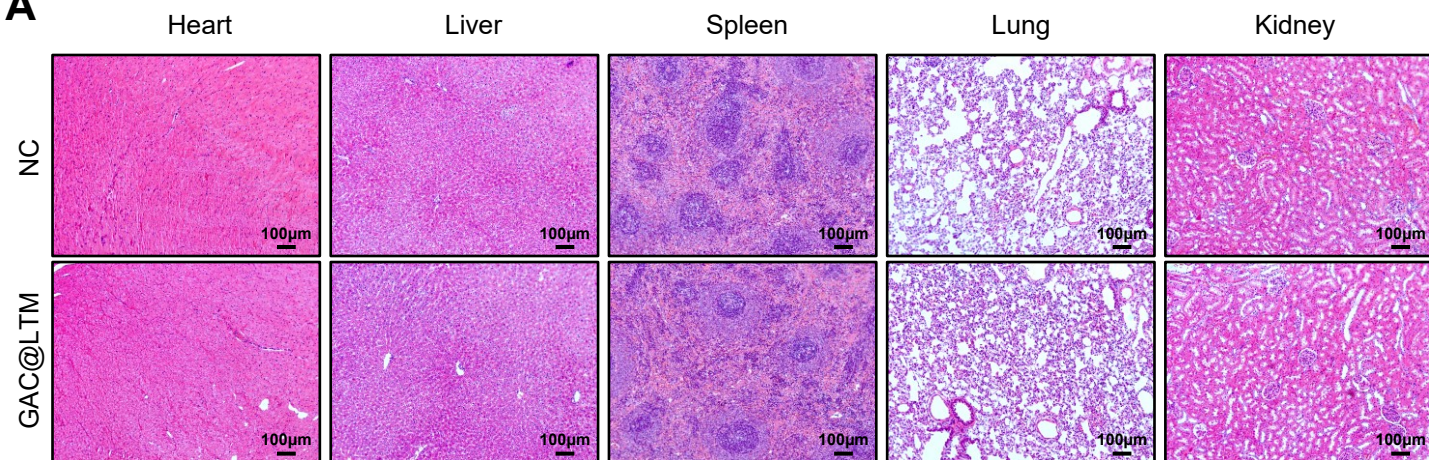
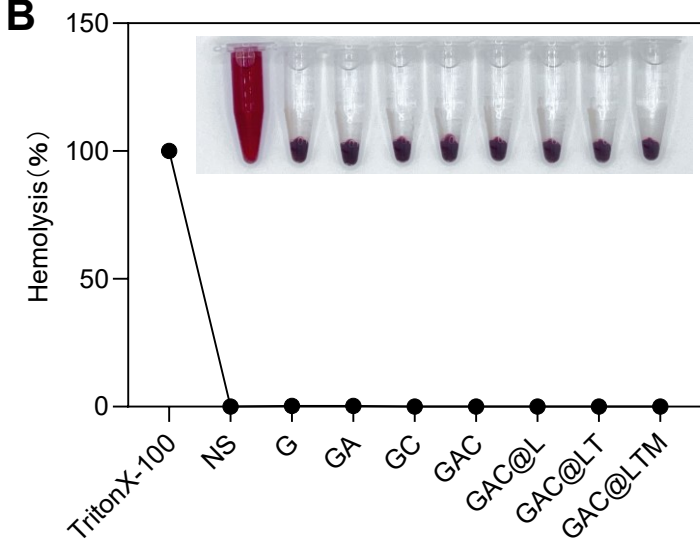
Supplementary Fig. 8. XPS assay for each group



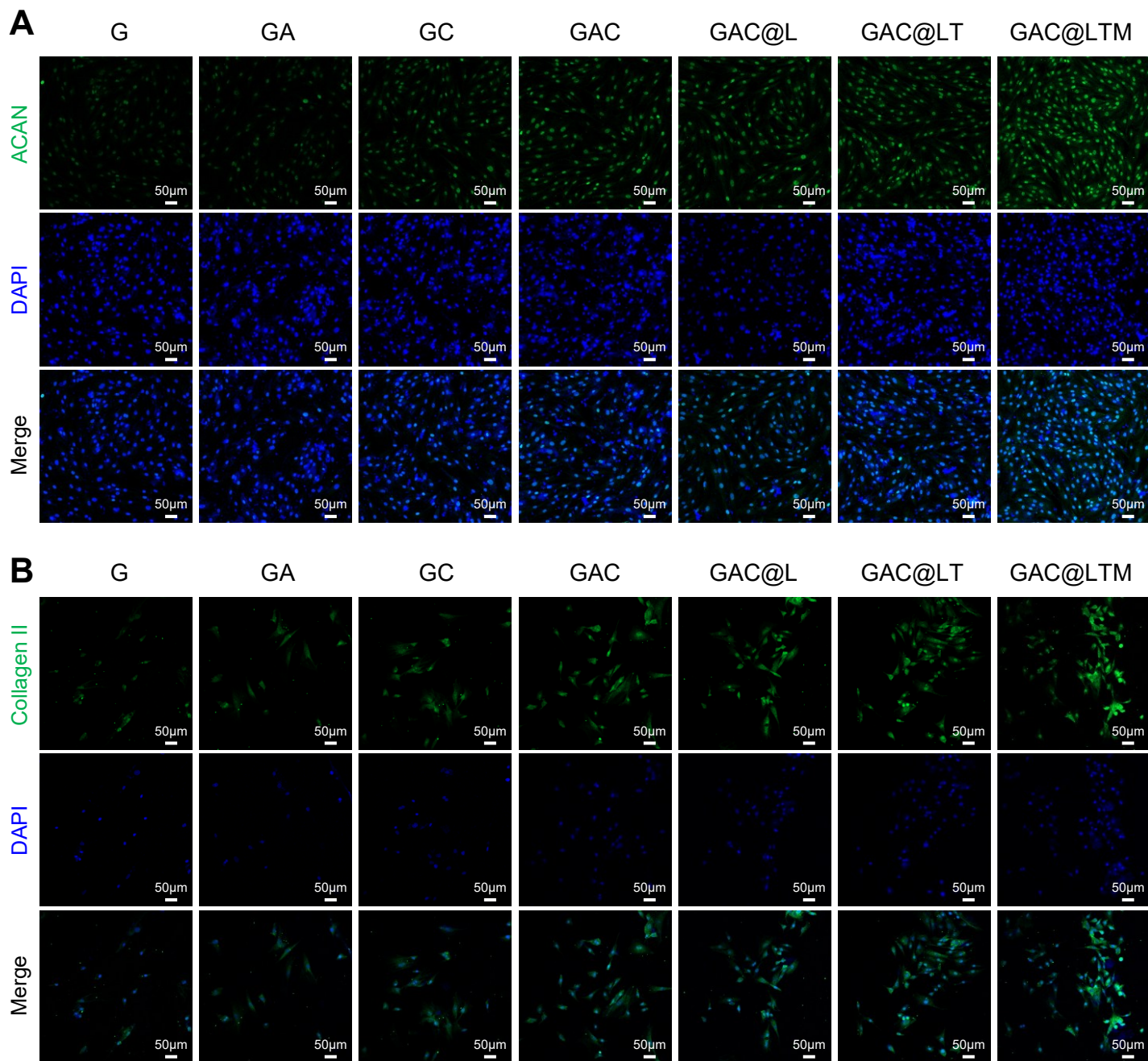
Supplementary Fig. 9. GAC@LTM citric acid drug release curve



Supplementary Fig. 10. A, B Live/dead cell staining and quantification of NPCs treated with hydrogel microspheres of different components for 24 h. **C** Cell viability of NPCs treated with hydrogel microspheres of different components for 24 h.

A**B**

Supplementary Fig. 11. A HE staining of organs after treatment.
B Hemolysis experiment after treatment.



Supplementary Fig. 12. A, B Immunofluorescence of ACAN and Collagen II expression of NPCs treated with TNF- α and hydrogel microspheres of different components for 24 h.