

## Supplementary Information

### **A novel bi-layered asymmetric membrane incorporated with demineralized dentin matrix accelerates tissue healing and bone regeneration in a rat skull defect model**

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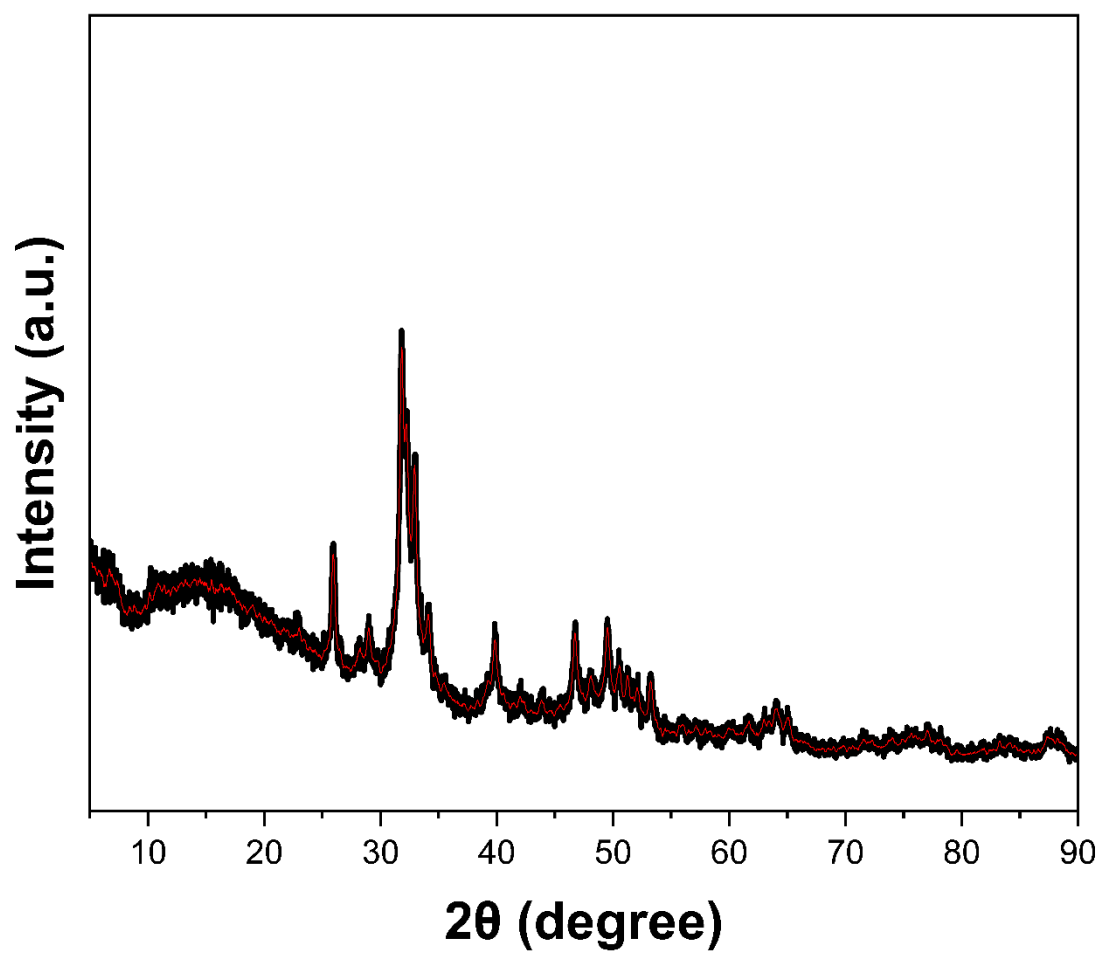
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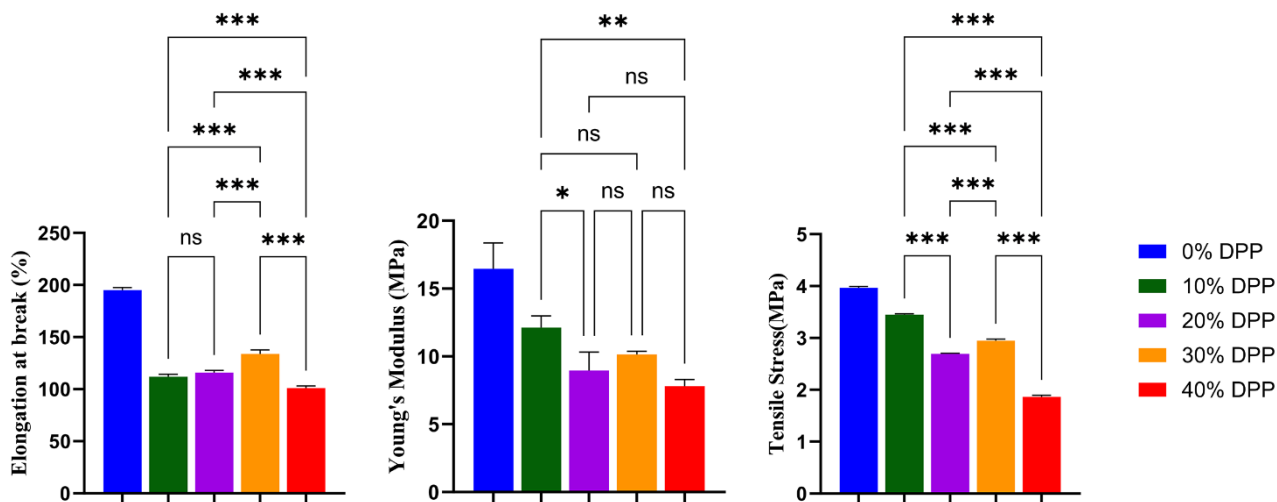
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1. **Figure S1.** The XRD spectrum of DDM particles.

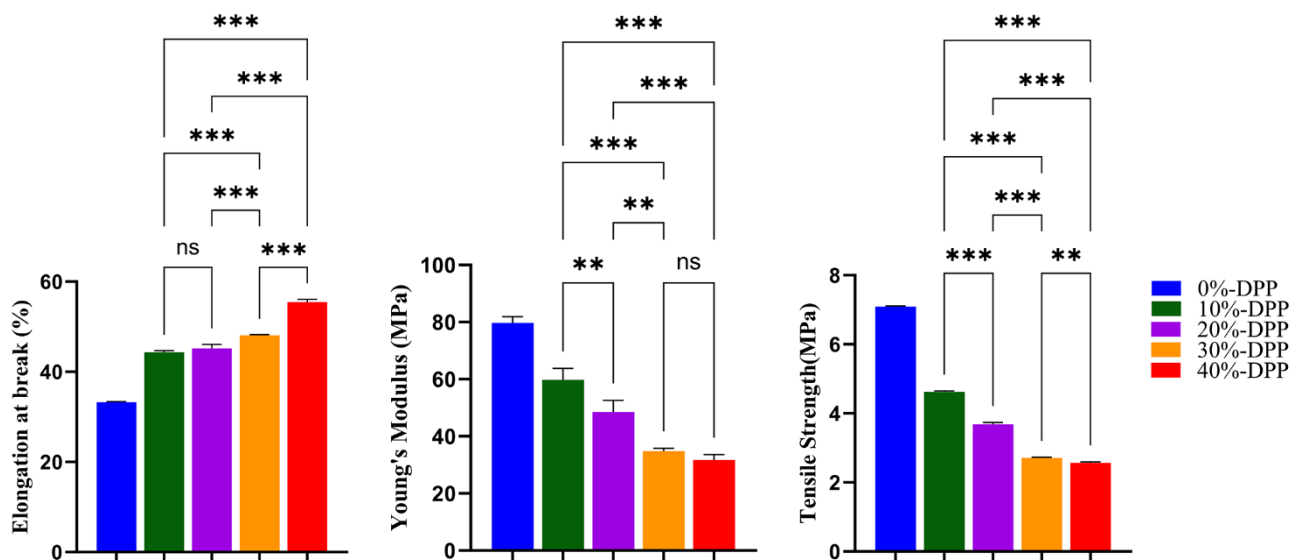


**2. Figure S2.** Intergroup differences of mechanical properties between different DPP bilayer membranes in the dry state.



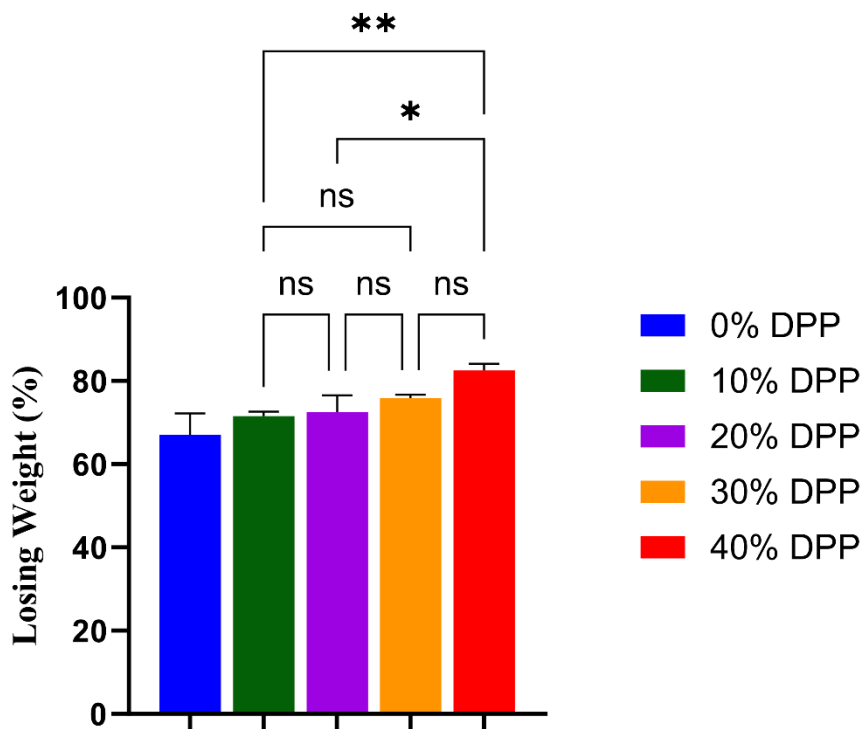
The results were presented as the mean  $\pm$  standard deviation (SD) of at least three different experiments. ns: not significant, \*  $P < 0.05$ , \*\*  $P < 0.01$ , \*\*\*  $P < 0.001$ .

**3. Figure S3.** Intergroup differences of mechanical properties between different DPP bilayer membranes in the wet state.



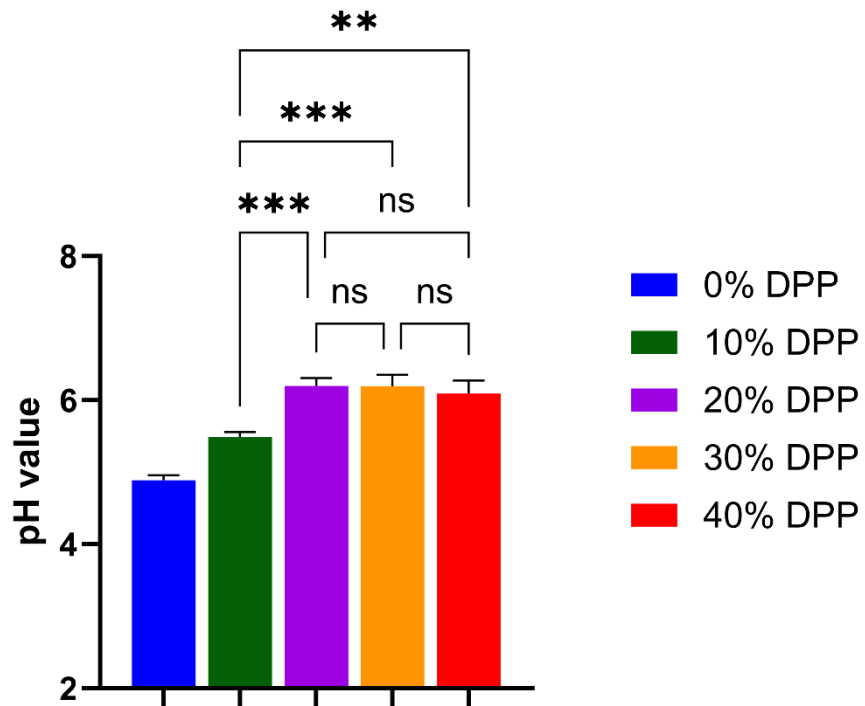
The results were presented as the mean  $\pm$  standard deviation (SD) of at least three different experiments. ns: not significant, \*\*  $P < 0.01$ , \*\*\*  $P < 0.001$ .

**4. Figure S4.** Intergroup differences of weight loss rate between different DPP bilayer membranes after 24 w in vitro degradation.



The results were presented as the mean  $\pm$  standard deviation (SD) of at least three different experiments. ns: not significant, \*  $P < 0.05$ , \*\*  $P < 0.01$ .

**5. Figure S5.** Intergroup differences of pH value between different DPP bilayer membranes after 24 w in vitro degradation.



The results were presented as the mean  $\pm$  standard deviation (SD) of at least three different experiments. ns: not significant, \*\*  $P < 0.01$ , \*\*\*  $P < 0.001$ .