

## Supplementary Information for

### Stress buffering in cyclodextrin-based membranes coated on emulsion droplet surfaces

Hua-Neng Xu\*, Jie Hou, Huanhuan Liu, and Lianfu Zhang

Correspondence to: [hnxujnu@163.com](mailto:hnxujnu@163.com)

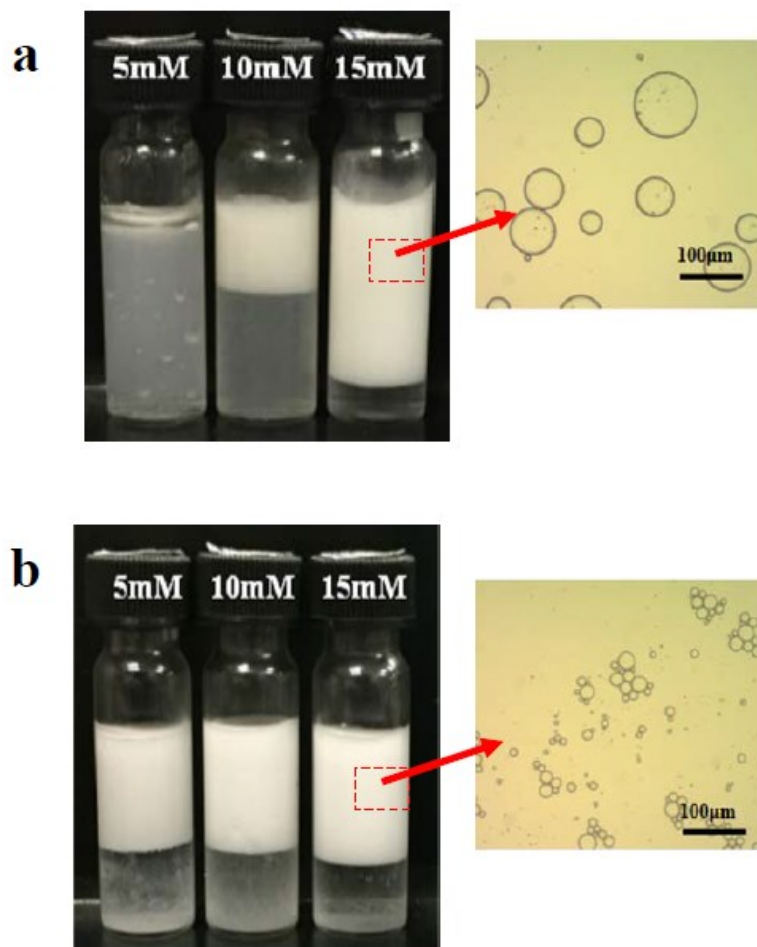
#### Contents

**Figure S1.** Effects of CD concentration on emulsion stability.

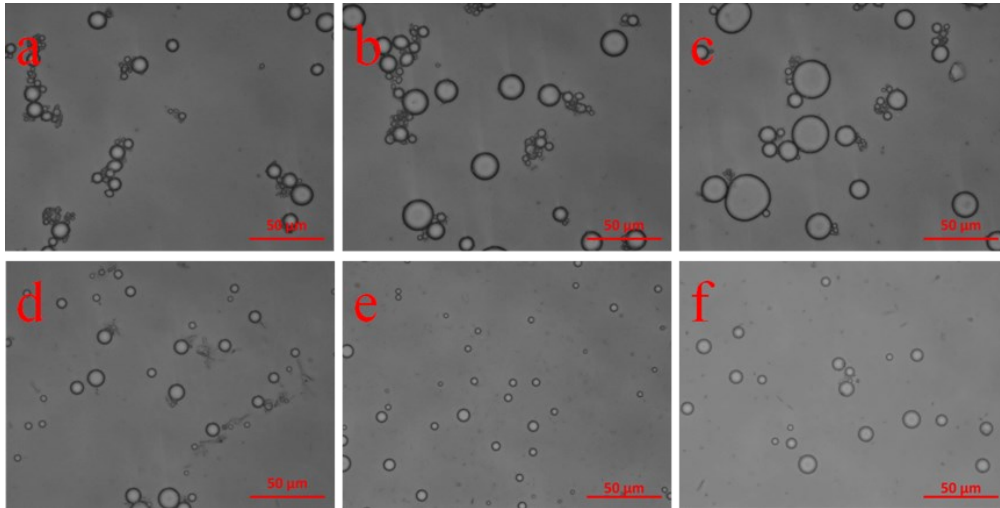
**Figure S2.** Optical microscopy images of emulsion droplets at the CD concentration of 15 mM.

**Video S1.** Video of pendant droplets for aqueous CD solutions with the concentration of 15 mM suspended in triglyceride oil during dynamic interfacial tension measurement

**Video S2.** Video of pendant droplets for aqueous CD solutions with the concentration of 15 mM suspended in n-dodecane during dynamic interfacial tension measurement



**Figure S1. Effects of CD concentration on emulsion stability. (a)** The triglyceride emulsions become gravitationally stable with the increasing CD concentration. **(b)** The n-dodecane emulsions are more resistant to creaming and the behavior is independent of the CD concentration. Photograph of vessels containing CD-based emulsions undergoing creaming after preparation for 2 weeks. The inset shows the optical micrographs of emulsion droplets that proceed via flocculation.



**Figure S2. Optical microscopy images of emulsion droplets at the CD concentration of 15 mM. (a)** triglyceride emulsion, freshly prepared. **(b)** triglyceride emulsion, stored for 1 weeks. **(c)** triglyceride emulsion, stored for 2 weeks. **(d)** n-dodecane emulsion, freshly prepared. **(e)** n-dodecane emulsion, stored for 1 weeks. **(f)** n-dodecane emulsion, stored for 2 weeks.