

## **Interfacial assembly and rheology of multi-responsive glycyrrhizic acid at liquid interfaces**

Jiyang Cai <sup>a</sup>, Jiahao Wu <sup>b</sup>, Xinke Yu <sup>a</sup>, Zhili Wan <sup>a,c,\*</sup>, Xiaoquan Yang <sup>a</sup>

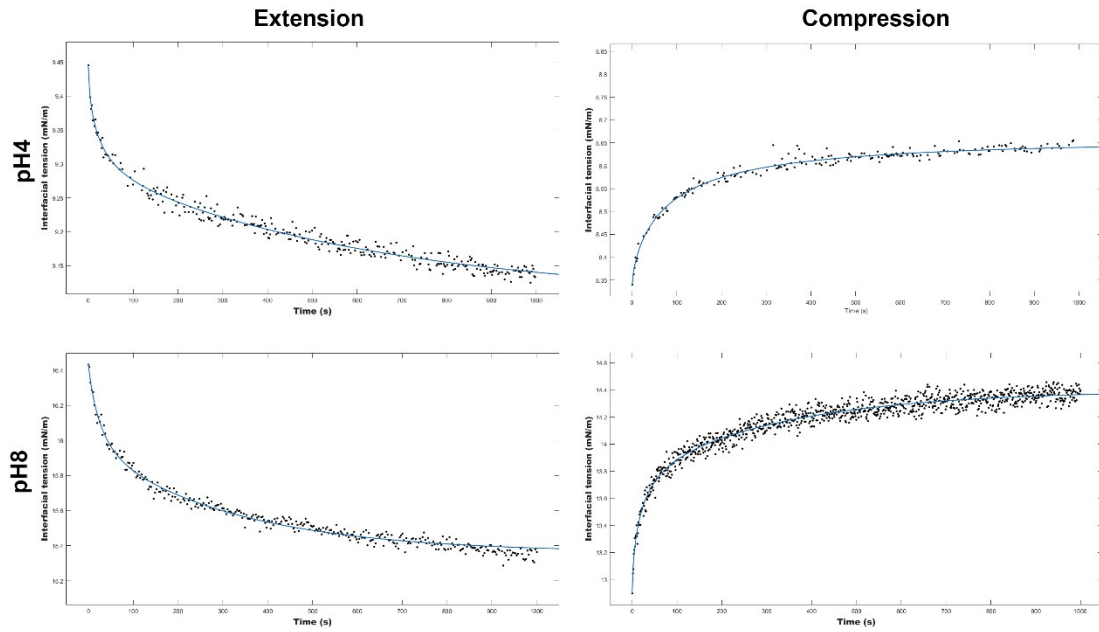
<sup>a</sup>Laboratory of Food Proteins and Colloids, School of Food Science and Engineering, Guangdong Province Key Laboratory for Green Processing of Natural Products and Product Safety, South China University of Technology, Guangzhou 510640, China

<sup>b</sup>Department of Chemistry, The Chinese University of Hong Kong, Shatin, N. T., Hong Kong, China

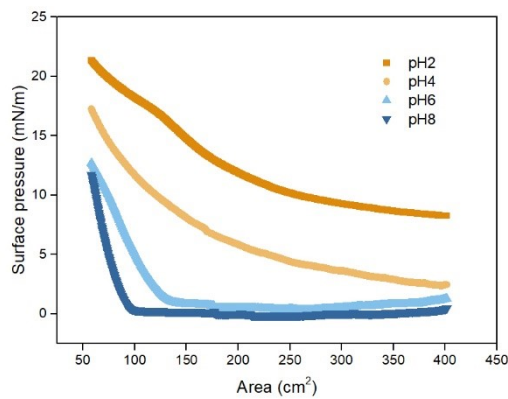
<sup>c</sup>Overseas Expertise Introduction Center for Discipline Innovation of Food Nutrition and Human Health (111 Center), Guangzhou 510640, China

\* To whom correspondence should be addressed.

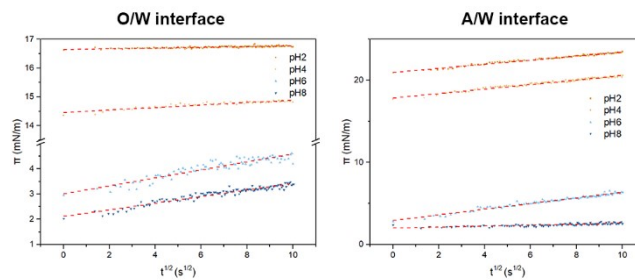
Email: zhiliwan@scut.edu.cn



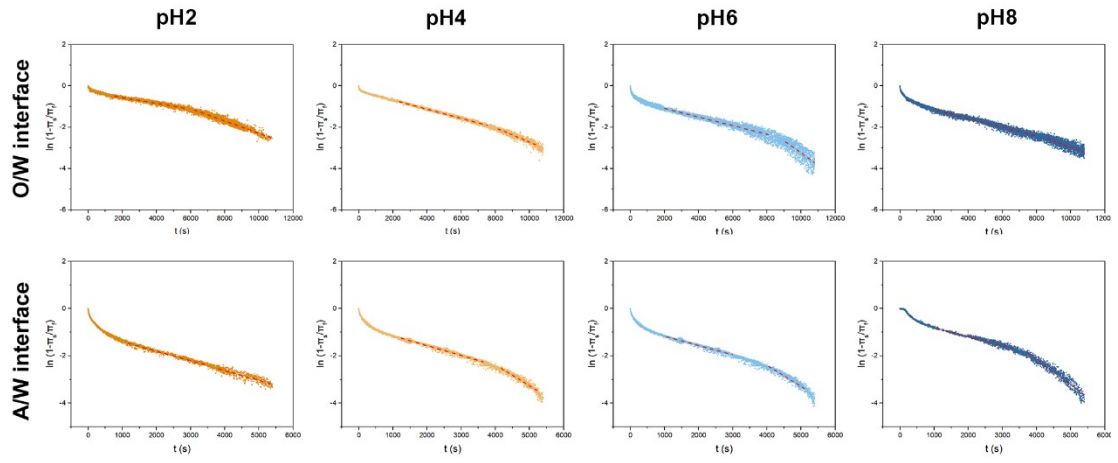
**Fig. S1.** The raw data of the step dilatation tests obtained from O/W interfaces stabilized by pH4 and pH8.



**Fig. S2.** Surface pressure isotherm of GA systems of pH2, pH4, pH6 and pH8 at the O/W interface, obtained from a Langmuir trough.



**Fig. S3.** Fitting of  $\pi_s$  during the first 100 s of the adsorption process according to eq. (8).



**Fig. S4.** Fitting of  $\pi_s$  during the late adsorption stage according to eq. (9).