

Supplementary Materials

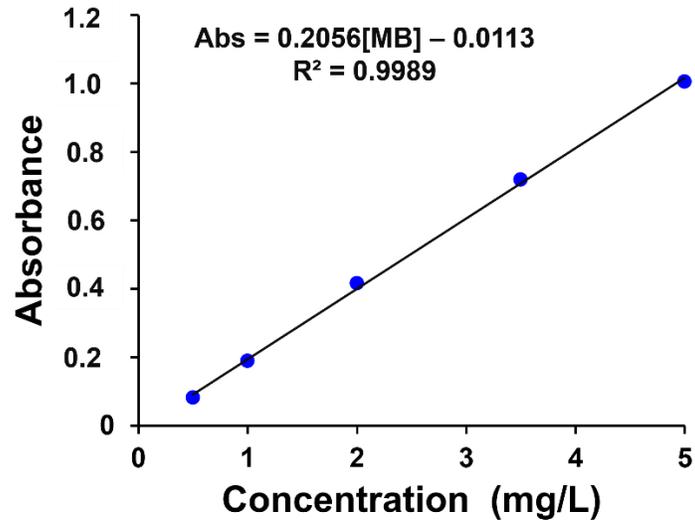


Figure S1. Calibration curve of MB in water at 665 nm.



Figure S2. Digital photography of CPP after 24 hours in distilled water under mechanical stirring at 100 rpm.

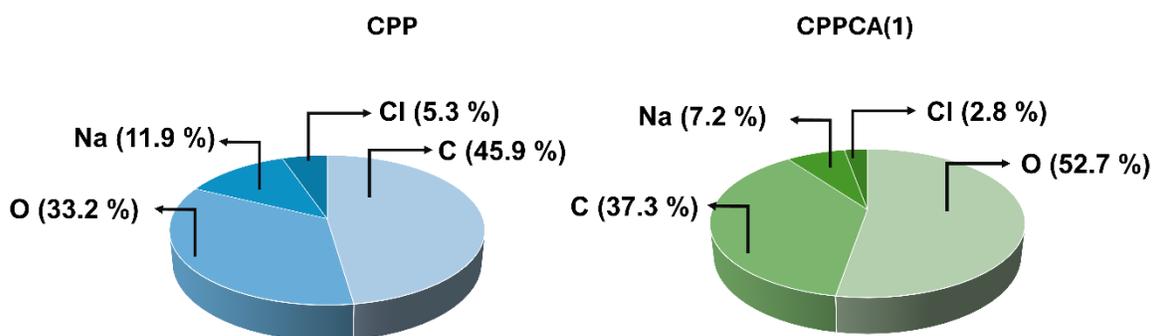


Figure S3. Elemental composition of CPP and CPPCA(1) according to EDS analysis.

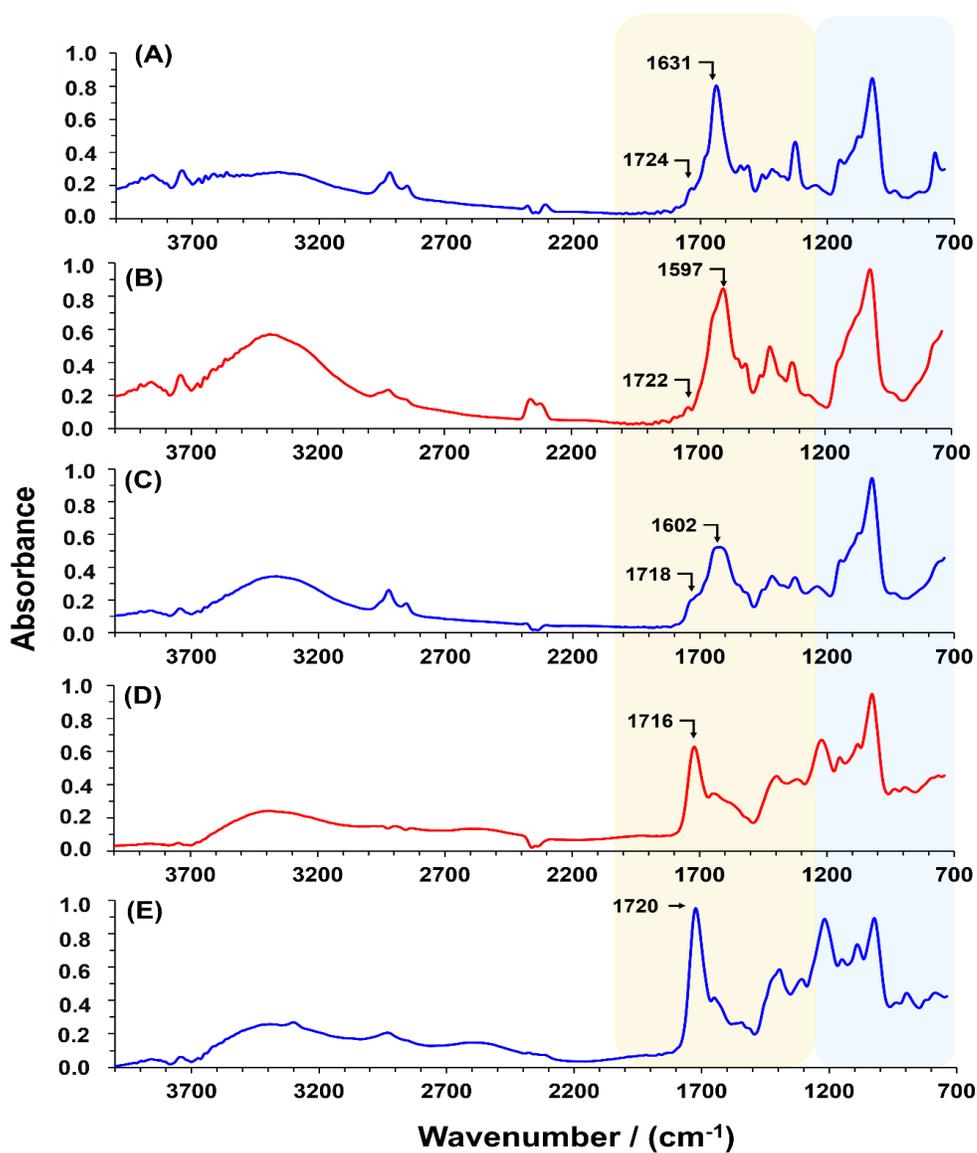


Figure S4. ATR-FTIR spectra of CPPCA(x) with different concentration of CA: (A) 1 %, (B) 2 %, (C) 3 %, (D) 5 %, and (E) 10 %.

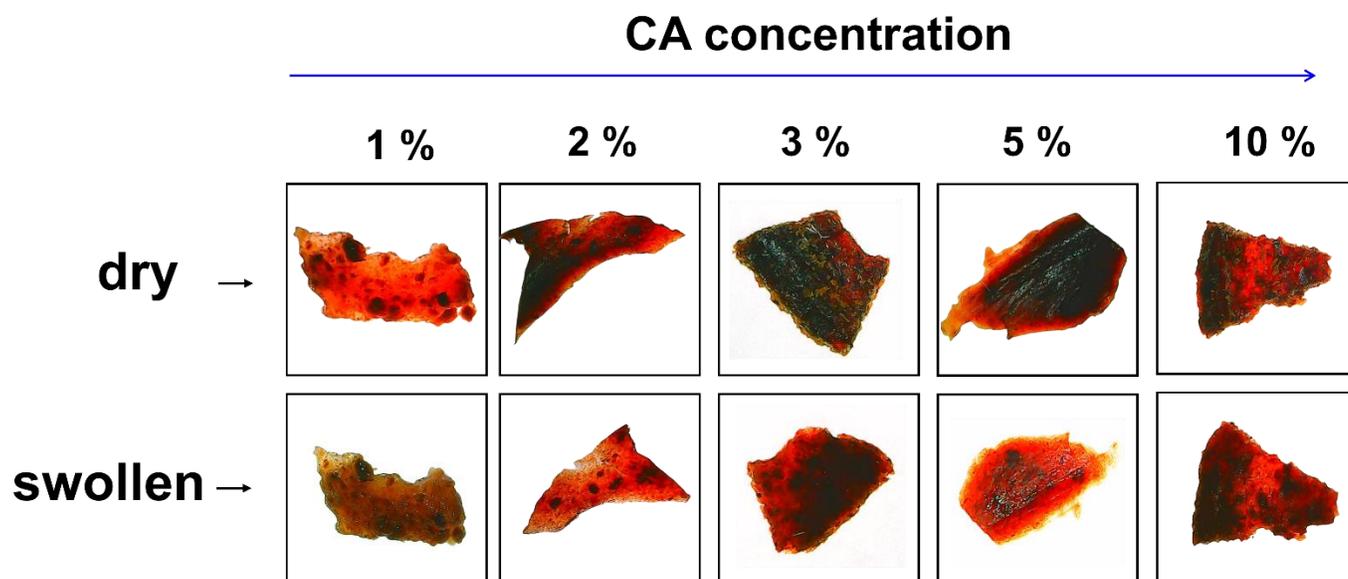


Figure S5. Digital photography of CPPCA dry and swollen after 24 hours in distilled water. The hydrogels formed with different CA concentration ranging from 1 to 10 %.

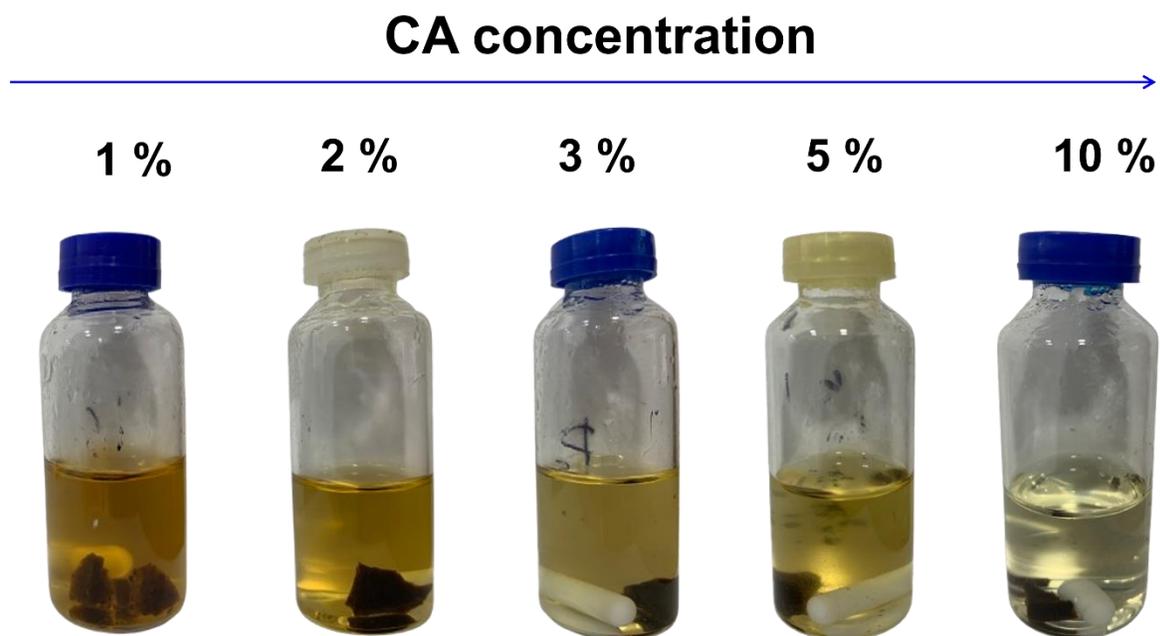


Figure S6. Digital photography of CPPCA(x) swollen after 24 hours in distilled water under mechanical stirring at 100 rpm. The hydrogels formed with different CA concentration ranging from 1 to 10 %.

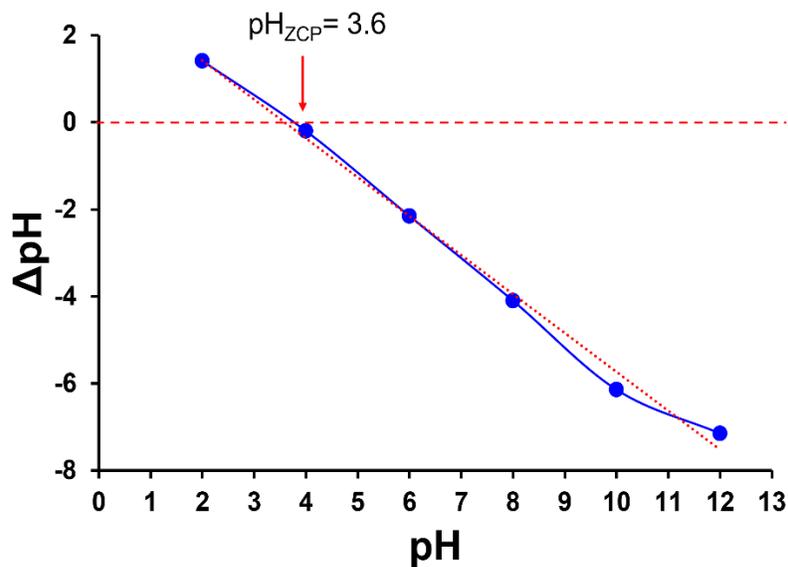


Figure S7. ΔpH versus $\text{pH}_{\text{initial}}$ curve behavior to determinate of the point of zero charge (pH_{PZC}) of the CPPCA(1).

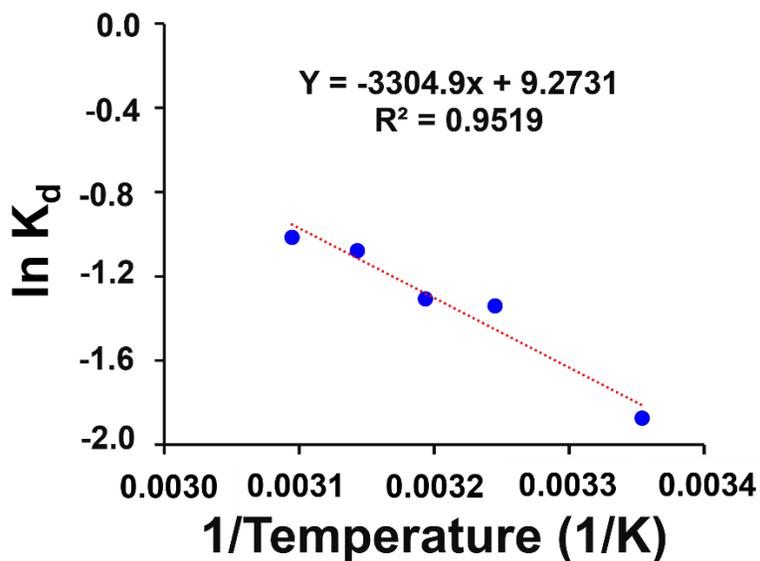


Figure S8. $\ln K_d$ vs $1/\text{temperature}$ for the MB adsorption on CPPCA(1). Conditions: time = 24 h, $C_o = 2000 \text{ mg/L}$, and adsorbent dose = 0.2 g/mL .

Table S1. Thermodynamic parameters for MB adsorption on CPPCA(1) hydrogel

Temperature (°C)	ΔG° (kJ/mol)	ΔS° (J/mol K)	ΔH° (J/mol K)
25	-4.96		
35	-3.49		
40	-3.51	77.10	-27.48
45	-2.67		
50	-2.56		