

## Supporting Information

### **Augmenting Therapeutic Potential of Polyphenols by Hydrogen-Bonding Complexation for the Treatment of Acute Lung Inflammation**

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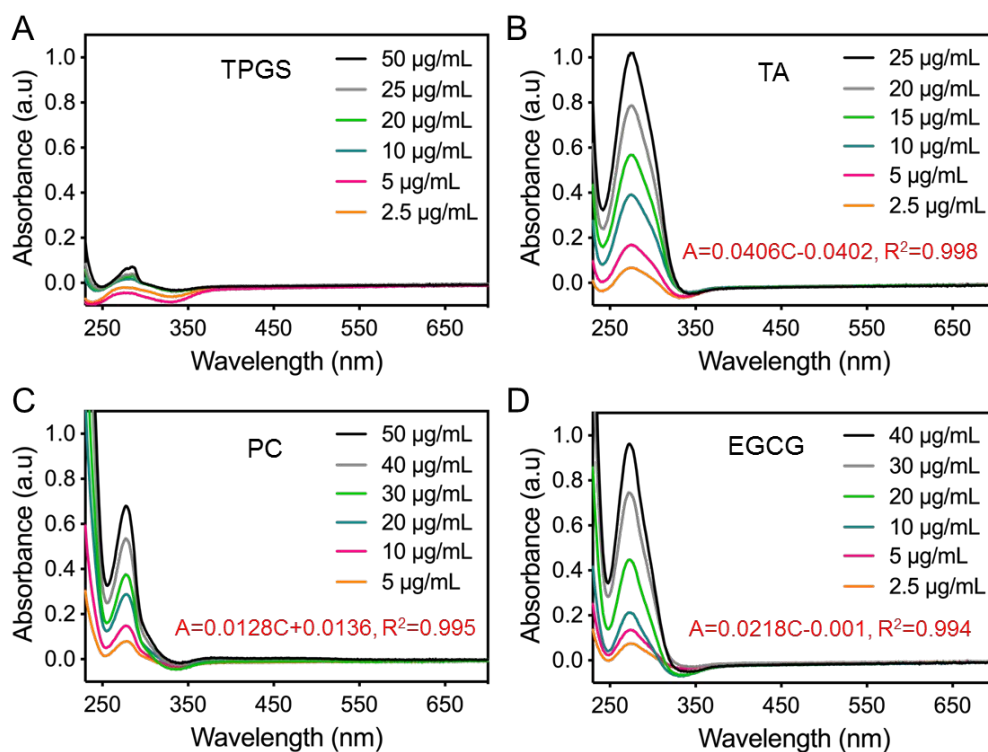
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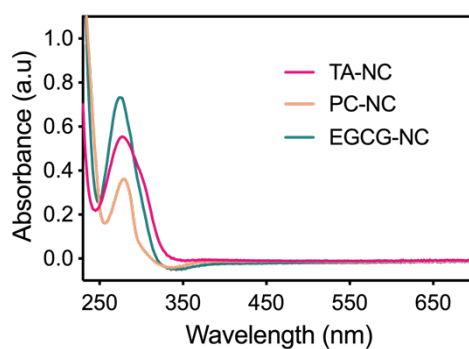
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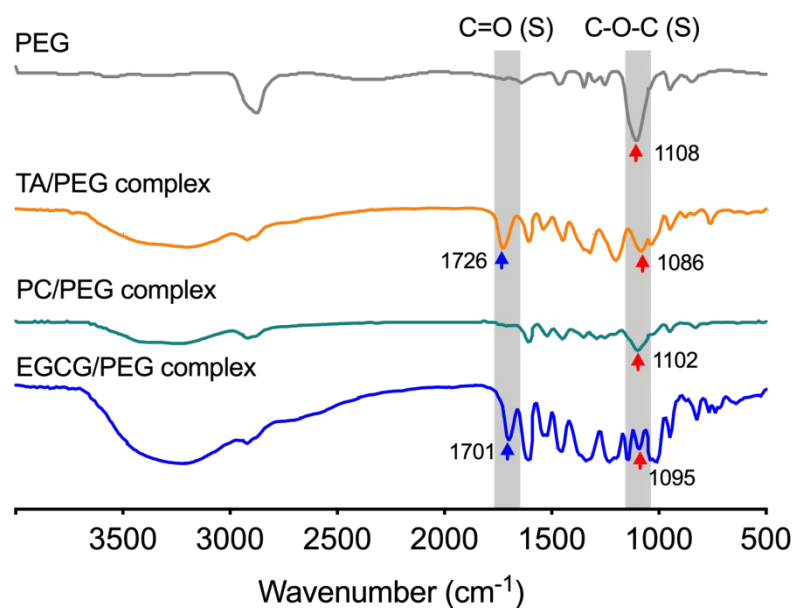
## Supplementary Figures



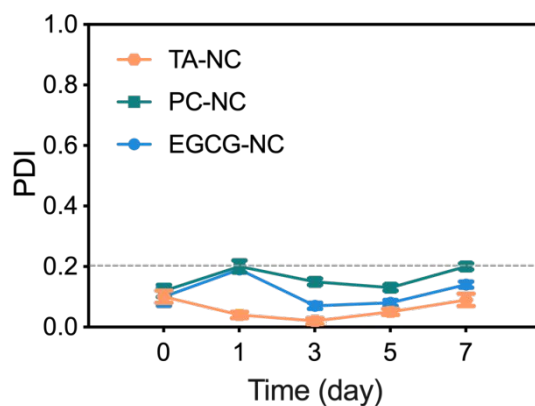
**Figure S1.** (A) UV-vis spectrum of TPGS solution with various concentrations. UV-vis spectra and the standard curves of free TA (B), PC (C) and EGCG (D) depending on the absorbance at 280 nm. A is the absorbance and C is the corresponding concentration of polyphenols in these described equations.



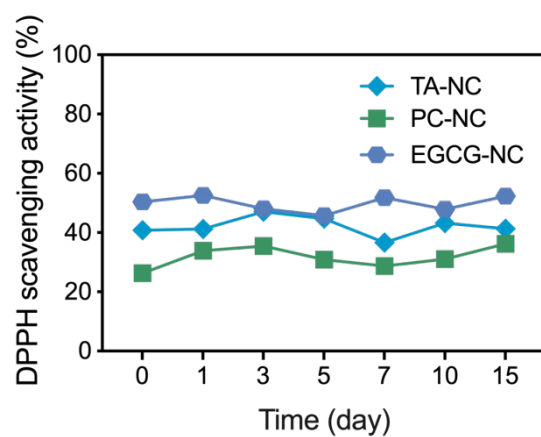
**Figure S2.** UV-vis spectra of TA-NC, PC-NC and EGCG-NC solution.



**Figure S3.** FT-IR spectra of PEG, TA/PEG complex, PC/PEG complex, EGCG/PEG complex. The stretching vibration of carbonyl groups (C=O) in both TA and EGCG molecules shifted from 1720 to 1726  $\text{cm}^{-1}$  (TA/PEG complex), and 1692 to 1701  $\text{cm}^{-1}$  (EGCG/PEG complex), respectively. The characteristic peaks of C–O–C belonged to PEG at 1108  $\text{cm}^{-1}$  were changed to 1086  $\text{cm}^{-1}$ , 1102  $\text{cm}^{-1}$  and 1095  $\text{cm}^{-1}$  for TA/PEG complex, PC/PEG complex and EGCG/PEG complex, respectively.



**Figure S4.** Monitoring PDI change of various nanocomplexes including TA-NC, PC-NC and EGCG-NC after storage at 4 °C.



**Figure S5.** DPPH scavenging activity of TA-NC, PC-NC or EGCG-NC measured by a UV-vis spectrometer after long-term storage at 4 °C conditions, and the polyphenol was 10 µg/mL.