Supporting Information

**Thermal Analysis of TPAC.** The TGA curves represented in Figure S1 shows that the triphenyl coupled chitosan (TPAC) have two main decomposition stages with the first occurring in the range 21°C-68°C attributed to the evaporation of water with weight loss about 10%. The second decomposition stage occurs in the range 237°C-421°C due to thermal degradation with a weight loss about 58%. The thermal degradation study of TPAC showed good stability above 400°C. The differential scanning calorimetry (DSC) curves are represented in Figure S2. The sample was investigated using heating and cooling scans at 10°C min⁻¹. The TPAC showed an endothermic peak at 157°C.

![Figure S1. TG Analysis of (a) chitosan and (b) TPAC.](image)
Figure S2. DSC curves of (a) chitosan and (b) TPAC.