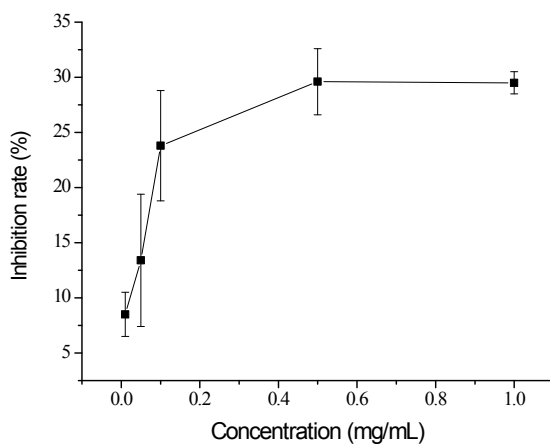
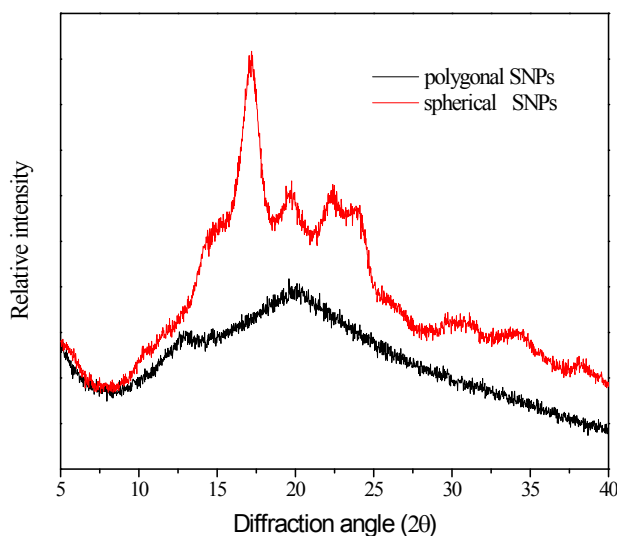


## Supporting Information



**Figure S1. Inhibitory effects of chitin nanowhiskers on  $\alpha$ -amylase.**

The inhibitory effects of different concentrations of chitin nanowhiskers on the activity of  $\alpha$ -amylase were investigated. The inhibitory potencies of chitin nanowhiskers on  $\alpha$ -amylase increased with the increase in chitin nanowhiskers (Figure S1). However, in the test concentration range, the maximum inhibitory rate for chitin nanowhiskers was 29.6%.



**Figure S2. X-ray diffraction patterns of spherical SNPs and polygonal SNPs.**

The X-ray diffraction patterns of spherical SNPs and polygonal SNPs are shown in Figure S2. Several peaks were observed at  $2\theta = 5.6^\circ$ ,  $17.1^\circ$ ,  $22.5^\circ$ , and  $24.3^\circ$  for spherical SNPs, thus exhibiting typical peaks of a B-type crystalline structure, and the relative crystallinity was 55.31%. Conversely, the polygonal SNPs with diffraction peaks at  $13.5^\circ$  and  $20.8^\circ$  exhibited V-type diffraction peaks and the relative crystallinity was only 25.2%.