

Supporting Information

Synthesis of Cationic Acrylate Copolyvidone- Iodine Nanoparticles with Double Active Centers and Their Antibacterial Application

Xuemei Li, Bin Wang, Tingyu Liang, Rongmin Wang*, Pengfei Song, Yufeng He*

Key Laboratory of Eco-functional Polymer Materials of the Ministry of Education, Institute
of Polymer, College of Chemistry & Chemical Engineering, Northwest Normal University,

Lanzhou 730070, China. *Corresponding author, Fax/ Tel: +86-931-7970358.

heyufeng@nwnu.edu.cn (YF He); wangrm@nwnu.edu.cn (RM Wang)

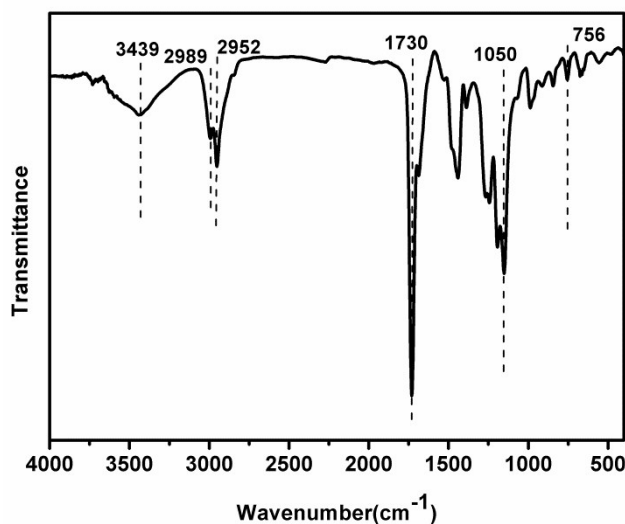


Fig. S1. FT-IR spectra of CACPVI.

In Fig. S2, CACPVI solution turns yellow initially due to the presence of iodine.

When 2 mol L⁻¹ sulfuric acid solution and 1mL starch solution were added, the yellow

solution turned blue, which was mainly because the starch appears blue when encountering iodine. After adding a certain concentration of sodium thiosulfate solution, the blue solution turned white. These color changes correspond to the redox reaction (see eq 1), indicating the presence of iodine.

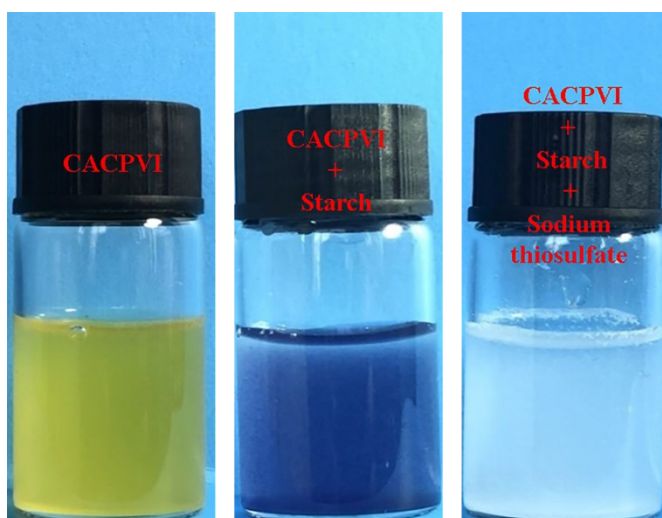


Fig. S2. Photographs of CACPVI suspension during iodometric titration.

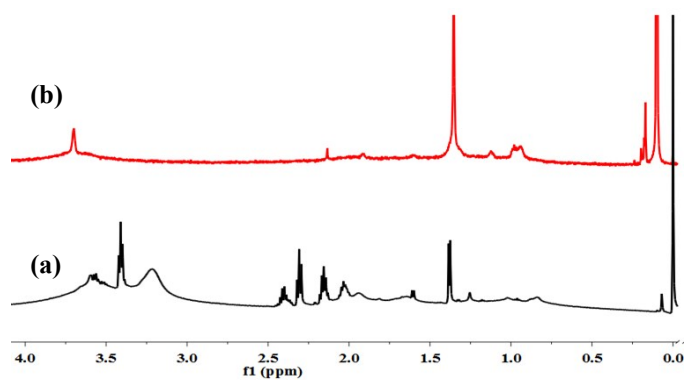


Fig. S3. ¹H NMR spectra of (a) CACPVI and (b) CACPVI.

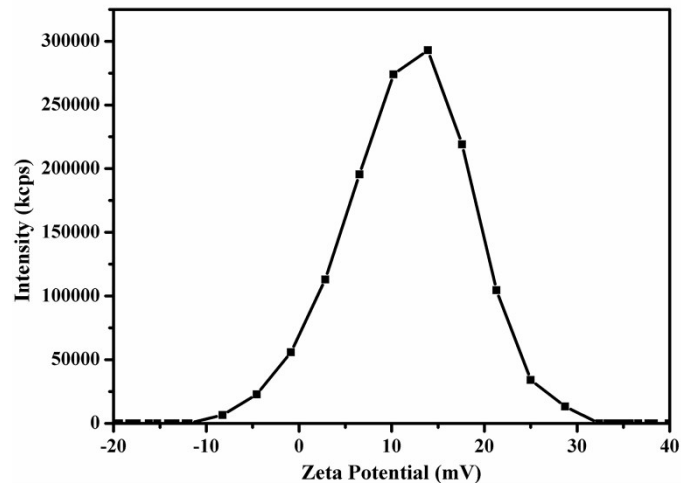


Fig. S4. Zeta potential of CACPVI.

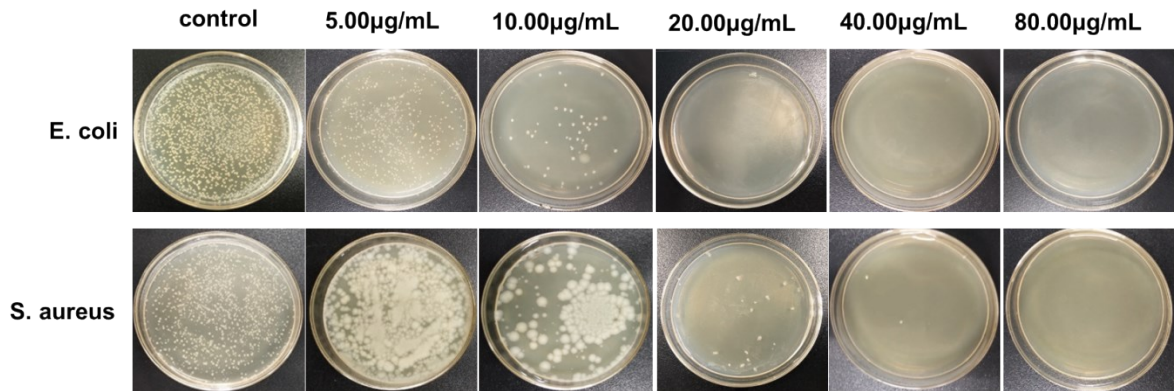


Fig. S5. Photographs of culture plates of *E. coli* and *S. aureus* after exposure to CACPVI at different concentrations.