Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Supplementary material

Enhancement of Inhibition Rate of Antibiotic against Bacteria by Molecularly Imprinted Nanoparticles Targeting Alarmone Nucleotides as Antibiotic Adjuvants

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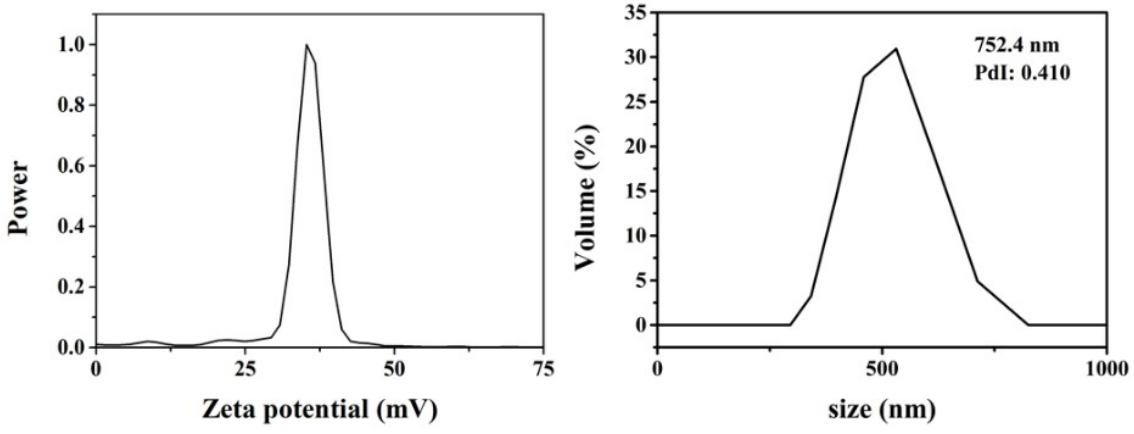

Figure S1. Zeta potential of the MIP-NPs and size distribution of MIP-NPs with polydispersity index (PDI) = 0.410. Inset shows Tyndall effect images.

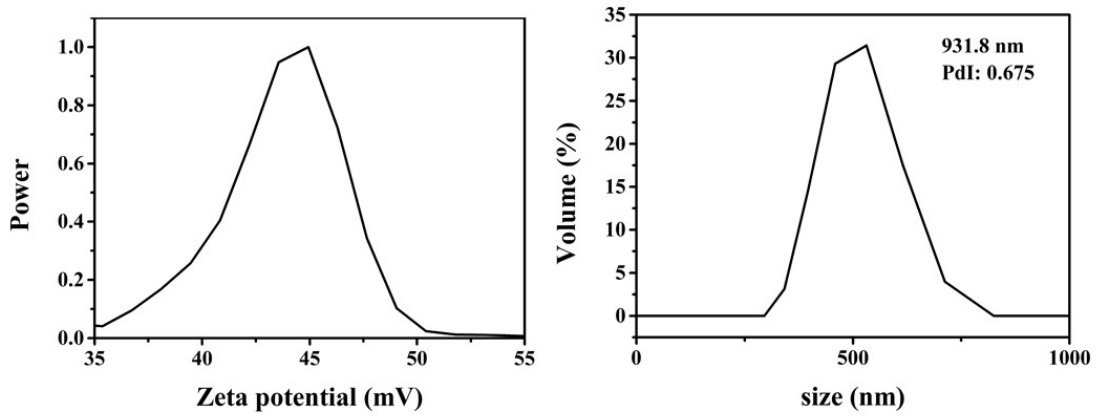

Figure S2. Zeta potential of the NIP-NPs and size distribution of NIP-NPs with polydispersity index (PDI) = 0.410. Inset shows Tyndall effect images.

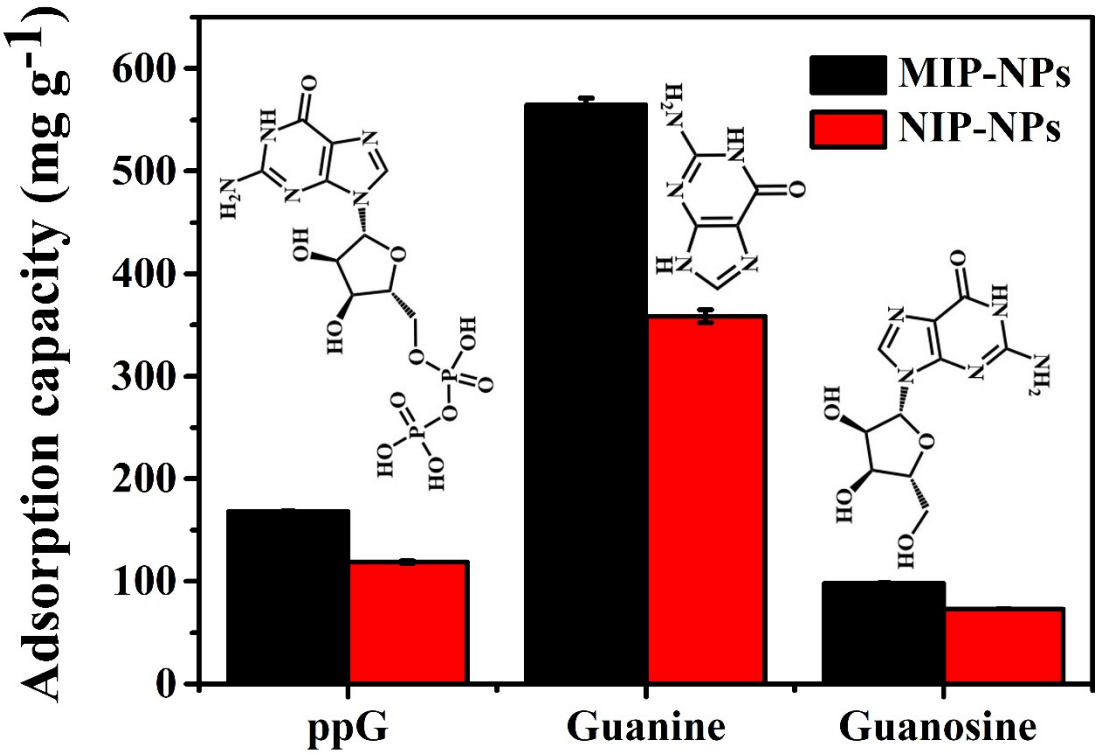

Figure S3. Comparison of the adsorption capacity of NPs in response to ppG or analogues, the concentration of ppG, Guanine and Guanosine was 80.0, 600.0 and 80.0 mg L^{-1}, respectively. (n=3, error bars=SD).

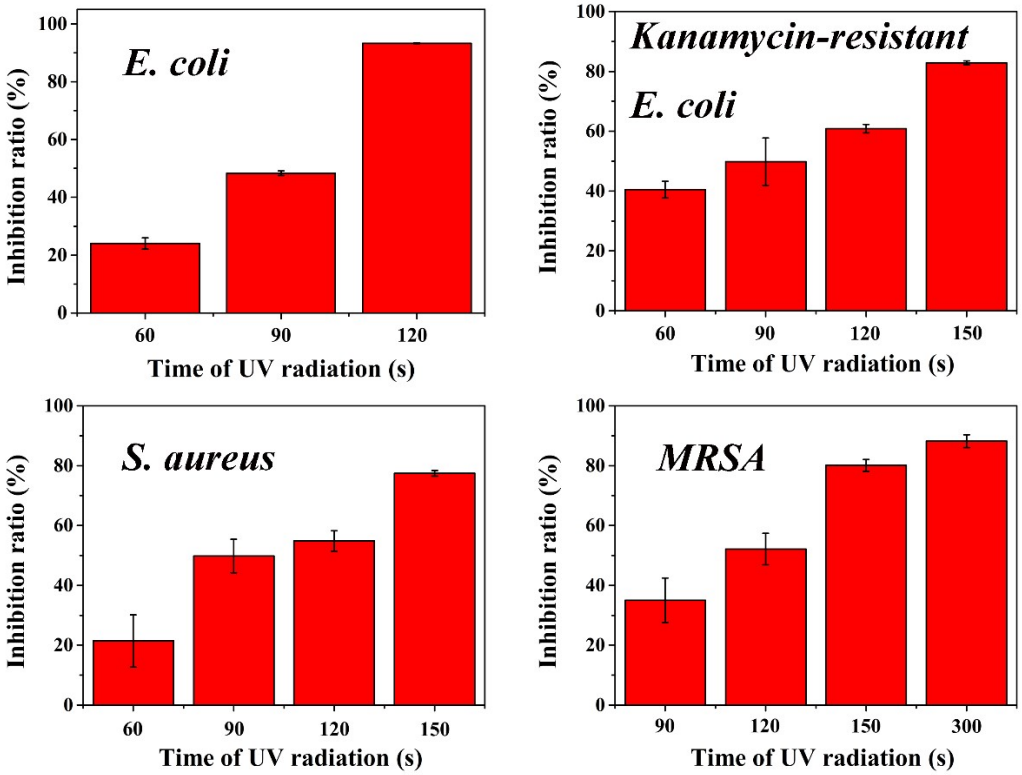

Figure S4. The effect of UV radiation time on the inhibition rates against *E. coli*, *Kanamycin-resistant E. coli, S. aureus* and *MRSA*, respectively. (n=3, error bars=SD).

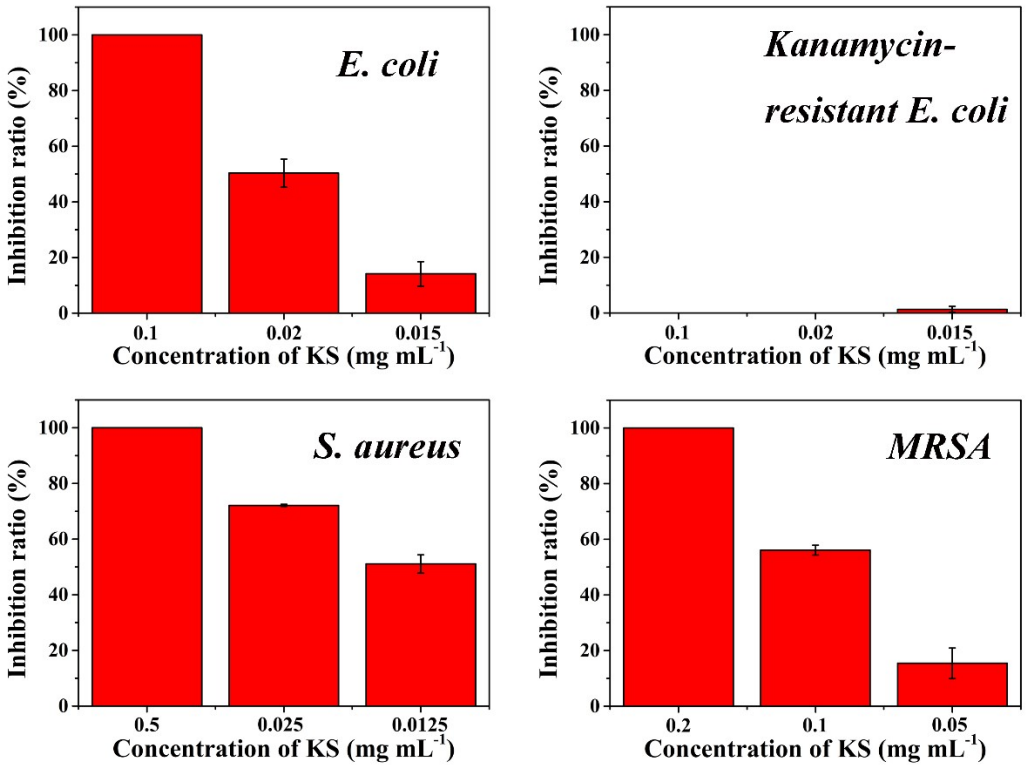

Figure S5. The effect of the different concentrations of KS on the inhibition rates against *E. coli*, *Kanamycin-resistant E. coli, S. aureus* and *MRSA*, respectively. (n=3, error bars=SD).

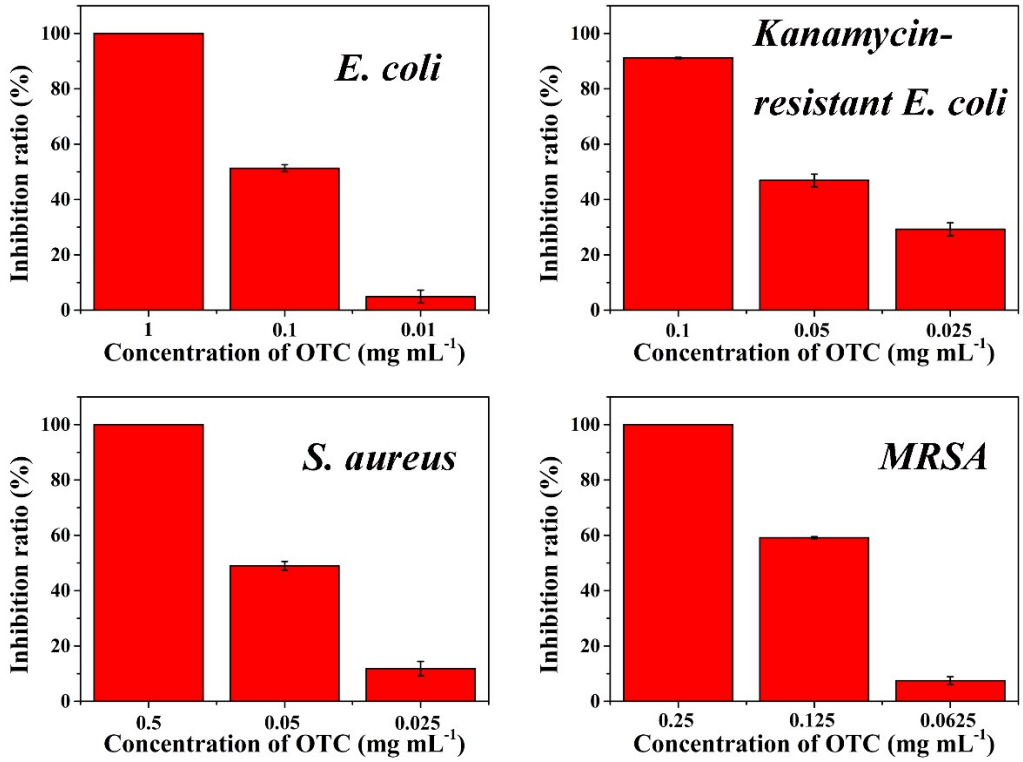

Figure S6. The effect of the different concentrations of OTC on the inhibition rates against *E. coli*, *Kanamycin-resistant E. coli, S. aureus* and *MRSA*, respectively. (n=3, error bars=SD).

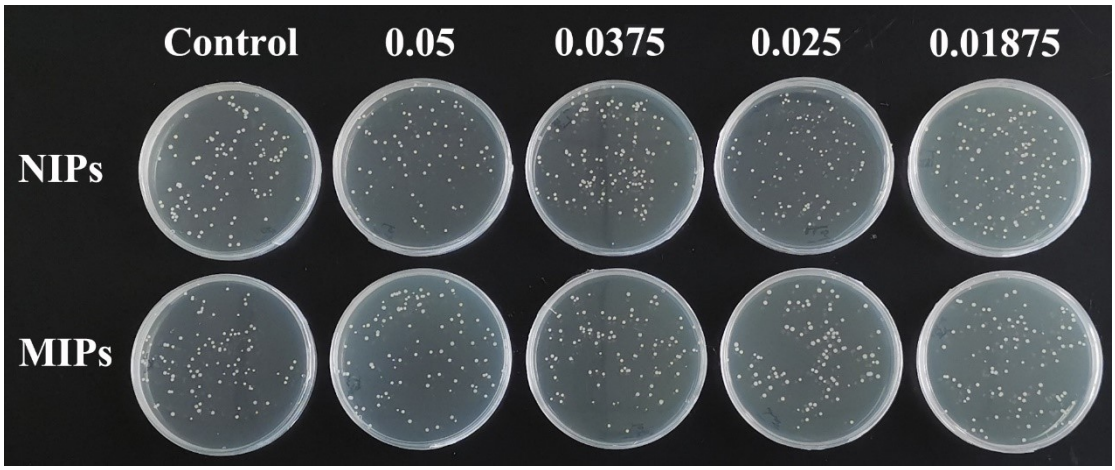

Figure S7. Photographs of the growth of *Kanamycin-resistant E. coli* treated with MIP-NPs + KS, and NIP-NPs + KS, respectively.

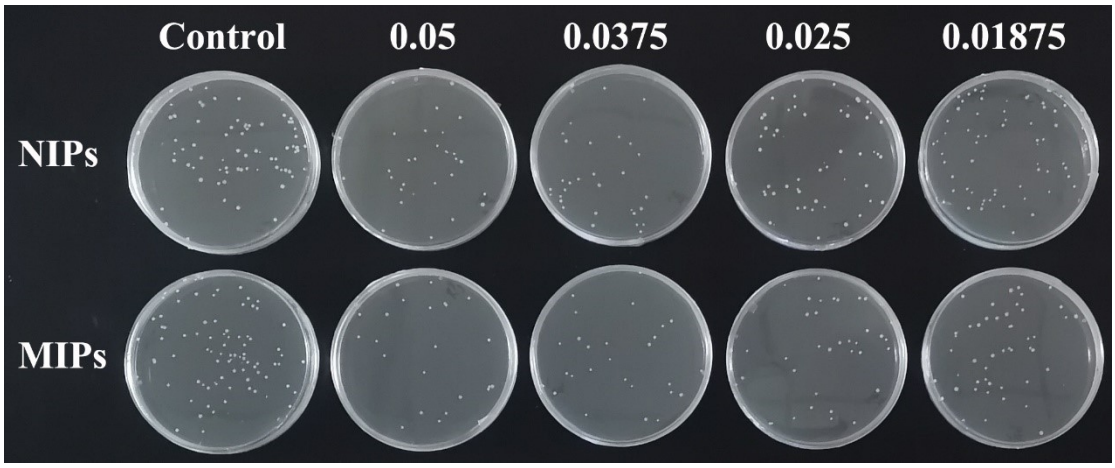

Figure S8. Photographs of the growth of *Kanamycin-resistant E. coli* treated with MIP-NPs + OTC, and NIP-NPs + OTC, respectively.

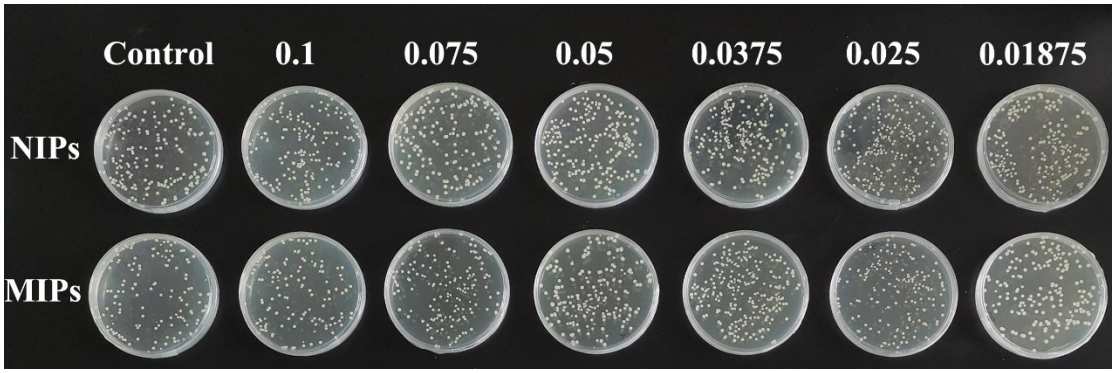

Figure S9. Photographs of the growth of *E. coli* treated with only MIP-NPs, and NIP-NPs, respectively.

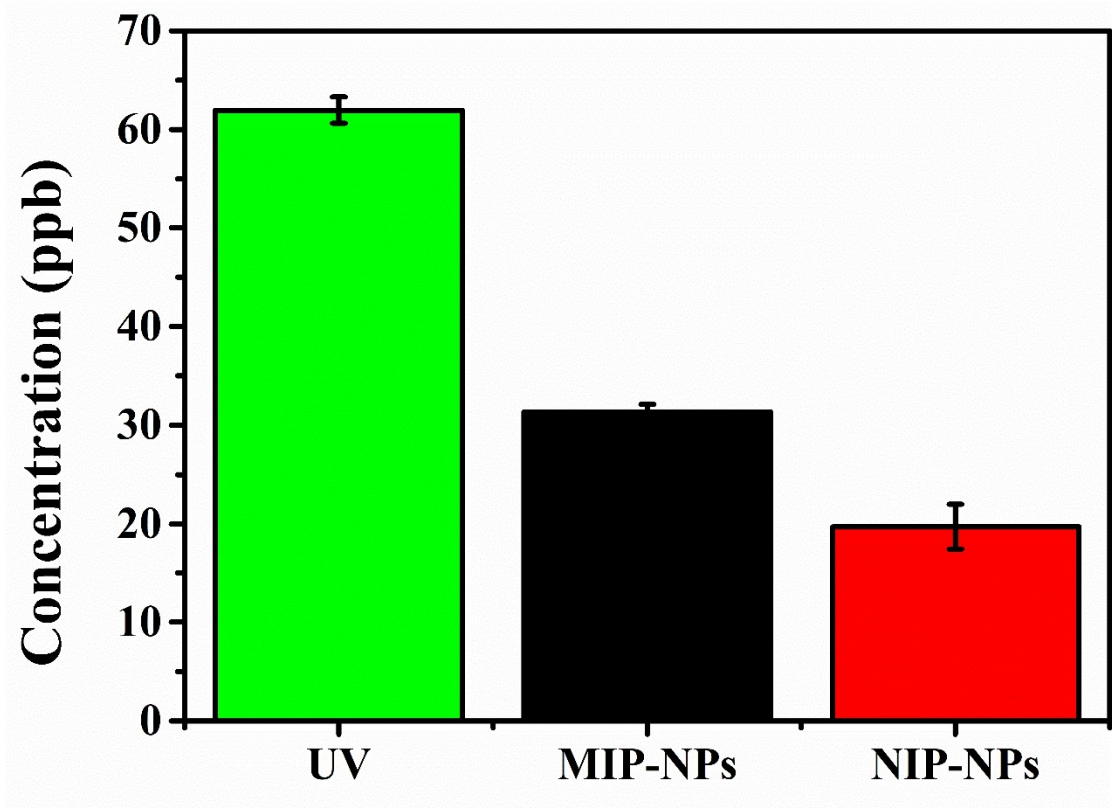

Figure S10. The increased concentration of the phosphorus treated with UV, UV+MIP-NPs, and UV+NIP-NPs, respectively. Saline (4 mL) used as the positive control. *E. coli* (1.0×10^9 CFU mL^{-1}, 2.0 mL) was mixed with 2.0 mL of saline, MIP-NPs (0.1 mg mL^{-1}) or NIP-NPs (0.1 mg mL^{-1}) used as the negative control. *E. coli* (1.0×10^9 CFU

mL^{-1}, 2.0 mL) was mixed with 2.0 mL of saline, MIP-NPs (0.1 mg mL^{-1}) or NIP-NPs (0.1 mg mL^{-1}) under radiation of UV (90 s) used as the experimental group. Then, the mixture was incubated at 37°C for 16 h. After the incubation, the mixture was centrifuged at 8000 rpm for 15 min, and the supernatants was membraned that the concentration of the phosphorus was recorded by Inductively Coupled Plasma Mass Spectrometry.