

Electronic Supplementary Information

The Responsive Photonic Crystal Film for Ultrasensitive Detection of Uranyl Ions

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Results and Discussion

Figure S1

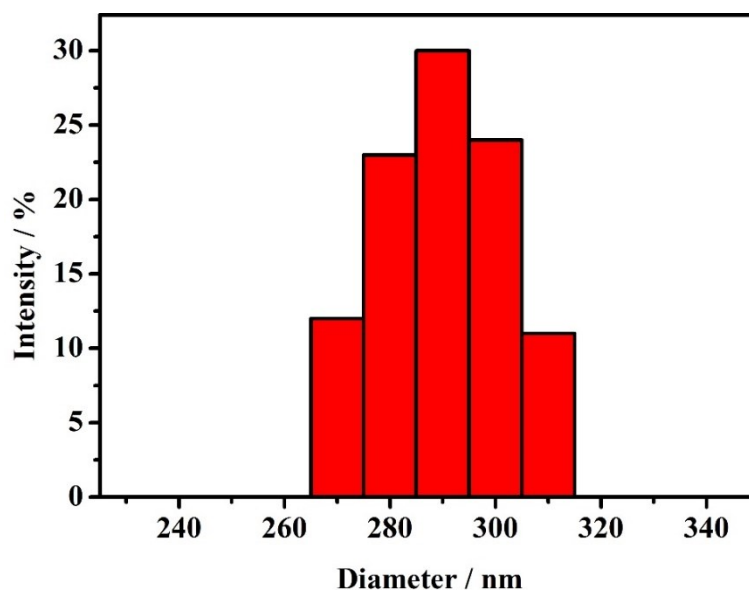


Figure S1. The DLS image of AO-PMMA-AN nanospheres in aqueous solution.

Figure S2



Figure S2. The optical image of the AO-PMMA-AN PC film shows a bright structure color.

Figure S3

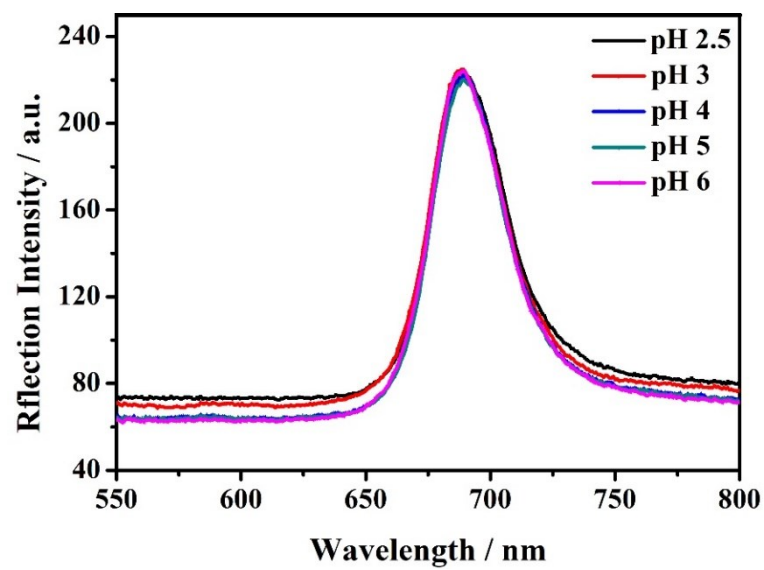


Figure S3. The reflection intensity of the AO-PMMA-AN PC film in blank buffer with different pH.

Figure S4

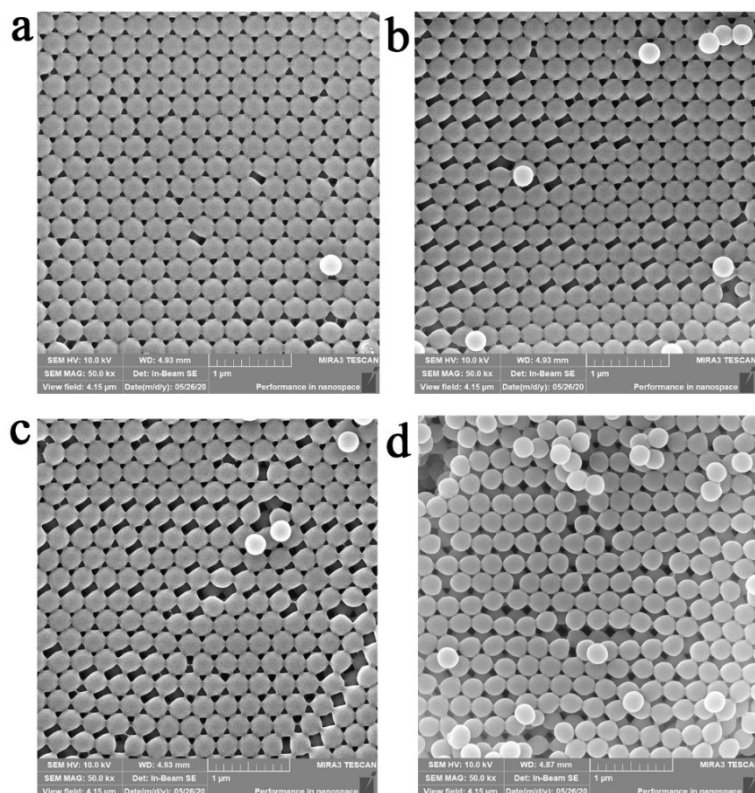


Figure S4. The SEM images of the PC film at different concentration of UO_2^{2+} . (a) - (b) represents the detection concentration of UO_2^{2+} is 10 pM, 1 nM, 100 nM and 10 μM respectively.

Figure S5

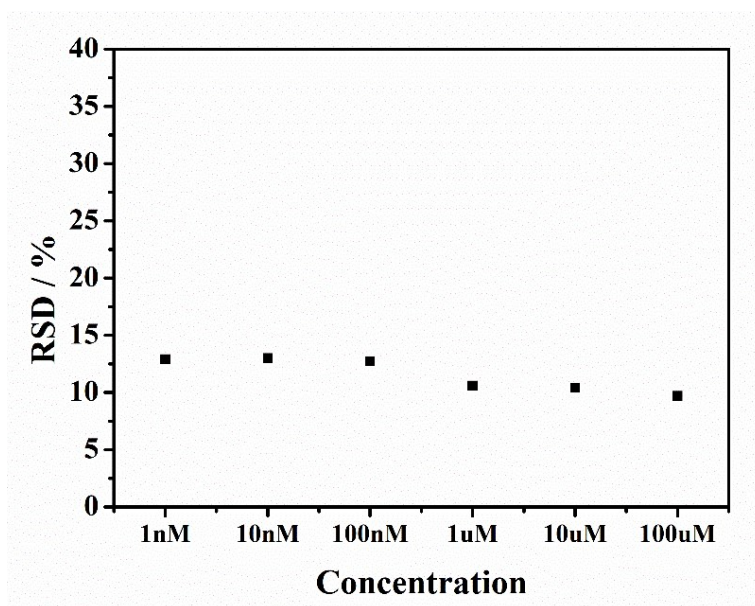


Figure S5. The RSD values of measurements are 12.9%, 13.0%, 12.7%, 10.6%, 10.4% and 9.7% respectively when the concentration of UO_2^{2+} was from 1nM to 100 μM respectively.

Figure S6

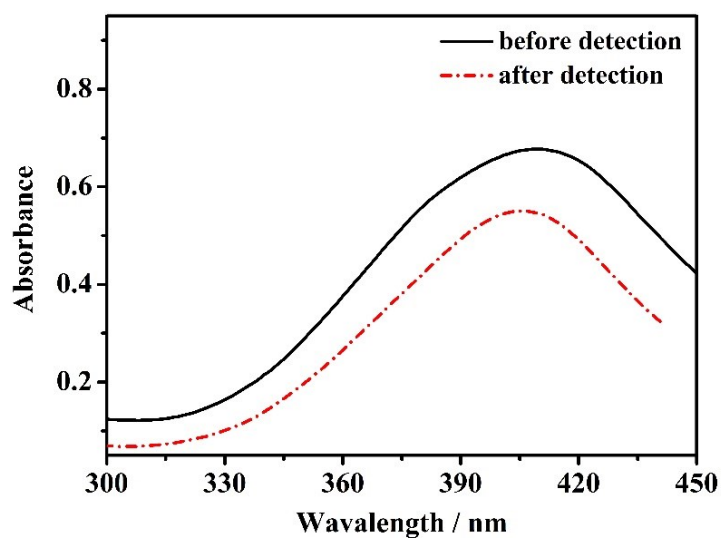


Figure S6. The change of UO_2^{2+} concentration (the initial concentration is 10 μM) is detected before and after binding with the AO-PMMA-AN PC film.