

Electronic Supplementary Information

Nanohybrid polymer brushes on silica for bioseparation

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Detection of boronic acid on Si@poly(NIPAm-co-GMA)@APBA using ARS

Si@poly(NIPAm-co-GMA)@APBA (5 mg) was mixed with 2 mL of ARS solution (0.1 mM) prepared in PBS (20 mM, pH 6.8) and stirred for 5 min. The fluorescence emission of the mixture was measured using an excitation wavelength at 469 nm. For comparison, Si@poly(NIPAm-co-GMA)@alkyne was used as a control and tested in the same procedure. As shown in Fig. S1, Si@poly(NIPAm-co-GMA)@APBA exhibited a strong fluorescence after it was treated with ARS. For the control, Si@poly(NIPAm-co-GMA)@alkyne did not show the characteristic emission band at 600 nm. These results confirm the presence of boronic acids in Si@poly(NIPAm-co-GMA)@APBA particles.

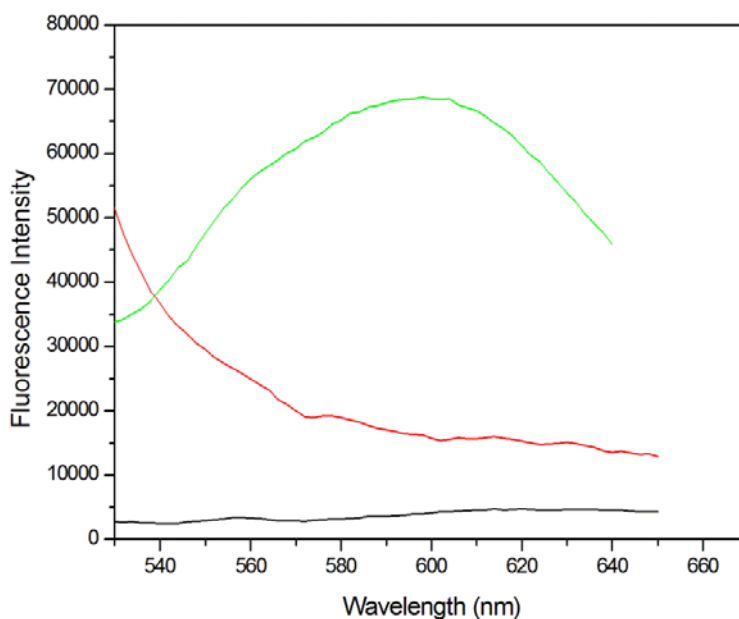


Fig. S1 Fluorescence emission spectra obtained from a mixture of: Si@poly(NIPAm-co-GMA)@APBA and ARS solution (green line); Si@poly(NIPAm-co-GMA)@alkyne and ARS solution (red line); and ARS solution (black line).