Supporting Information

Poly(acrylate) with pendant aggregation-induced emission (AIE) tetraphenylethene luminogens: Highly stable AIE polymer nanoparticles for effective detection of nitro-compounds

Hui Zhou, a Jiesheng Li, a Ming Hui Chua, a Hong Yan, a Bengzhong Tang, b, * Jianwei Xu a, *

jw-xu@imre.a-star.edu.sg; tangbenz@ust.hk

b Department of Chemistry, Center for Display Research, The Hong Kong University of Science & Technology, Clear Water Bay, Kowloon Hong Kong (PR China)

Figure S1. (A) FL spectra of P2 in THF/H2O mixtures with different H2O contents (λex = 318 nm, [P2] = 100.0 µg •mL−1, inserted picture is photographs of P2 solutions taken under UV illumination). (B) Change of FL maximum of P2 with H2O content of the aqueous mixture.

Figure S2. (A) FL spectra of P3 in THF/H2O mixtures with different H2O contents (λex = 318 nm, [P3] = 100.0 µg •mL−1, inserted picture is photographs of P3 solutions taken under UV illumination). (B) Change of FL maximum of P3 with H2O content of the aqueous mixture.
**Figure S3.** (A) Fluorescence spectra of 100.0 µg•mL⁻¹ P2 in THF/H₂O (1:9 v/v) mixture in the presence of different PA concentrations (µg•mL⁻¹), the insets display the photo of P2 in the absence and presence of 100 µg•mL⁻¹ PA under UV light (365 nm) illumination. (B) Concentration-dependent fluorescence quenching of P2 by PA.

**Figure S4.** (A) Fluorescence spectra of 100.0 µg•mL⁻¹ P3 in THF/H₂O (1:9 v/v) mixture in the presence of different PA concentrations (µg•mL⁻¹), the insets display the photo of P3 in the absence and presence of 100 µg•mL⁻¹ PA under UV light (365 nm) illumination. (B) Concentration-dependent fluorescence quenching of P3 by PA.
Figure S5. (a) Fluorescence spectra of polymer P1 (100.0, 50.0, 25.0 and 12.5 µg•mL⁻¹) in THF/H₂O (1:9 v/v) mixtures in the absence and presence of equal PA concentration. (b) Fluorescence quenching of polymer P1 in THF/H₂O (1:9 v/v) mixtures at different concentrations.

Figure S6. (A) Fluorescence spectra of 50.0 µg•mL⁻¹ P1 in THF/H₂O (1:9 v/v) mixture in the presence of different PA concentrations (µg•mL⁻¹). (B) Concentration-dependent fluorescence quenching of P1 by PA.

Figure S7. (A) Fluorescence spectra of 25.0 µg•mL⁻¹ P1 in THF/H₂O (1:9 v/v) mixture in the presence of different PA concentrations (µg•mL⁻¹). (B) Concentration-dependent fluorescence quenching of P1 by PA.
Figure S8. (A) Fluorescence spectra of 12.5 µg•mL\(^{-1}\) P1 in THF/H\(_2\)O (1:9 v/v) mixture in the presence of different PA concentrations (µg•mL\(^{-1}\)). (B) Concentration-dependent fluorescence quenching of P1 by PA.