Supporting Information for:

Fluorescent Sensor for Intracellular Zn^{2+} by Cylindrical Molecular Brushes of Poly(2-oxazoline) through Ion-Induced Emission

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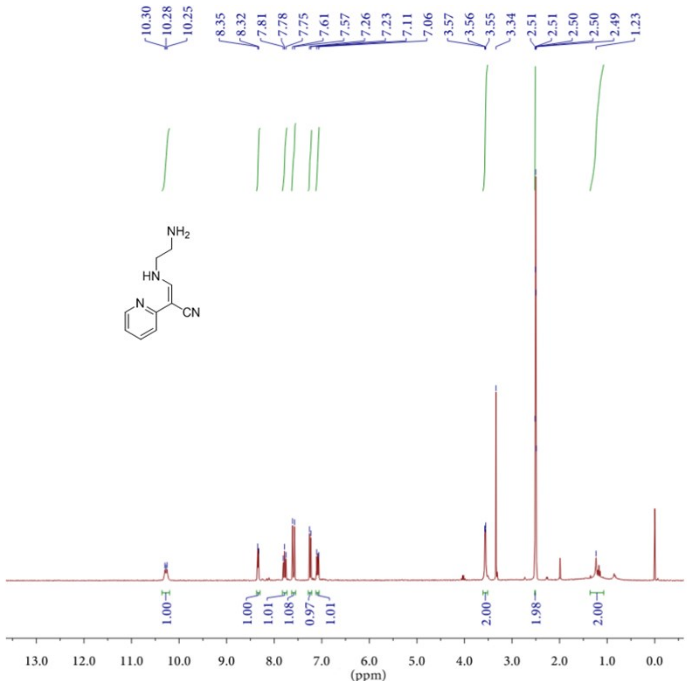

Fig. S1 (A) [1]H NMR of enaminitrile molecule PAN-1.

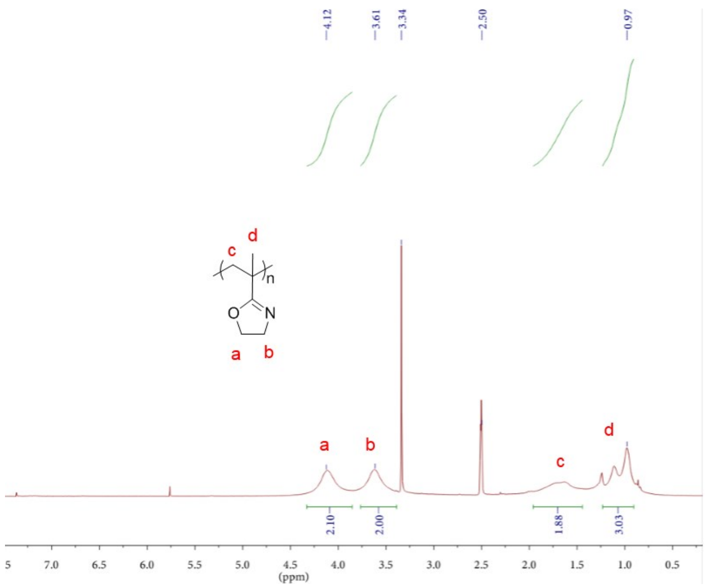

Fig. S1 (B) [1]H NMR of $P(IPOx)_n$.

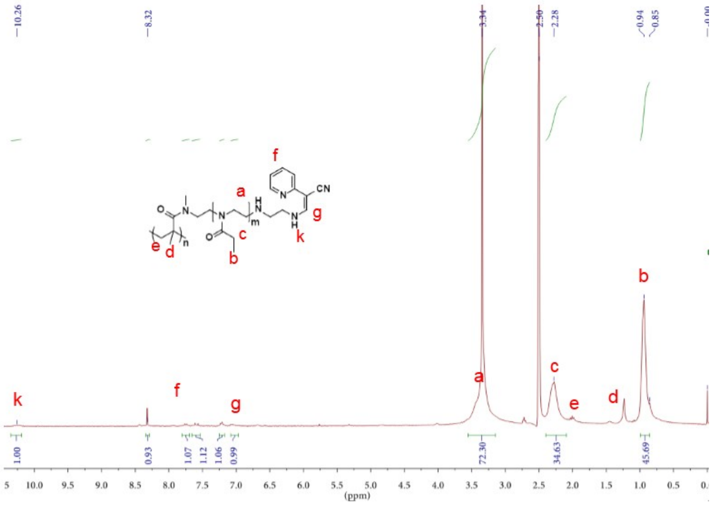

Fig. S1 (C) ^1H NMR of P(IPOx-g-EtOx).

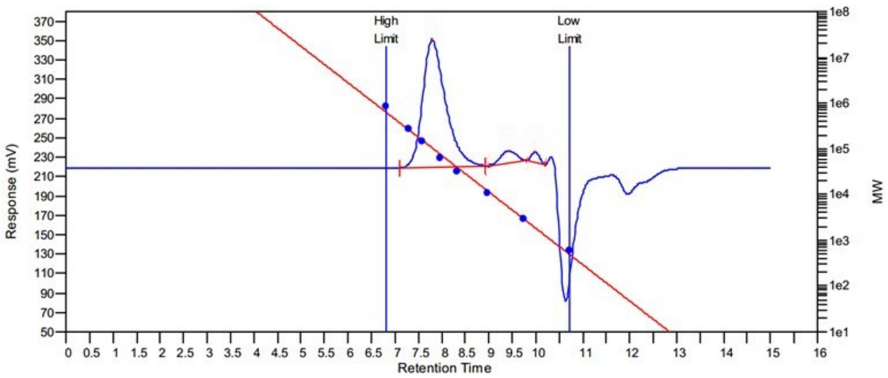

Fig. S1 (D) GPC of molecular brush P(IPOx-*g*-EtOx).

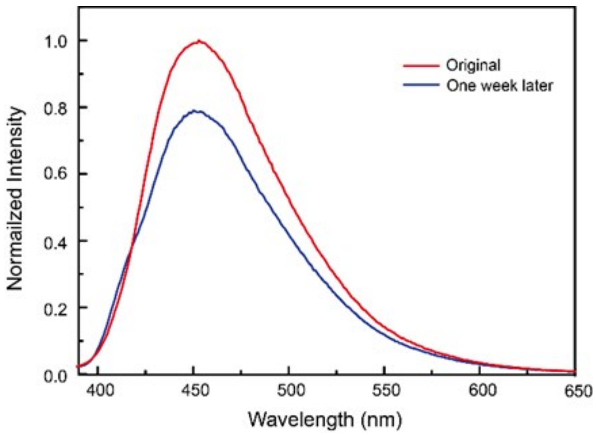

Fig. S2 Fluorescence spectra of P(IPOx-g-EtOx) (2 mg/mL) aqueous solution containing Zn^{2+} (100 μM) ions before and after exposure to sun light for one week. Excitation wavelength was kept at 365 nm.

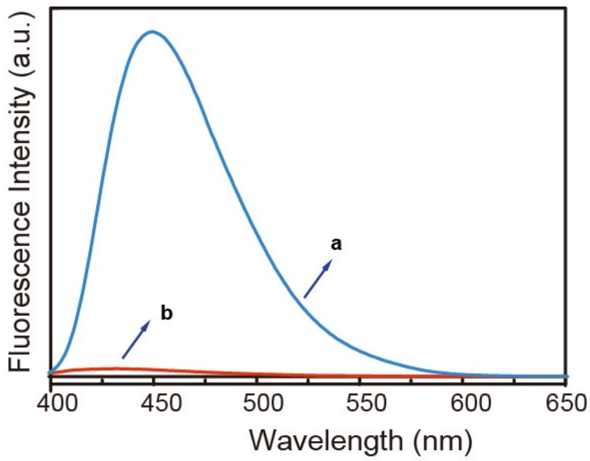

Fig. S3 Fluorescence spectra of the molecular brush of poly(2-oxazoline) end-capping with PAN-1 (a) and without enaminitrile species (b) toward Zn^{2+}.

Fig. S4 Visual color change of the solution of molecule PAN-1 observed with addition of different metal ions under UV light (λ =365 nm).

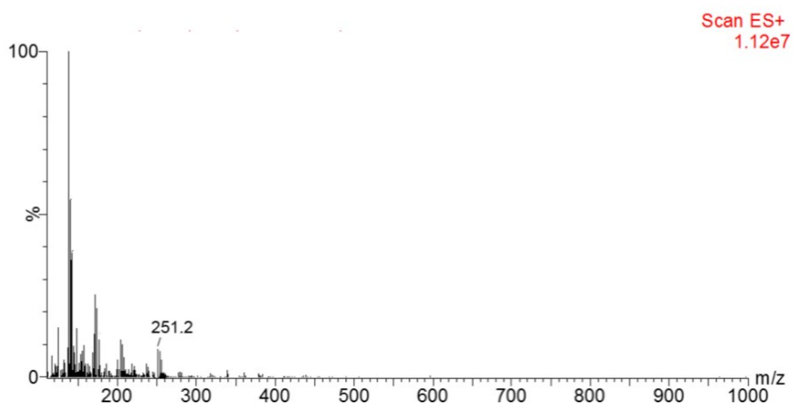

Fig. S5 Mass spectrum of PAN-1 with Zn^{2+}.

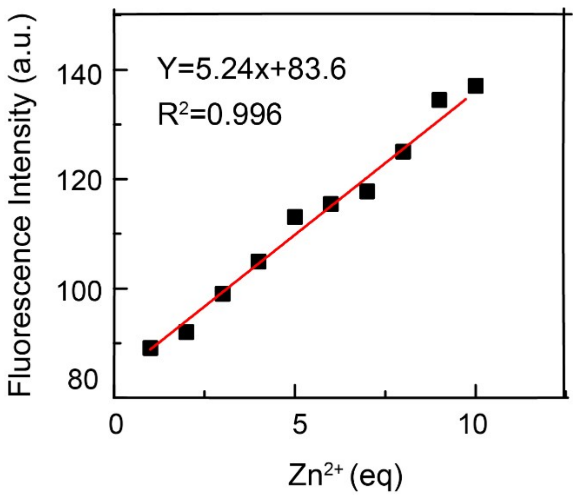

Fig. S6 The calibration plots of P(IPOx-*g*-EtOx) (LOD can be calculated by 3 σ/k, LOD=3 σ/k=3×1.55×10^{-5}/5.24=8.9 μM).

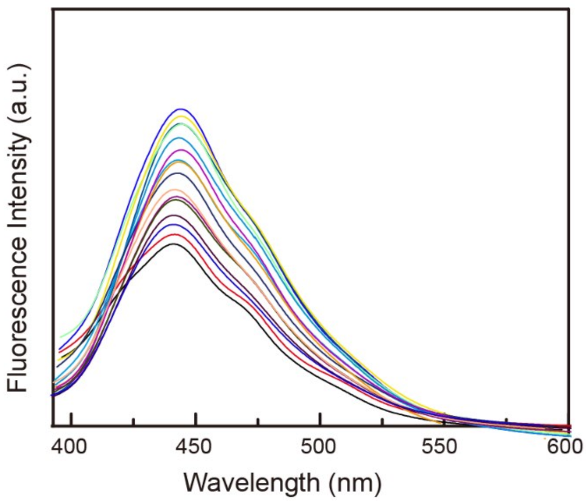

Fig. S7 Fluorescence emission spectra of P(IPOx-*g*-EtOx) (1 mg/mL) aqueous solution upon successive addition of Zn^{2+} (0–50 μM).

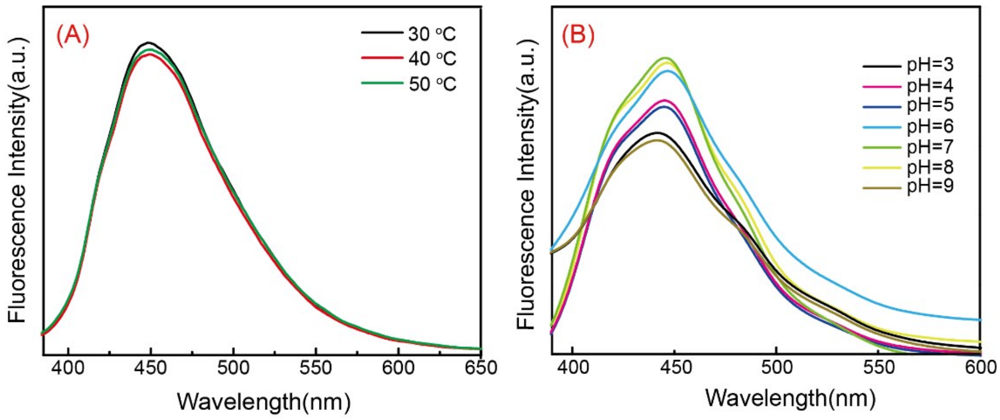

Fig. S8 (A) Fluorescence intensity variation for P(IPOx-g-EtOx) (2 mg/mL) aqueous solution containing Zn^{2+} (100 μM) ions at different temperature. (B) Fluorescence intensity variation for P(IPOx-g-EtOx) (2 mg/mL) aqueous solution containing Zn^{2+} (100 μM) ions at different pH values. Excitation at 365 nm.

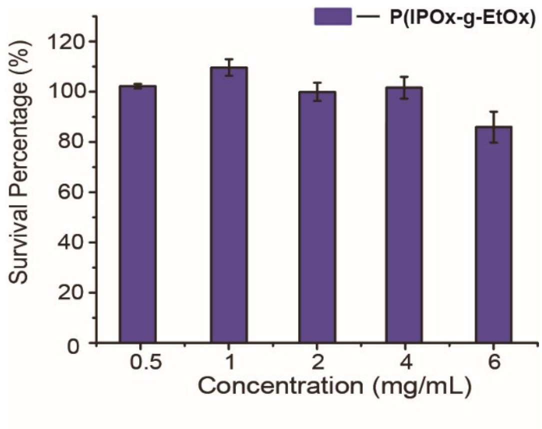

Fig. S9 Viabilities of HeLa cells incubated with P(IPOx-g-EtOx) for 48 h at 37 °C, respectively. All the results were repeated three times and presented as mean ± SD.