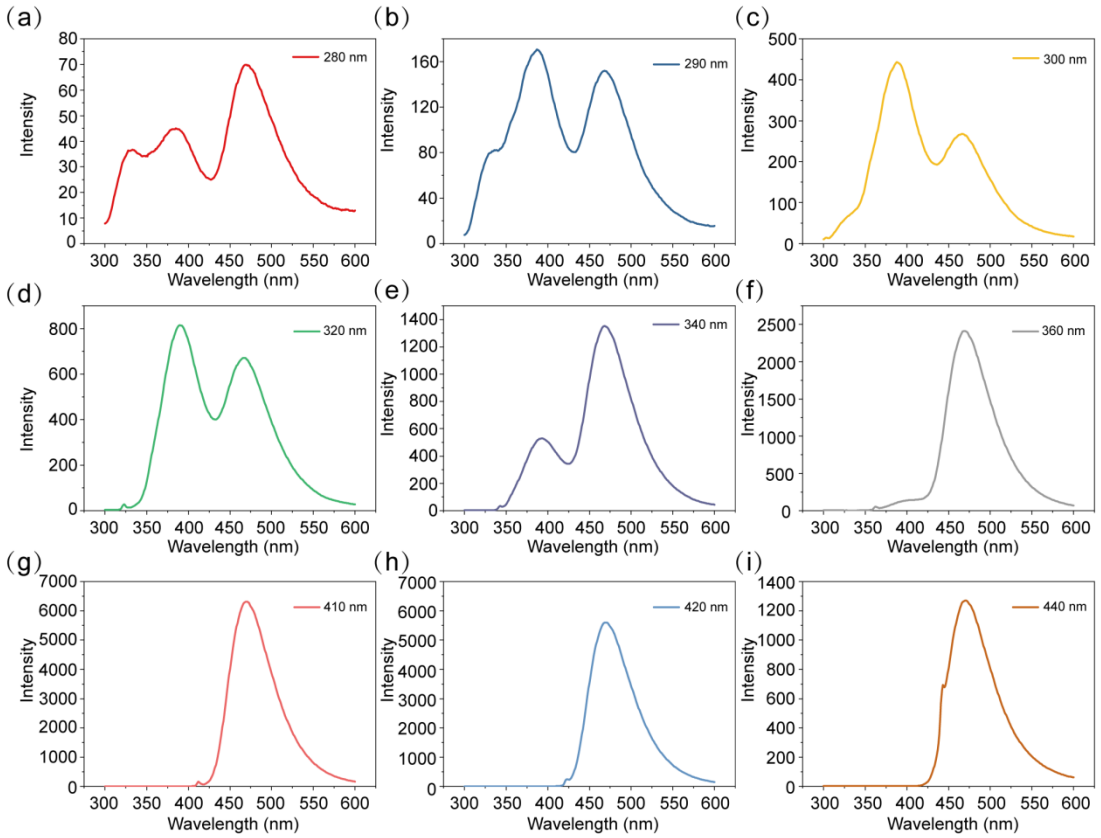

Fig. S1, (a)-(i) The emission spectra of PSS solutions were obtained at different excitation wavelengths. The emission peaks decrease gradually from three at 330 nm, 384 nm, and 469 nm, and finally only one emission peak is retained at 469 nm.

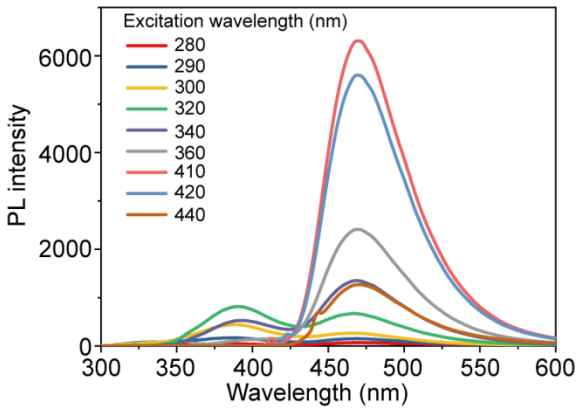

Fig. S2, Summary of emission spectra of PSS solutions obtained at different excitation wavelengths.

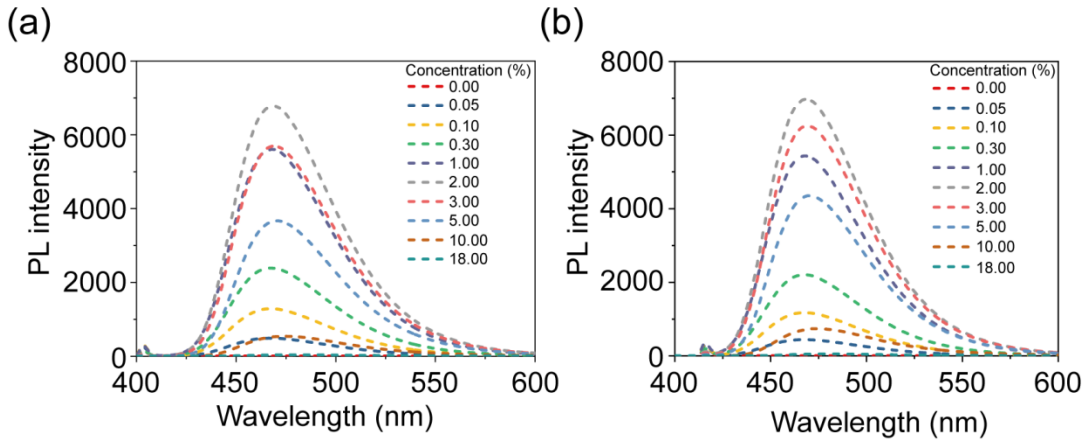

Fig. S3, Emission spectra of 0wt% ~ 18wt% PSS solutions at (a) 402 nm and (b) 414 nm excitation wavelengths.

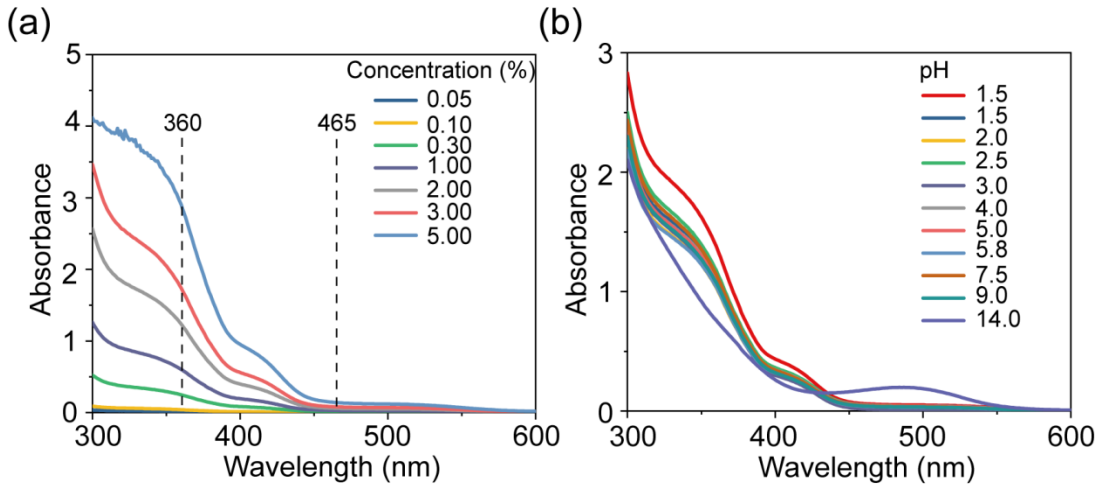

Fig. S4, (a) Absorption spectra of 0 wt%–5 wt% PSS solutions. (b) Absorption spectra of 2 wt% PSS solutions at different pH values.

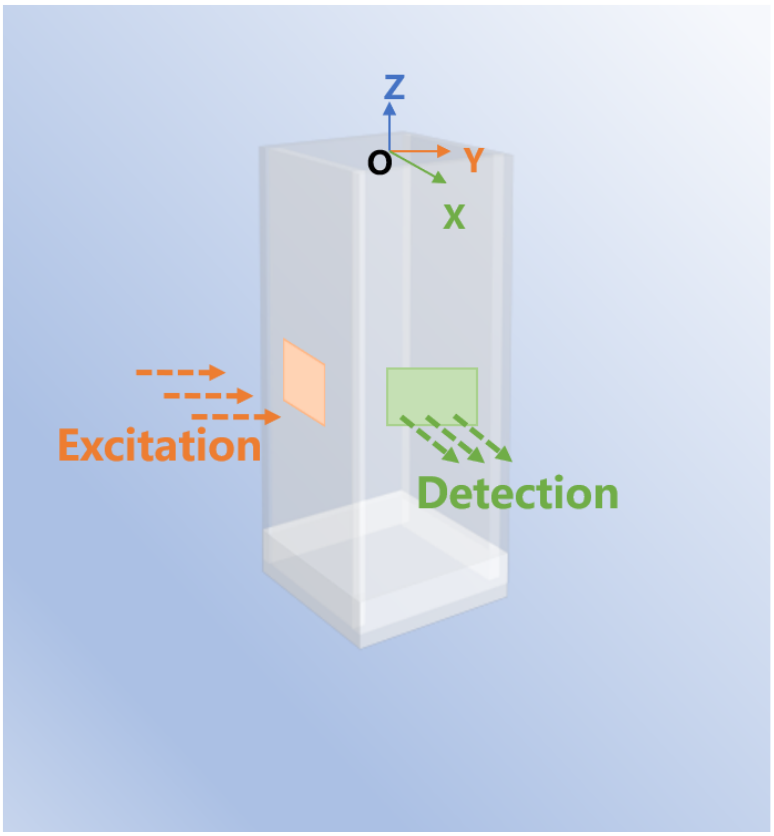

Fig. S5, Schematic diagram of the cuvette for PL spectra measurement with an angle of 90° between the excitation and detection directions.

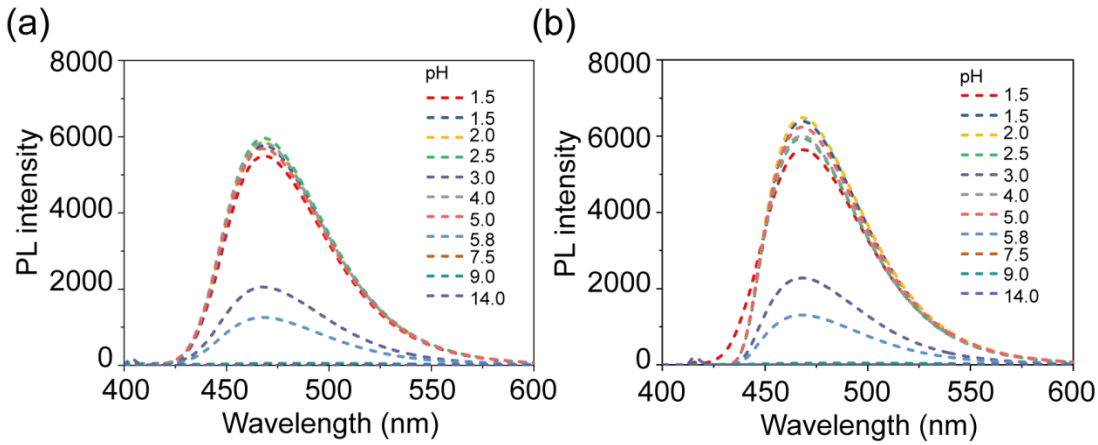

Fig. S6, Emission spectra of 2 wt% PSS solutions at different pH values at (a) 402 nm and (b) 414 nm excitation wavelengths.