

**Supporting information**

**Development of Solution, Film and Membrane Based Fluorescent Sensor for the Detection of Fluoride Anions from Water**

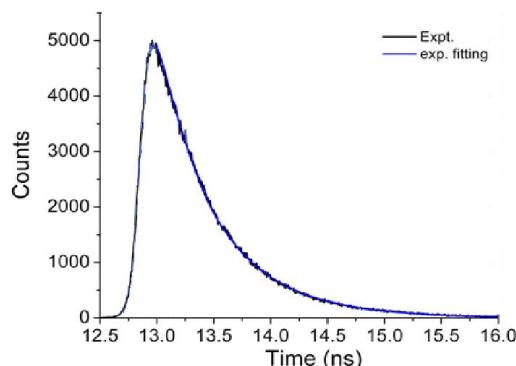
*Gunin Saikia, Atul Kumar Dwivedi and Parameswar Krishnan Iyer\**

Department of Chemistry, Indian Institute of Technology Guwahati, Guwahati-781039. India

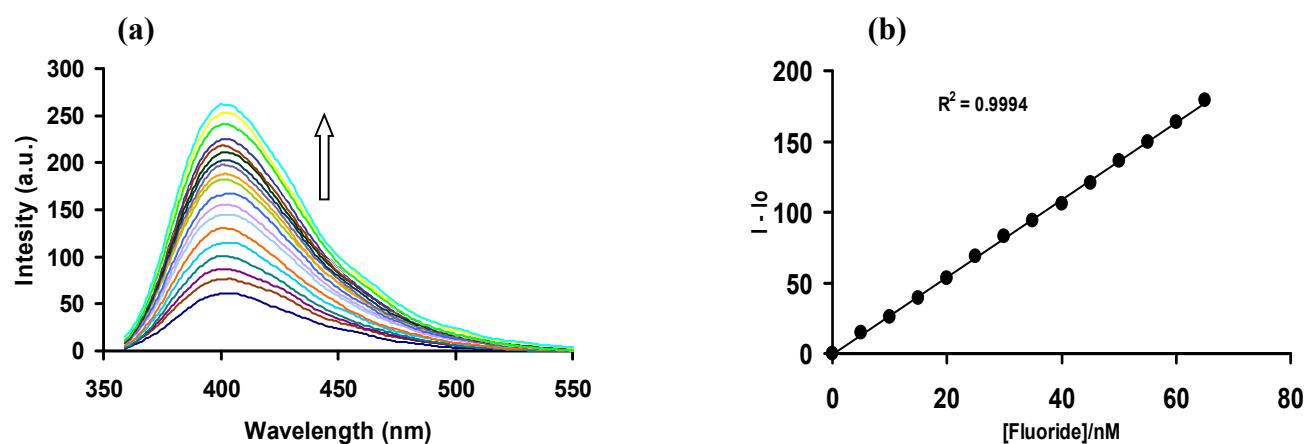
CORRESPONDING AUTHOR: \*Parameswar K. Iyer, Department of Chemistry, Indian Institute of Technology Guwahati, Guwahati-781039. INDIA.

AUTHOR EMAIL ADDRESS: [pki@iitg.ernet.in](mailto:pki@iitg.ernet.in)

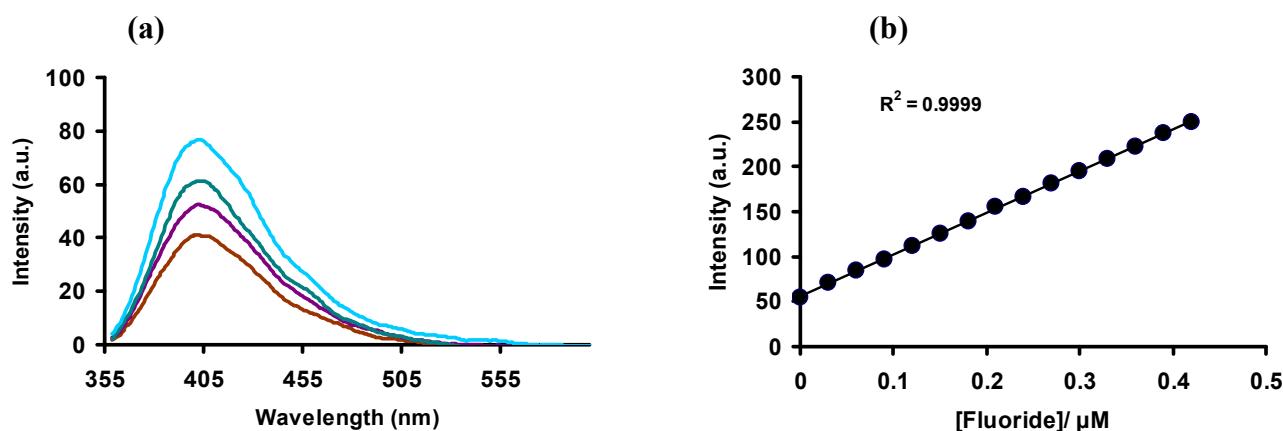
AUTHOR FAX: +91 361 258 2349



**Figure S1** Exponential decay profile for PPI and PPI- $\text{Cu}^{2+}$  with different concentration.



**Figure S2** Estimation of detection limit for  $\text{F}^-$  with PPI. (a) Fluorescence spectral enhancement of PPI- $\text{Cu}^{2+}$  on addition of 1.5nm of  $\text{F}^-$  (1.5 nM – 30nM) in 4:1 THF/Water. (b) Plot of emission intensity at 350 nm versus  $\text{F}^-$  concentration. To estimate detection limit slit width of 15 nm was used for more sensitive detection.



**Figure S3** Estimation of for  $\text{F}^-$  with PPI. (a) Fluorescence spectral enhancement of PPI- $\text{Cu}^{2+}$  on addition of four unknown random samples in 4:1 THF/Water. (b) Plot of emission intensity at 350 nm versus  $\text{F}^-$  0.03 – 0.42  $\mu\text{M}$  solution in 4:1 THF/Water.