Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supporting Information

Proton triggered emission and selective sensing of 2,4,6-trinitrophenol by fluorescent hydrosol of 2-phenylquinoline

Samir Maity, Milan Shyamal, Debasish Das, Ashim Maity, Sudipto Dey and Ajay Misra

Department of Chemistry and Chemical Technology, Vidyasagar University,

Midnapore 721 102, W.B, India.

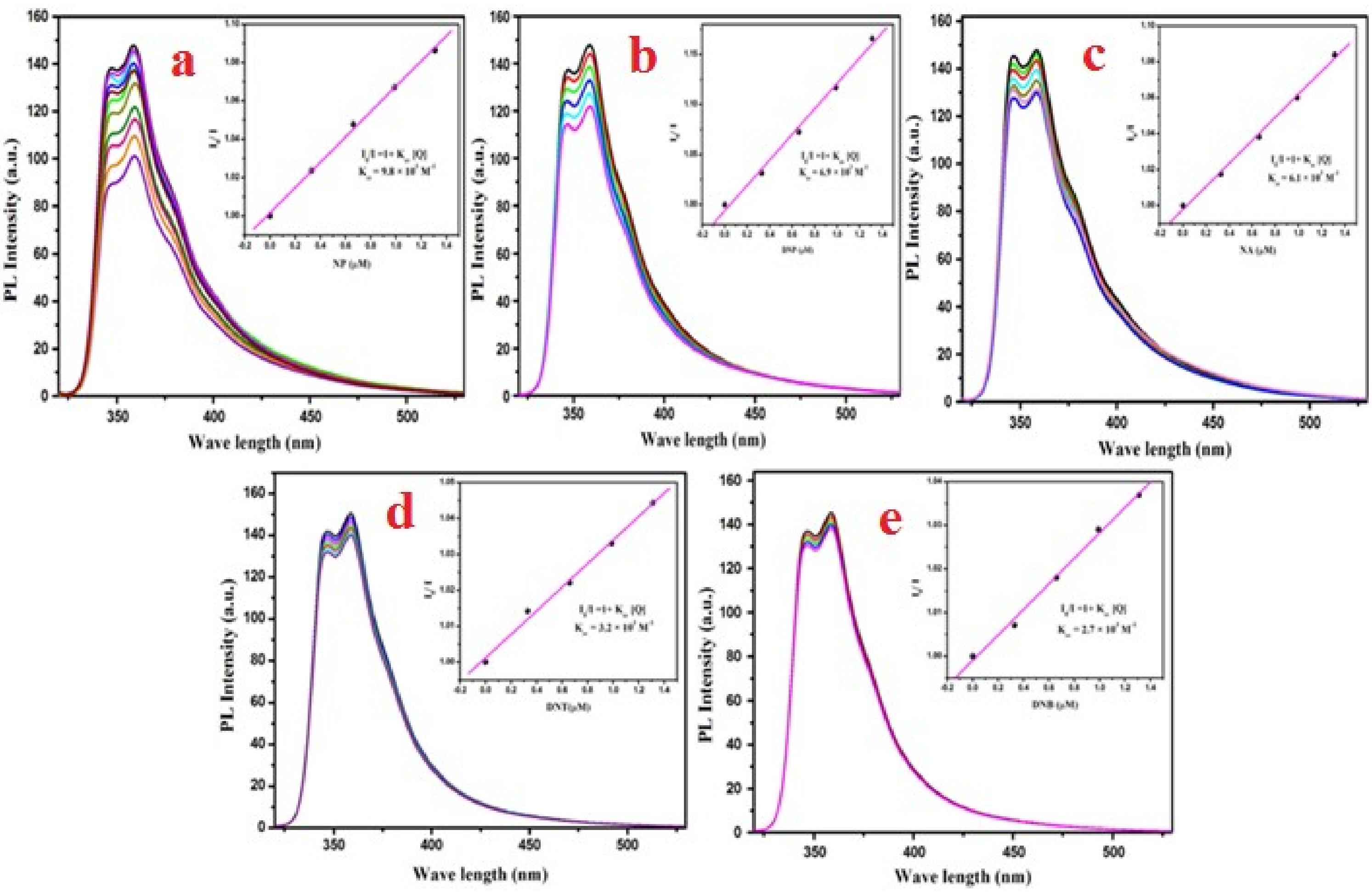

Fig.S1 Fluorescence Quenching of PhQ hydrosol in presence of (a) 4-Nitro-phenol (NP), (b) 2,4-dinitro-phenol (DNP), (c) 4-Nitroaniline (NA), (d) Dinitro-tolune (DNT), (e) Dinitro-benzene (DNB).

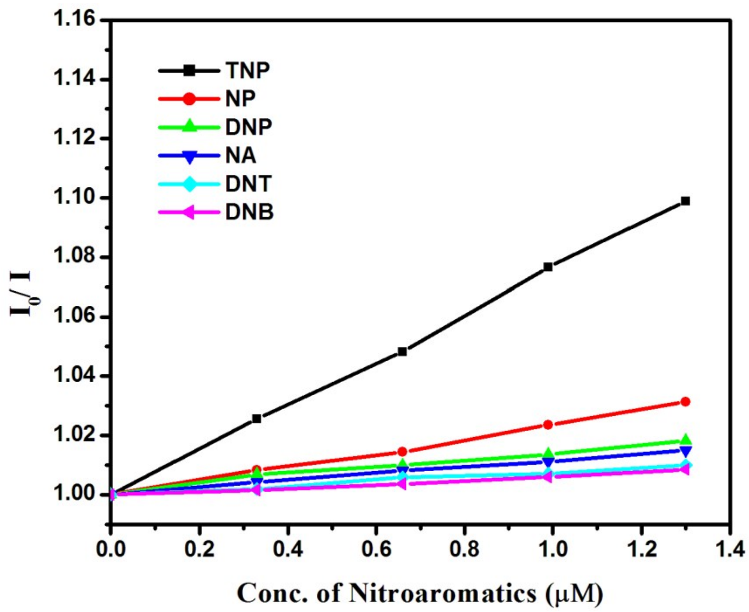

Fig.S2 Comparison of Stern-Volmer plot of different nitroaromatics.

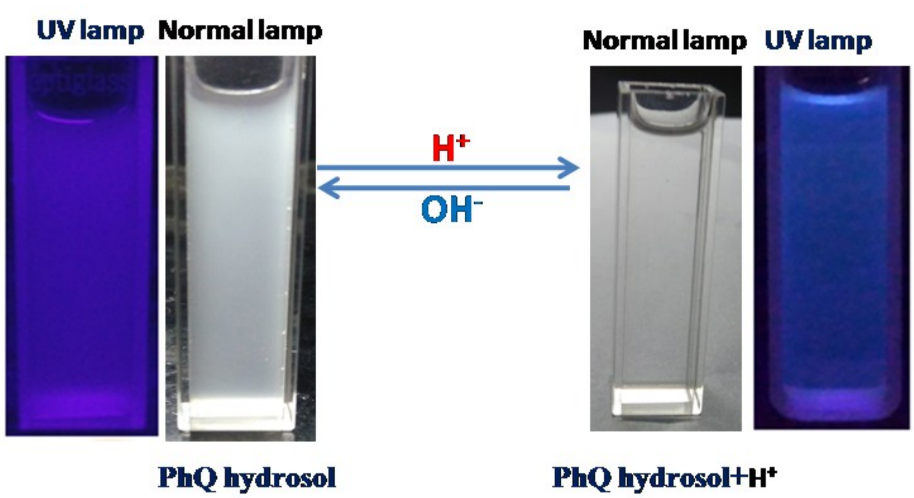

Fig.S3: Photographic picture of PhQ and protonated PhQ hydrosol under normal light and UV light (365 nm) irradiation.

Table S1: Stern-Volmer quenching constant (K_{SV} M^{-1}) for different nitroaromatics

Nitroaromatics	**R**	**K_{SV} (M^{-1})**
TNP	**0.9930**	**7.8×10^4**
NP	**0.9981**	**9.8×10^3**
DNP	**0.9995**	**6.9×10^3**
NA	**0.9967**	**6.1×10^3**
DNT	**0.9975**	**3.2×10^3**
DNB	**0.9983**	**2.7×10^3**

Table S2: A comparative study of our work with the other reported works in the literature with reference to K_{sv}, Detection limit and Anti interference study.

References	**K_{sv} (M^{-1})**	**Detection limit**	**Anti interference**
Anal. Methods, 2013,5,6228-6233	**0.33**	**1 µM**	**-**
Dalton Trans. 2013,42,12403-12409	**-**	**4.5×10^{-7} M**	**-**
ACS Appl. Mater. Interfaces 2013, 5, 672−679	**1.55×10^4**	**3.5×10^{-7} M**	**-**
RSC Adv., 2016, 6, 37929-37932	**-**	**2.4×10^{-7} M**	**-**
J. Mol. Liq. 224, 2016, 255–264	**6.02×10^3**	**2.98×10^{-6} M**	**-**
J. Photo Chem. & Photo Biology A. 2011,217,356-362	**5.1×10^4**	**1×10^{-8} M**	**-**
Org. Lett. 2012,14,3112-3115	**6.9×10^4**	**500 ppb**	**-**

J.Mater.Chem.A,2013, 1,8745-8752	**3.4×10^4**	**8×10^{-8} M**	**-**
Chem.commun.,2013, 49,4764	**-**	**70 nM**	**-**
J.Org. Chem., 2013,78,1306-1310	**3.3×10^4**	**354 ppb**	**-**
J. Mater. Chem., 2012,22,11574	**3.04×10^4**	**2.38×10^{-8} M**	**-**
Our present study	**7.8×10^4**	**4.3×10^{-7} M**	**Yes**