

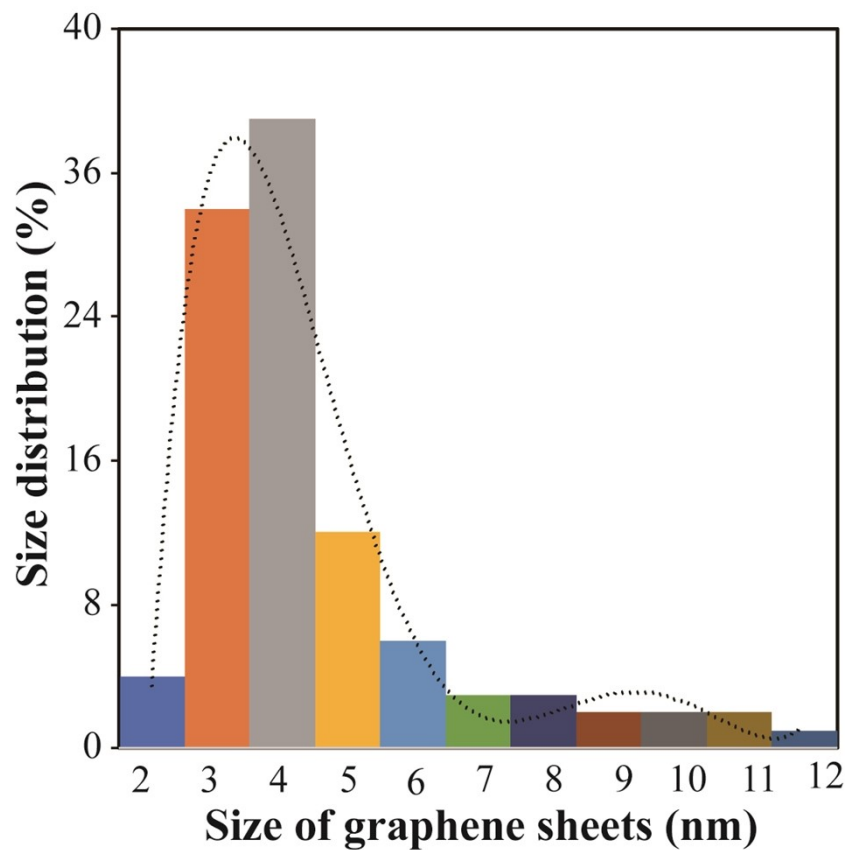
## **Electronic Supporting Information (ESI)**

**Synthesis of folic acid, histidine and serine-functionalized and boron and phosphorus-doped graphene quantum dot with excellent yellow luminescence behavior in aqueous/solid state and its use for fluorescence detection of Fe<sup>2+</sup> in urine**

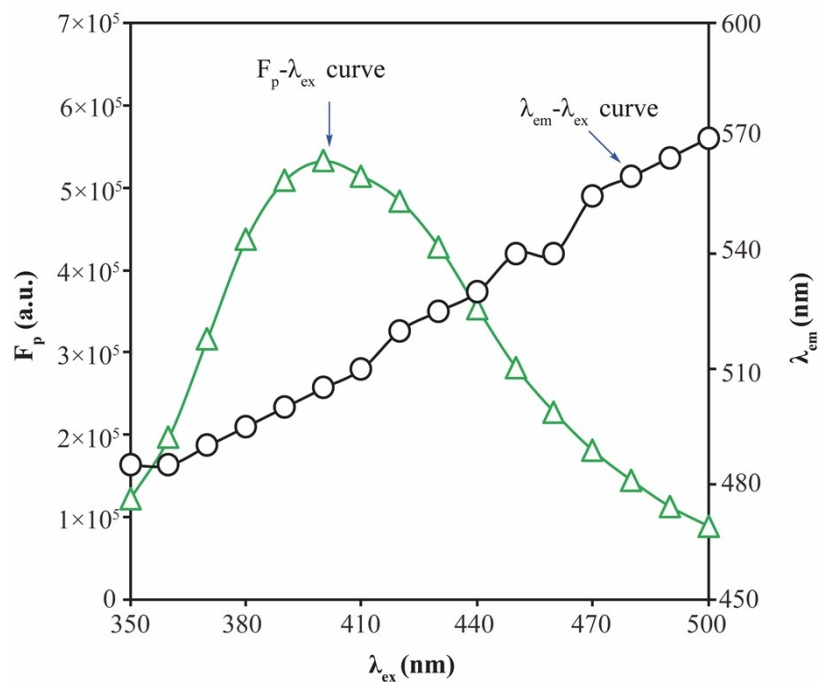
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### **1. Figures**



**Fig. S1** Size distribution of graphene sheets in FHS-GQD-B/P



**Fig. S2** Plots of excitation wavelength vs. the  $F_p$  and the maximum emission wavelength

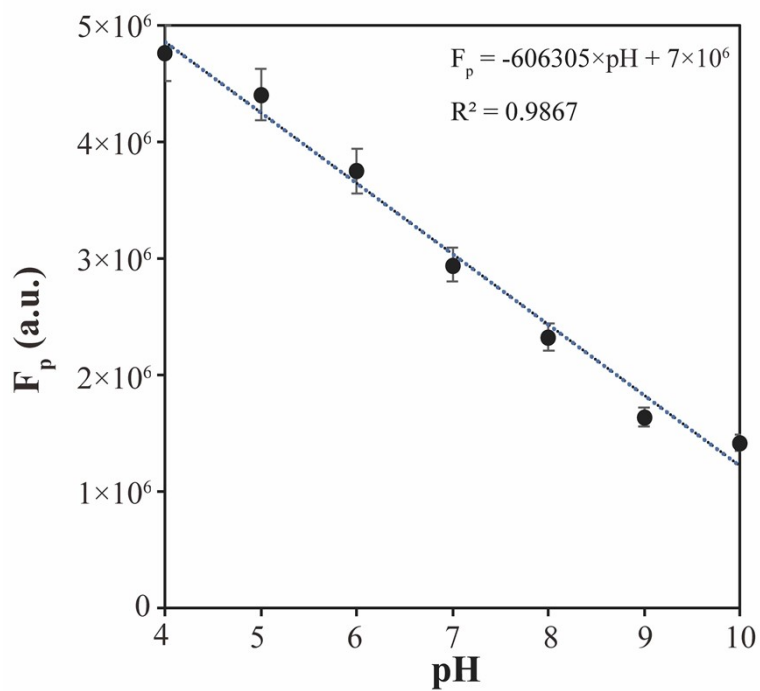


Fig. S3 Relationship curve of pH value with  $F_p$

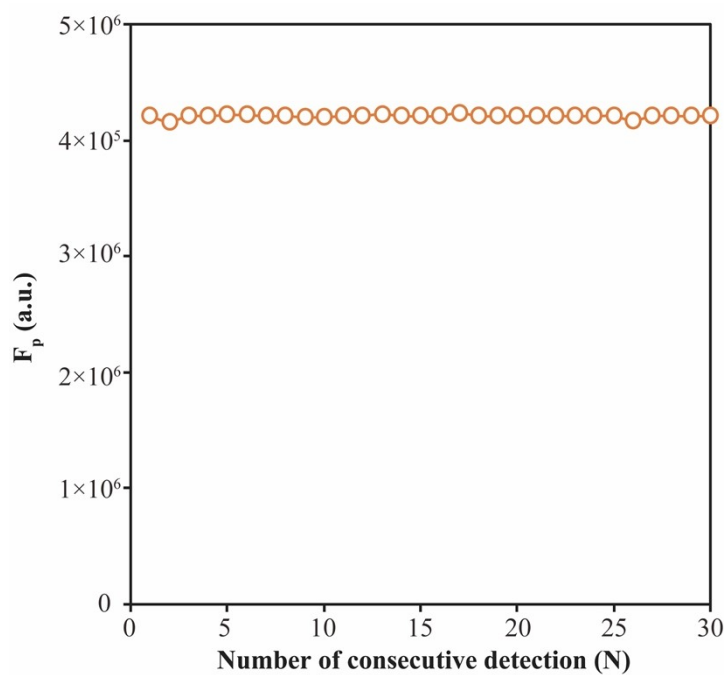
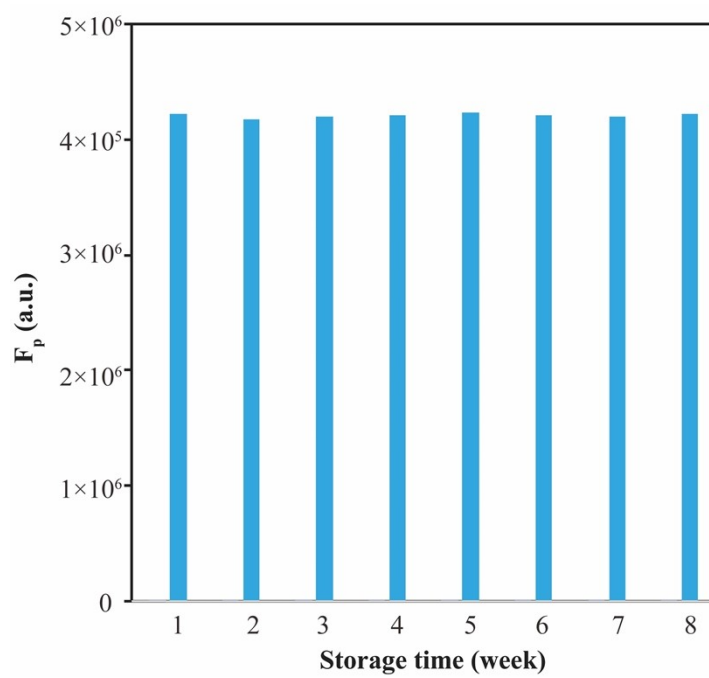


Fig. S4  $F_p$  values for different detection times



**Fig. S5**  $F_p$  values for different storage time