

## Supplementary

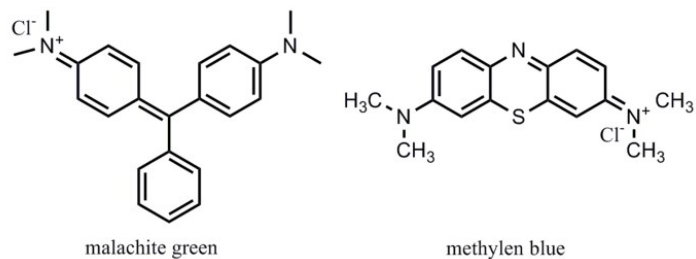
### **Efficient removal of cationic dyes using a new magnetic nanocomposite based on starch-g-poly (vinylalcohol) and functionalized with sulfate groups**

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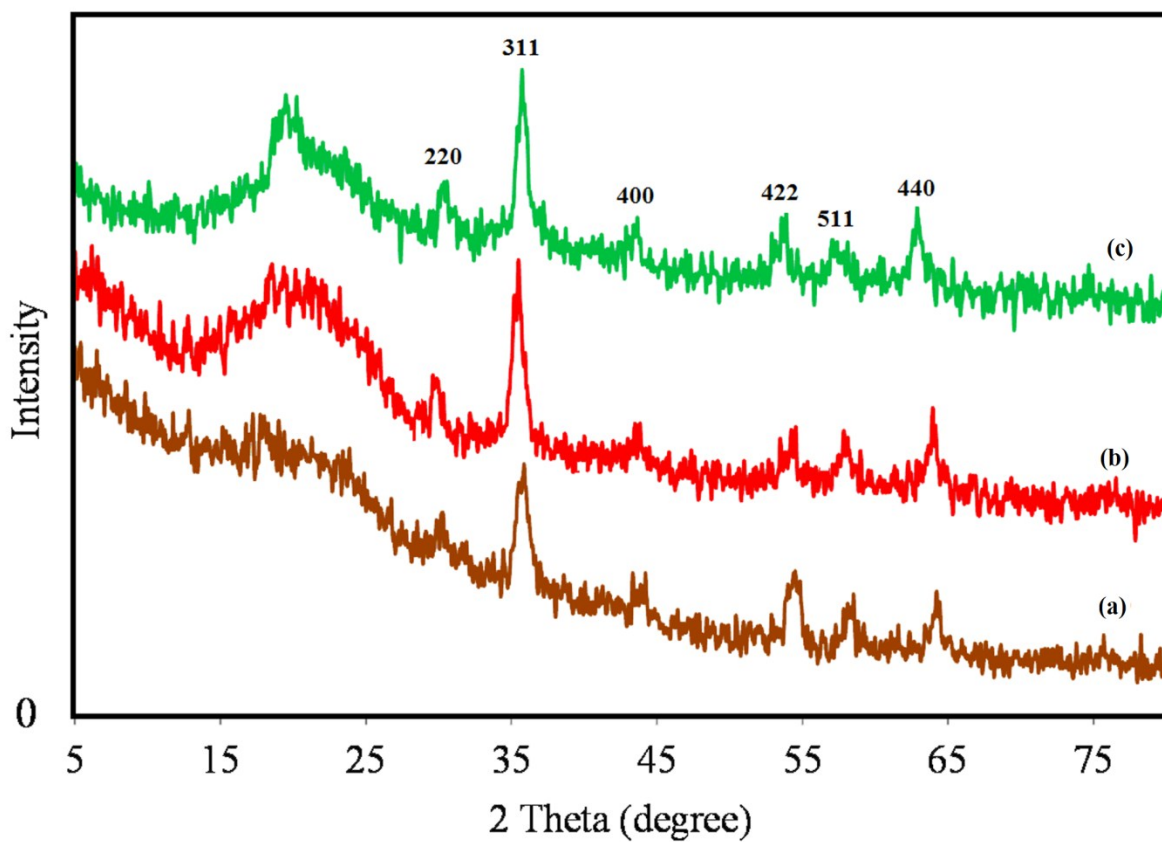
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**Fig. S1** Structure of dyes



**Fig. S2** XRD patterns of MNP (a), MNP@St-g-PVAc (b) and MNP@St-g-PVS nanocomposite

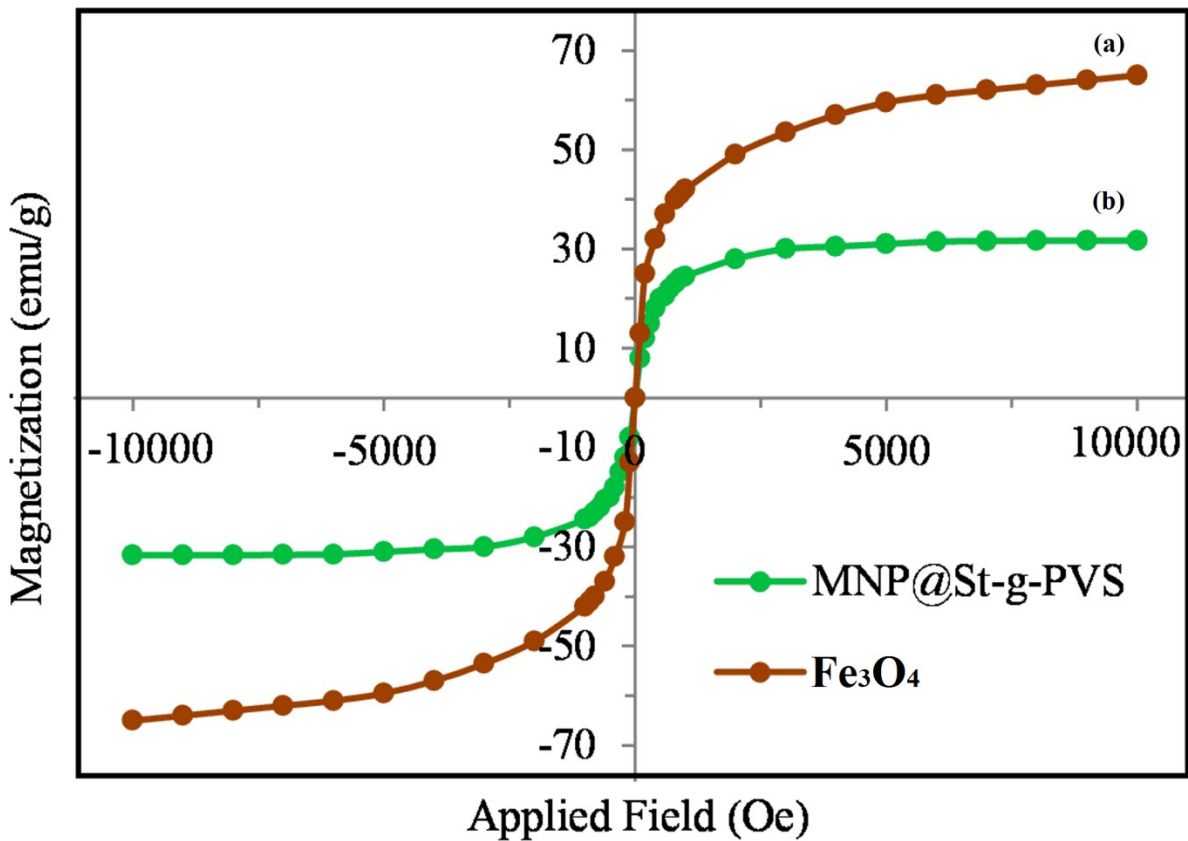


Fig. S3 Room-temperature magnetization curves for Fe<sub>3</sub>O<sub>4</sub> (a) and MNP@St-g-PVS (b)

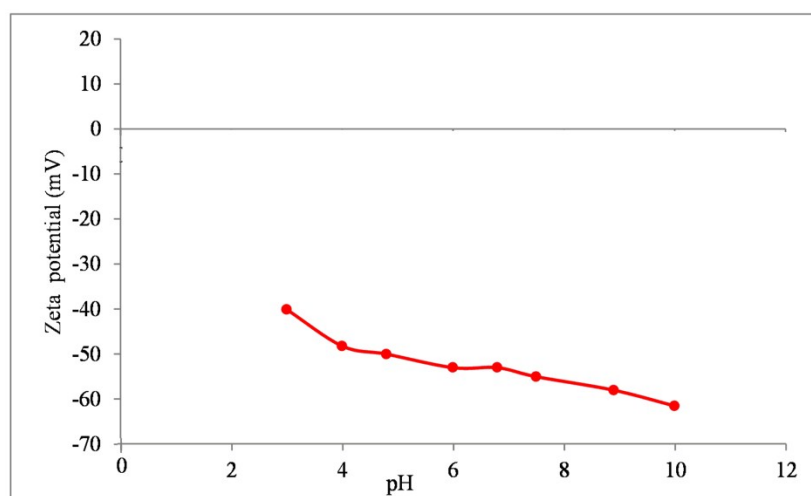


Fig. S4 Zeta potentials of MNP@St-g-PVS adsorbent