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## Thiophene-Thiazole Functionalized Oligomers-Excellent fluorescent sensing and selective probe for copper and iron ion

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### Highlights

- Developed a new thiophene-thiazole type colorimetric and fluorescent chemosensor for  $\text{Cu}^{2+}$  and  $\text{Fe}^{2+}$  recognition in water samples from other metal ions such as  $\text{Li}^+$ ,  $\text{Na}^+$ ,  $\text{Mg}^{2+}$ ,  $\text{Ni}^{2+}$ ,  $\text{Cd}^{2+}$  and  $\text{Zn}^{2+}$ .
- Very rapid and remarkable recognition over the conventional detection methods.
- Achieved detection limit (LOD) of  $\text{Cu}^{2+}$  was  $1.04 \times 10^{-5}$  M for OBTV-TZ and  $0.988 \times 10^{-5}$  M for OTTV-TZ
- Both oligomers are successfully regained from the  $\text{Fe}^{2+}$  complexed system by using EDTA

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