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Aminophenol based colorimetric chemosensor for naked-eye detection of biologically important fluoride and acetate ions in organo-aqueous medium: effective and simple anion sensors

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Graphical abstract



Highlights

- A three new colorimetric receptors R1-R3 were designed and synthesized.
- Receptors R1 and R2 ($4.5 \times 10^{-5} \text{ M}$) displayed highly selective and sensitive ability towards F⁻ and AcO⁻ ions in both organic medium DMSO as well as in CH₃CN.
- Receptors R1 and R2 showed high capability of sensing F⁻ and AcO⁻ ions present in the form of sodium salts (NaAcO and NaF) in an aqueous medium.
- The binding constant and stoichiometry of the receptors-anions complexes were calculated.

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