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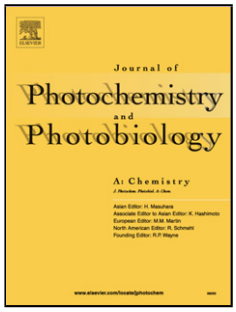

Title: 1, 10-Phenanthroline based ESIPT Sensor for Cascade Recognition of Cu^{2+} and CN^{-} ions

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1, 10-Phenanthroline based ESIPT Sensor for Cascade Recognition of Cu^{2+} and CN^- ions

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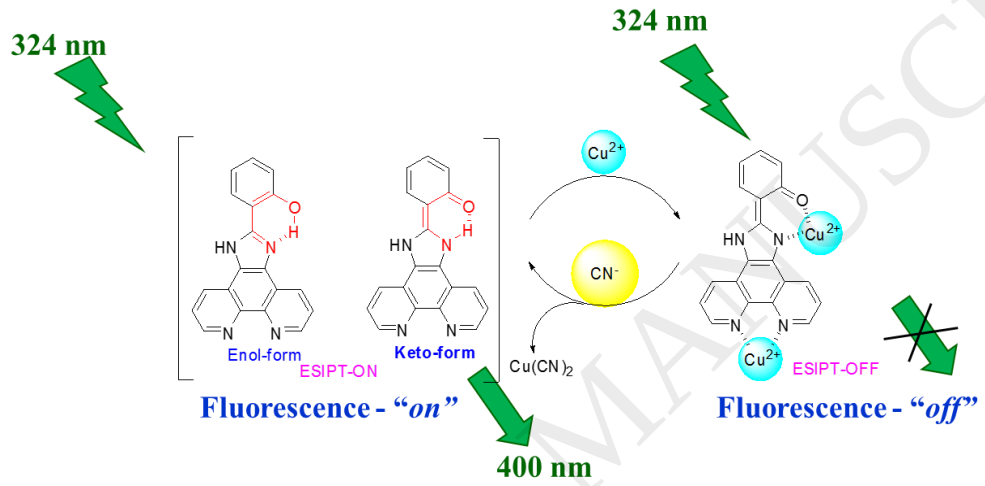
Graphical abstract



Highlights

- A simple 1,10-phenanthroline based ESIPT sensor for fluorescent detection of different transition metal ions.
- "*In-situ*" generated **1**-Cu^{2+} complex for cascade detection of CN^- ions.
- "*on-off-on*" switching process caused by Cu^{2+} and CN^- additions could be repeated several times with little fluorescence efficiency loss.
- Elaboration of "Set-Reset" flip flop at molecular level by alternate additions of Cu^{2+} and CN^- ions.

Abstract: The optical methods, using organic molecular sensors, for the detection of cations and anions, offer several advantages in being selective and sensitive, in addition to simple in application and *in-situ* monitoring. Herein, the chemosensing properties of 1,10-