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Authors: Lin Zhong, Hao Li, Shao-Lin Wang, Qin-Hua Song



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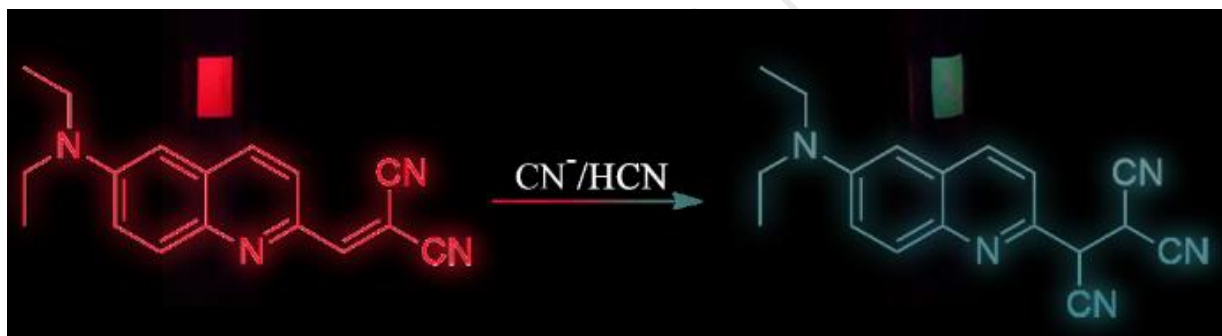
# The sensing property of charge-transfer chemosensors tuned by acceptors for colorimetric and fluorometric detection of $\text{CN}^-/\text{HCN}$ in solutions and in gas phase

Lin Zhong, Hao Li, Shao-Lin Wang and Qin-Hua Song\*

Department of Chemistry, University of Science and Technology of China, Hefei 230026, P. R. China

E-mail address: [qhsong@ustc.edu.cn](mailto:qhsong@ustc.edu.cn)

## Graphical abstract:



## Highlights

- Four charge-transfer sensors **3a–3d** for  $\text{CN}^-$  were synthesized, among them the sensor **3a** with dicyanovinyl group exhibits fast response ( $\sim 10$  s), a low detection limit (15 nM) and high selectivity.
- The sensing behavior of these sensors depends on the electron-withdrawing ability of substituents at vinyl.

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