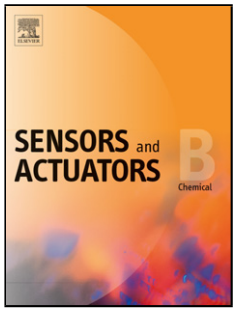

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Dual recognition of Zn^{2+} and Al^{3+} ions by a novel probe containing two fluorophore through different signaling mechanisms

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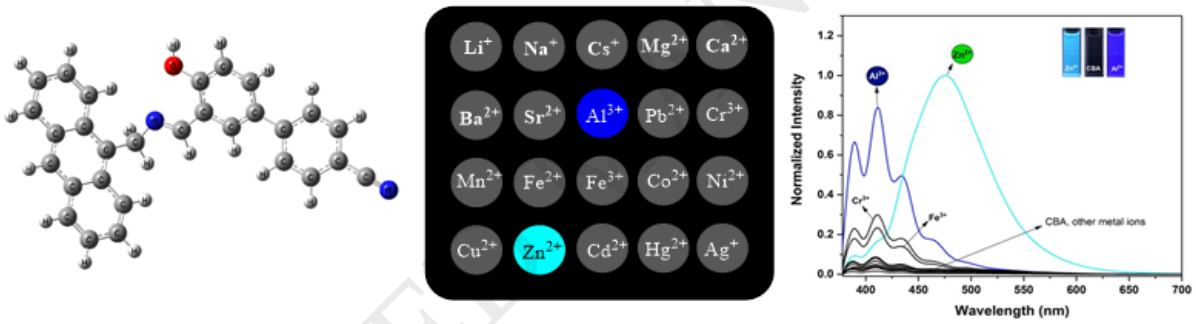
Graphical Abstract



Highlights

- A new fluorescent sensor (CBA) containing 4-cyanobiphenyl and anthracene was designed and synthesized
- **CBA** was characterized by using ^{1}H, ^{13}C, COSY, FT-IR, elemental, Fluorescence and UV-vis data.
- **CBA** exhibited an effectively selective and sensitive recognition toward Zn^{2+} and Al^{3+} ions through two different mechanisms
- Test paper strips of CBA was also produced for rapid and selective detection of Zn^{2+} and Al^{3+}